

## **Impact of Smartphone News Apps on Print Media – A Twin TAM Framework**

Dr. Elangovan N<sup>1</sup>, Harshit Gupta<sup>2</sup>

<sup>1,2</sup> (Department of Management Studies, Christ University, India)

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**Abstract :** *News magazine being an important part of the print Media industry has so far been affected by World Wide Web and currently by the Smartphone Apps. They have just entered the industry with great promises and potential. Research focusing on the impact of news apps on the news magazines will provide an opportunity to understand how readers look at both technology and decide on using them. The study used a survey method by questionnaire distributed by both direct and online mode. A conceptual model with Twin TAM framework was proposed for the study as the research requires considering two technologies simultaneously. Usefulness and Ease of Use of both technologies has an influence on attitude towards News Apps and Print Media respectively. Positive attitude towards print media creates more dissonance in presence of Attitude towards News Apps. Apparently, if the attitude is positive then the dissonance will be more in case of print magazine. Also, reverse is the case of news apps. Finally, dissonance is found to reduce the intention to use News Apps. The study provides implication to print media industry based on previous cases.*

**Keywords -** *Twin TAM, News Apps, News Magazine, Dissonance, Intention.*

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### **I. Introduction**

Technology has transformed the print media industry. Be it the journey starting from the printing press to news websites, and currently the revolutionary news apps, it is the dynamism of the technology that has continuously evolved suiting the current needs of the present tech-savvy generation. Technology has become the part of our daily life. Knowingly or unknowingly, we are leveraging the advantages of the technology everywhere and everyplace. The fact remains that all the three mediums discussed previously exist by supplementing and posing challenges to each other simultaneously. The news media organizations have struck a balance in all the three mediums. Each medium is rich in content and unique in its own way. Resulting in wider reach of customers and increasing the popularity among people. Newspaper was considered the main source of information for fairly a large population of the country for of its characteristics of being concise and portability. As other forms of media came quite later and hence enjoyed complete freedom in its operations. Meanwhile, Magazine came into picture and gave the print media an all together new avatar by creating a different market for itself. Now, people have a substitute, and have weighed it as an important source of information. However, due to the advent of technology these two mediums had to keep up with the ever-changing market. Since, then it has come a long way and undergone numerous changes to meet the changing demand of the consumers. Before the advent of apps, the print media industry had a limited scope. The news media solely relied on the printed form. Nobody imagined the consumption of news and information other than newspapers or magazines. The invention of the World Wide Web (“WWW”) in the year 1991 gave the print media a digital form. Computers became widely popular and a necessity for the working population. Currently the digital media is leading the whole industry. The rest is history.

The year 2008 has witnessed the emergence of the term- “app”- which is a short form of the term “application software” has exploded the demand for Smartphone, tablet computers and other mobile devices in the market. Now we have apps for almost everything ranging from news, games, cooking, driving, etc. You name it and it has it. The explosion in number and variety of apps, due to the user requirements, has paved the way in the creation of a wide-range of review, recommendation, blogs, etc. in magazines. News apps have revolutionized the way we look at the print media industry now. It has added one more dimension to it by expanding its horizon from different length and breadth thereby creating many opportunities to a rather unexplored but potential area mainly related to the magazine publication. In this case, as both these mediums single-handedly created their own market in the presence of other mediums still existing and competing with each other, has created a direct relationship to study comprehensively the two broad mediums of media format i.e. news apps and print magazines.

News apps not only provide immediate information but also constantly updated news items thereby providing a better medium for information exchange among its users as compared to conventional media like newspaper or magazine. Simultaneously, print magazine provides a more wide coverage of concrete data or news and also used as reference material in many cases. Therefore, a fine comparison between both the mediums was an apt study to check the latest trends in the media industry. In addition, a lot of research had been

conducted analyzing the growth of print media and the impact of digitalization over this industry and therefore restricting its scope mainly to newspaper and World Wide Web. Simultaneously, magazine being an important part of the industry was rather neglected and apps have just entered the industry with great promises and potential. Therefore, the focus of this research is to analyze the impact of the added dimension of digitalization i.e. apps, on the printed magazines. In other words, study the impact of digital media on the print version and vice-versa. In this way overcoming the gap and contributing to the print media as a whole.

This paper is organized as follows: The first section introduces the study by stating the purpose and scope. The following section presents the literature review to support or rather back the study by integrating concepts like “mediamorphosis” or digitalization. This is followed by a description of the methodology in which the conceptual model of Twin-TAM is created and further the development of measuring instrument is explained. In the same section, the variables are elaborated. In the analysis and interpretation section, first the demography profile is presented. This is followed by correlation, reliability test and finally the path analysis using bootstrapping. In the next section, the implications of the findings are discussed. Contributions and limitations of the study is further presented and finally concluded with the recommendations to the industry.

## **II. Literature Review**

The idea of this research is to study the on-going recent changes which the print media magazine is witnessing over the past few years or rather will witness in the near future due to advancement in the technology. The advancement, which is the subject of research, is yet another milestone achieved by technology i.e. in the form of the introduction of revolutionary apps (application software) or rather news apps in this case. The key question that arises here is the impact these latest news apps will have on the subscription of printed magazine. But, before going to the crux of the subject matter it is mandatory to first address the stand which the Print Media Magazine holds.

In the earlier decades the Newspapers had a rather smooth time before the technology had its impact on the Print Media Industry [1]. But, unlike past the traditional print medium has been heading to an entirely new realm of digitalization for its delivery system because of frequent challenges and competitions, the first phase being the News Websites. It was magazines that first took advantage of World Wide Web (www) because of their better background in visual information [2]. The former study found that as newspaper’s circulation declined, organizations were shifting to online newspapers because it provided an opportunity to participate more due to its unique features. While the latter found that online source had more news content, more related articles and longer headlines than its print counterpart did. Thus, the newspaper industry began to go into the Web in the mid-1990s. It became clear after this research that the Internet as a news medium has the potential to reshape the news media world.

Therefore, what actually is this buzzword “app?” Mobile app is nothing but end user software applications that are designed for a mobile device operating system and which further boosts the device functionality. These apps are available in online app stores such as Appstore for Android, Apple’s App Store for iOS to name a few. Smartphones have revolutionized the apps. It has completely changed the outlook as we used to perceive this mode of communication. According to the app-tracking firm Flurry, “The world has adopted Smartphones and tablets 10 times faster than it embraced personal computers in the 1980s, twice as fast as it logged into the Internet boom of the '90s, and three times faster than it joined social networks in the new millennium” [3]. Gartner, a market research firm, forecasted that 185 billion apps would be downloaded by the end of 2014 [4].

Millions and millions of people all across the world now depend upon apps to shop, play, read, date, learn, work out, take photos, and find directions. Apps today have emerged for every possible need and requirements in a person’s day-to-day life. “Apps bring out the human part of technology,” says Scott Steinberg, a consultant and professional speaker on innovation in St. Louis [3]. Similarly, News apps provide the bulk of information where previously the print media industry was enjoying the monopoly.

Nevertheless, today a shift from not only the print media but also the websites is clearly witnessed. Readers are increasingly looking for added features to boost their reading and efficiency. When deciding to purchase the e-reader version of a newspaper or magazine, more than 50 percent of those surveyed look for the ability to search for related content, additional content not available in print, and video that supplements the stories they are reading. The brick-and-mortar print media continue to see a decline in print sales; the only bright spot is the app market, in which demand are skyrocketing [5].

The Web has provided a platform to more than 4,000 electronic publishers to create Web sites. As a result there is a tough competition among each other as well as with traditional media such as newspaper, magazines, radio and television [6]. The result showed that the newspaper industry is not in as much danger and rather in a quite comfortable position as most publishers fear. Moreover, most of the newspapers publishers have created their own Websites. Consequently, they have positioned themselves in a comparatively better position to remain in the competition.

The availability of various alternatives for news consumption present today has greatly diversified the industry, unlike the previous decades, where the source of information was only newspapers. Due to the growing expectations, the consumers are expecting customization when it comes to choice of news at free of cost at their disposal. Due to this shift there has been a decline in the revenue. Advertising revenue in the print media is comparatively more as compared to the digital media. This has resulted to reduction in reportorial staffing and thereby leaving many areas of investigation uncovered. In the beginning of Digital-First Publication i.e. 1980's 1990's it was rather a fortuitous times for the industry. In addition, it enjoyed large profits at its disposal. However, the 21<sup>st</sup> century saw the industry struggling and saw layoffs after layoffs [7].

Technology has enabled the print media to avoid expenditure on infrastructure of printing presses, newsprint, or a delivery operation. Consumers can now view content on a piece of personal hardware in the form of a Smartphone, or desktop, laptop or tablet computer. But, these digital distribution systems have to prove as a reliable source of established publications revenue to cover up for the losses in print revenue as a whole. Due to emergence of latest Smartphone and computing tablet devices the possibility of new opportunities to disseminate content and generate revenue is showing a great deal of promise. Digital-only publications are discovering new presentations of content that have succeeded in generating user payments, higher ad rates and better sponsorship [7].

“Historians have long understood that the arrival of new technologies has prompted traditional forms of mass media to undergo changes. Media historian Donald L. Shaw [8] argues that media forms progress in stages, from youth to maturity. As their audience dominance wanes, partly because of the challenge of newer platforms, the traditional forms adapt out of necessity. Media technology futurist Roger Fidler [9] has named this process of adaptation a mediamorphosis, arguing that traditional media forms either change or die. At times, such adaptations have been relatively benign. Radio and magazines, for example, revised formats and marketing strategies to respond to the competitive pressures arriving with the powerful new medium of television, but the media platforms themselves remained generally the same. Radio still relied on audio broadcasting; magazines remained a production of words and images on paper. This study focuses on what promises to be a more complex mediamorphosis. It examines the extent to which U.S. daily newspapers are involved in the process of change as they cope with declining circulation in their traditional, printed form and move to adapt to the imposing new realities of digitization. This is a dramatic change that requires newspapers to shift from a once-dominant and now traditional form to a revolutionary new platform and to engage in new journalistic practices more suited to the digital landscape” [1].

News websites offers personalization and adaptive interactivity through software algorithms to predict readers' content preferences. The study debates on journalism's future funding, transparency, and societal benefits. There is a need for studying how news organizations' deployment of personalization on mobile devices in conjunction with social networking platforms will be effective [8].

In case of mobile apps consumer's decision-making process during pre adoption and consumption stages of consumer-based technologies integrate consumer resistance in predicting the end decisions to adopt/not adopt or continue/discontinue the use of a technology [9]. Though the study employed the theoretical framework of cognitive appraisal theory, that integrated the TAM, yet, consumer resistance to adopt technology is not unheard of. Lee and O'Connor [10] found that consumers are constantly stressed about the overwhelming learning and maintenance requirements of new technologies. Mishra [10] quote Nielson wire study that found that despite the surge of apps in the mobile phone market, a 2010 survey of 4,200 Americans reported that only 14% of total Smartphone owners had downloaded apps during 30 days.

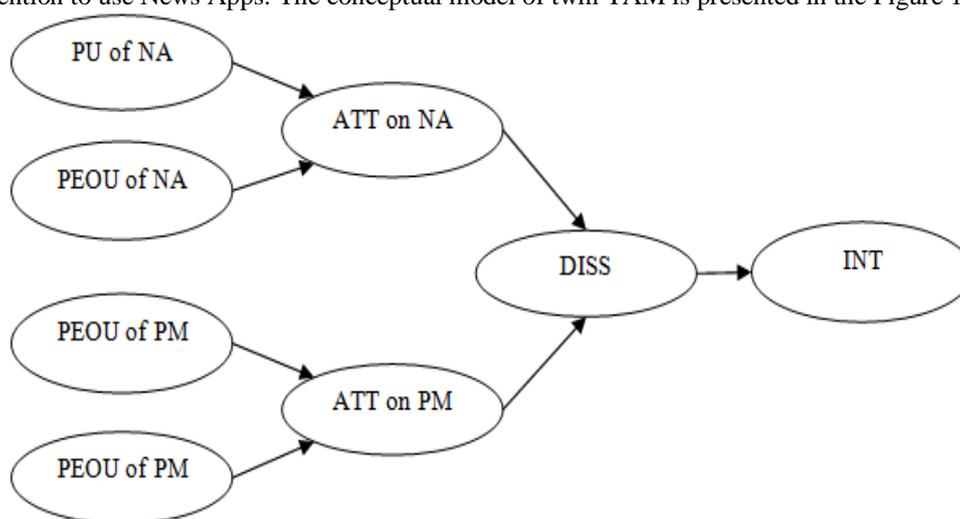
Ram and Sheth [12] pointed out that adoption occurs because of overcoming initial consumer resistance; though the degree of resistance may vary for different consumers. Mishra [10], proposed that degrees of resistance can be seen from being passive to active and further sub-categorized into various levels of consumer resistance such as indifference (either ignoring a technology or refusing its adoption), postponement (either looking for more information regarding the product or waiting for a more appropriate time for adoption), rejection (deciding to not at all take up an innovation) and, opposition (boycotting the innovation).

We see that a lot of research has been done in the areas of newspaper, news websites, mobile apps, technology adoption lifecycle, etc. All these look at various phases of development happening in the print media industry from time to time or in other words taking a shape of mediamorphosis. However, there is a clear-cut gap arising due to less importance given to the contribution of magazine publication. In addition, it plays a major role in the process of information dissemination in the print media industry as a whole. So, a research is required to overcome this negligence of a rather important and potential source of media information. On the other hand, mobile apps have been rather generalized. Thus, news apps made it more apt for the study under consideration as it had made its impact in this industry too. At the same time, creating a relationship between both these crucial mediums made proper sense as they directly or indirectly affected each other. Xu, Forman, Kim & Ittersum [11] examined consumer's news consumption behaviors in using news apps. A longitudinal study done during 2009 and 2010 by the authors revealed that News apps increases the likelihood of visiting the

News website. They argued that the time constrained consumers find concentrated news content at news websites.

### III. Methodology

This study focuses on investigating the use of Smartphone New Apps against the Print Media. Considering the News Apps as technology, Technology Acceptance Model (TAM) of Venkatesh et al [12] will be the suitable theory to explain the factors in the adoption of News Apps. TAM has been used to study the adoption of various technologies and in some case even products like Adult Diapers [11]. Pre-purchase decision involves evaluation of alternatives. Therefore, the attitude towards competing products will have an influence on the purchase decision Behaviour, which reflects a given attitude, may be suppressed because of a competing attitude, or in deference to the views of others who disagree with it. A classic theory that addresses inconsistencies in behaviour and attitudes is Leon Festinger's theory of cognitive dissonance, which is based on the principle that people prefer their cognitions, or beliefs, to be consistent with each other and with their own behaviour. Inconsistency, or dissonance, among their own ideas makes people uneasy enough to alter these ideas so that they will agree with each other [14]. Based on this concept a twin TAM was framed with Cognitive dissonance connecting attitude towards News Apps and attitude towards Print Media and leading towards intention to use News Apps. The conceptual model of twin TAM is presented in the Figure 1.



**Fig: 1 Conceptual Model - Twin TAM**

The Technology Acceptance Model (TAM) is an information systems theory that models how users come to accept and use a technology. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

**Perceived usefulness (PU)** - This was defined by Fred Davis as "the degree to which a person believes that using a particular system would enhance his or her job performance".

**Perceived ease-of-use (PEOU)** - Davis defined this as "the degree to which a person believes that using a particular system would be free from effort" (Davis 1989).

**Attitude:** Individual's positive or negative feeling about performing the target behaviour (e.g., using a system).

**Behavioural intention:** The degree to which a person has formulated conscious plans to perform or not perform some specified future behaviour.

**Dissonance:** Lack of agreement; especially: inconsistency between the beliefs one holds or between one's actions and one's beliefs.

To measure the concepts in the model, a survey instrument was developed by operationalizing the variables. The items for the TAM portion were mainly borrowed from Venkatesh & Davis [17]. The measures of cognitive dissonance is developed from Sweeney, Hausknecht and Soutar [11] and modified to measure pre-purchase decision. The details of the instrument are presented in Table 1.

**Table 1 Instrument Development**

Construct	Items	Scale	Source
PU of NA	5	5 Point Likert Scale	[17]
PEOU of NA	5		
PU of PM	5		
PEOU PM	5		
Attitude on NA	5		
Attitude on PM	5		
Intention	5	5 Point Likert Scale	[11]
Dissonance	10		

Fourth edition of Deloitte's predictions for the technology, media and telecommunications (TMT) in India in 2014 estimated that there will be 104m urban Indians owning Smartphone [11]. According to figures given by Google, over the past four years more and more people in Tier-II cities have been shifting to Smartphones. Google revealed that seven of the top 10 searched keywords in Google contain the word 'apps'. A Google study also revealed that the Smartphone users in Tier-II cities are more app-hungry. Though cities like Vellore, Coimbatore, Erode, Madurai Warangal, Vishakhapatnam, Vijayawada and Nellore have left other metros like Kolkata behind, cities like Bangalore and Hyderabad still lead the list [11]. Considering the density of the Smartphone users and the App downloads, the city of Bengaluru was considered for the study. Since it is difficult to obtain the database on Smartphone users, a sampling frame relied on general public by filtering them by asking if they used a Smartphone. Since the size of the population is larger than one lakh, considering it as an infinite population, the sample size is determined using Krejcie & Morgan [18] as 384. The study uses a survey method-using questionnaire both by direct and online mode to collect the responses. The response will be collected from Teenagers and Adults regarding matters like reading habits, subscription, Smartphone usage, use of apps etc. Interviews with experts in publishing industry were done to supplement the information on the print media future endeavours. Because of a lower response rate, only 243 responses were finally received.

**IV. Analysis and Interpretation**

The data collected through the survey was coded and entered in a spreadsheet. Table 2 presents the demography of the respondents. Majority of the respondents (51.03%) are less than 30 years of age. 26.75% of the respondents are of 30 to 40 years of age. 24.28% of the respondents are salaried. However, majority (32.51%) of the respondents on the occupation fall into the category of others, which mostly included students. Majority of the respondents (56.79%) are men. On the income level of the respondents, 65.02% of them have less than 5 lakhs and 23.05% have 5 to 10 lakhs of income. Around 47.74% of the respondents are graduates and 28.68% are postgraduates.

**Table 2 Demography of respondents**

Variable	Options	N	%	Variable	Options	N	%
Age	Less than 30	124	51.03	Gender	Man	138	56.79
	30 to 40 Years	65	26.75		Woman	105	43.21
	41 to 50 Years	31	12.76		Total	243	100
	Above 50	23	9.47	Income	Less than 5 Lakhs	158	65.02
	Total	243	100				
					Above 10 Lakhs	29	11.93
Occupation	Salaried	59	24.28	Total	243	100	
	Professional	48	19.75	Education	Graduation	116	47.74
	Self-employed	23	9.47		Post Graduation	94	38.68
	Housewife	34	13.99		Above PG	33	13.58
	Others	79	32.51		Total	243	100
	Total	243	100				

The items of the questionnaire are aggregated into constructs and their correlation are calculated and presented in Table 3. All the relationships were found to be statistically significant but having a varying strength. The correlation between Usefulness of News App and Ease of News App (r=0.402), Usefulness of News App & Attitude of News App (r=0.467) and between Usefulness of News APP and Intention (r=0.498) are found to be positive and moderate. In addition Ease of News App and Attitude on News App (r= 0.399), Usefulness of Print Media and Ease of Print Media (r=0.493), Usefulness of Print Media and Attitude on Print Media (r=0.528) are found to be positive and moderate. Similarly, Ease of Print Media and Attitude on Print

Media ( $r=0.424$ ) and between Attitude on News App and Intention ( $r=0.416$ ) are found to be positive and moderate.

The correlation between Usefulness of News Apps and Ease of Print Media ( $r=-0.038$ ), between Ease of News Apps and Usefulness of Print Media ( $r=-0.101$ ), between Ease of News Apps and Attitude on Print Media ( $r=-0.060$ ) and between Usefulness of Print Media and Attitude on News APP ( $r=-0.183$ ) are found to be negative and weak. Similarly between Usefulness of Print Media and Intention ( $r=-0.030$ ), between Ease of Print Media and Attitude on News App ( $r=-0.094$ ), between Ease of Print Media and Intention ( $r=-0.062$ ), Attitude Print Media and Intention ( $r=-0.008$ ) and between Dissonance and Intention ( $r=-0.012$ ) are also found to be negative and weak. All other relationships are found to be positive but weak.

**Table 3 Correlation of Latent Variables**

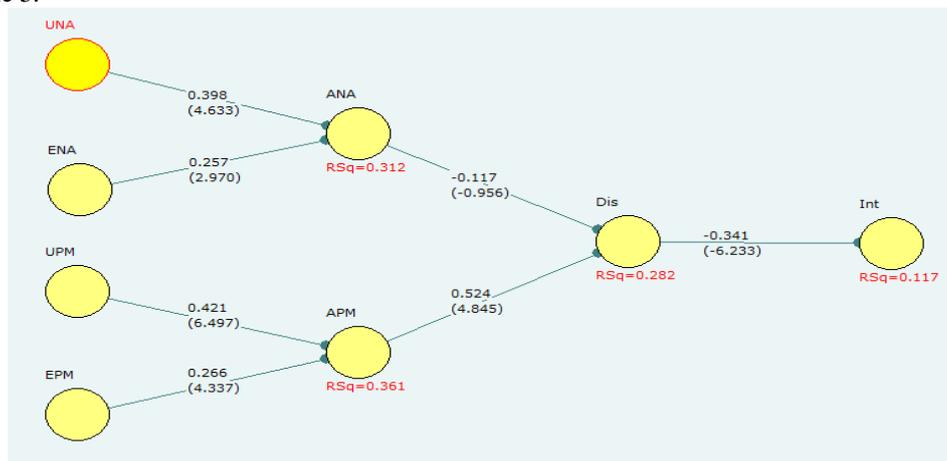
	UNA	ENA	UPM	EPM	ANA	APM	DIS	INT
UNA	1.000							
ENA	0.402	1.000						
UPM	0.039	-0.101	1.000					
EPM	-0.038	0.011	0.493	1.000				
ANA	0.467	0.399	-0.183	-0.094	1.000			
APM	0.103	-0.060	0.528	0.424	0.084	1.000		
DIS	0.210	0.114	0.238	0.261	0.122	0.293	1.000	
INT	0.498	0.367	-0.030	-0.062	0.416	-0.008	-0.012	1.000

Table 4 presents the reliability statistics for the multi-item measures of the constructs. The composite reliability (CR) was obtained after the Cronbach alpha and Average Variance Extracted (AVE) values were calculated. The recommended threshold value for CR is 0.6 and AVE is 0.5. When the calculated values are more than the threshold, then construct internal consistency is evidenced [22]. Similarly, Cronbach alpha > 0.7 indicates satisfactory internal consistency reliability [23]. The results show that the AVE for all the constructs are above 0.5, except for Dissonance (AVE=0.25961). However, Cronbach alpha is above 0.7 and the composite reliability is close to 0.7 Therefore, it is concluded that the all the multi-items are having internal consistency and are reliable.

**Table 4 Reliability and AVE**

Construct	Composite Reliability	AVE	Cronbach Alpha
UNA	0.807590	0.55777	0.701085
ENA	0.834300	0.50458	0.754850
UPM	0.842336	0.52022	0.763073
EPM	0.825192	0.90940	0.731870
ANA	0.840471	0.51571	0.770569
APM	0.806670	0.55355	0.694325
DIS	0.697241	0.25961	0.748983
INT	0.713724	0.59060	0.700562

Since the proposed model is a complex model with parallel paths and multiple levels, Structural Equation Modelling (SEM) technique using Visual PLS (VPLS) that utilizes the Partial Least Square method was employed. The path model was first designed in the Graphic User Interface (GUI) as shown in the figure 2. Further, the data was mapped and then analyzed. The results of the path analysis are presented in the figure 2 and the table 5.



**Fig: 2 Results of vPLS for twin TAM**

Path analysis reveals that Usefulness of News App ( $B=0.398$ ,  $t=4.633$ ) and Ease of News App ( $B=0.257$ ,  $t=2.970$ ) has a positive and significant influence on Attitude of News App. Similarly, that Usefulness of Print Media ( $B=0.421$ ,  $t=6.497$ ) and Ease of Print Media ( $B=0.266$ ,  $t=4.337$ ) has a positive and significant influence on Attitude of Print Media. The next level of the model reveals that Attitude on Print Media has a positive and significant influence on Dissonance ( $B=0.524$ ,  $t=4.845$ ). However, Attitude of News Media has a negative influence on Dissonance but found to be insignificant ( $B= - 0.117$ ,  $t= - 0.956$ ). Finally, Dissonance was found to have negative and significant influence on Intention ( $B= - 0.341$ ,  $t= - 6.233$ ).

**Table 5 Structural Model—BootStrap**

	Entire Sample estimate	Mean of Subsamples	Standard error	T-Statistic
UNA →ANA	0.398	0.4294	0.0859	4.6329
ENA →ANA	0.257	0.2282	0.0865	2.9698
UPM →APM	0.421	0.4301	0.0648	6.4970
EPM →APM	0.266	0.2790	0.0613	4.3367
ANA →DIS	-0.117	-0.1707	0.1224	-0.9559
APM →DIS	0.524	0.4985	0.1081	4.8452
DIS →INT	-0.341	-0.3846	0.0547	-6.2331
R-Square Value				
ANA	0.312			
APM	0.361			
DIS	0.282			
INT	0.117			

The results show that the variance of the final dependent variable ‘Intention’ explained by dissonance is 11.75 (RSq=0.117). The variance of dissonance explained by Attitude on News App and Attitude on Print Media is 28.2% (RSq=0.28.2). Similarly, Usefulness of News App and Ease of News App create of variance of 31.2% on Attitude on News App (RSq=0.312). Usefulness of Print Media and Ease of Print Media explain a variance of 36.1% on Attitude on Print Media (RSq=0.361).

### V. Discussion

Usefulness and Ease of Use has an influence on attitude towards News Apps and Print Media because of the significant role of both the variables either leading to positive or negative relationship of the attitude. Positive attitude towards print media creates more dissonance in presence of attitude towards News Apps as the significance level is more than two. Apparently, if the attitude is positive then the dissonance will be more in case of print magazine. Also, reverse is the case of news apps. More positive attitude towards News Apps reduces the Dissonance. However, cannot be generalized. Need to be tested further. Therefore, making the final statement about this matter will be very early. Attitude towards print magazine creates more dissonance, whereas attitude towards news app reduces dissonance. This dissonance will reduce the intention to read News Apps. Therefore, higher the dissonance will lead to lower intention of the people to read news apps and vice-versa.

The interviews and the secondary sources revealed that there is no urgency or threat on the print magazine. However, a “mediamorphosis” will evolve. Hence, the theory of Media historian Donald L. Shaw [24] about the media forms progress in stages, from youth to maturity is still relevant and plays an important role in the current study of shift from print magazine to news apps. Also, Media technology futurist, Roger Fidler [9] arguing that traditional media forms either change or die. Magazines and newspaper, for example, revised formats and marketing strategies to respond to the competitive pressures arriving with the powerful new medium of news apps, but the media platforms themselves remained generally the same. Validity or reliability of a Twin TAM has proved to be highlight of this present study. As the entire research is backed by or in other words supported by the Twin TAM. It gave clearer picture to compare as well as analyze the two technologies in the News media industry. The influence on intention of using News apps against printed magazines is more. The response collected from various diversified sources with people from both in and out of the publishing industry gave a more meaningful data to support the research at hand and avoided the chances of biasness.

Apps being a new technology have a lot of potential. Its scope has to be limited for the current study. Only, its features and benefits were elaborated. On the other hand its revenue source via advertisement is a potential area for further study. Digitalization can make up for the losses in print revenue. As already mentioned that according to Deloitte, 2010 survey the brick-and-mortar print media continue to see a decline in print sales; the only bright spot is the app market, in which demand are skyrocketing.

Hence, print media can leverage its brand image through digitalization to reach more and more people. Consequently, can fill the gap of loss of revenue and bring the industry back to profit. Alternatively, can charge for the digital media but it lies in the mutual consent of all the players in the print market. As it offers exclusive

news content dedicated to only digital media like in the lines of Wall Street Journal. Content analysis of news in Websites and Mobile Apps were done by Padley [10]. The results indicated that content provided on news apps is the same as the content provided on the news websites because media organizations have yet to take advantage of the technology the app platform has to offer. However, Westlund [10] highlighted that the touchscreen-enabled mobile devices and the flat-rate subscriptions for mobile internet has led to widespread production and use of news-related content and services began to flourish. News agencies are today customising news content to mobiles applications.

## VI. Conclusion

One contribution of this study is developing a Twin TAM that integrates two technologies simultaneously. Usually TAM gives an opportunity to test only a particular or rather one new technology at a time. So, a relationship cannot be established to study the impact and affect on one another. Therefore, this model will help in future research to carry out a distinct relationship among variables to make the analysis and interpretation more meaningful and appropriate. In addition, our understanding of such a modified version will improve our decision-making and conclusion. The study found that the intention to use news apps is influenced by the attitude towards news apps and attitude towards print magazine through dissonance. Hence, dissonance act as a deciding factor for the selection of a variable depending upon the mental conflict, which each individual undergoes for deciding to use it. Attitude towards print magazine creates more dissonance, whereas attitude towards news app reduces dissonance. Therefore, the print media has to seriously look in for its revival strategies to cover the losses and compete in the tech-savvy generation. Digitalization can make up for the losses in print revenue. Consequently, news apps demand is skyrocketing and the only bright spot to boost the sales of the print media is the app market.

Twin TAM expresses the relationship in a classified manner. Different variables are compared and significance of each is checked on one another. Thus, giving a clearer picture on the relationship established in the study. This study supports the concept of mediamorphosis. As news apps are the transition of the media forms progress in stages from print to digital format. Starting its journey from the printing press to news websites and currently the revolutionary news apps, all the three mediums discussed previously exist by supplementing or posing challenges to each other simultaneously. Constantinides [10] proposes that using news apps develop into habit. Reading news on smartphones has provided an individual experience with marked differences in the way people read and access news. Personalisation of news apps, and users' news reading behaviour can be used for developing a smarter app that is able to recognise reading behaviour and adapt its display and interaction methods. "Apps bring out the human part of technology," says Scott Steinberg, a consultant and professional speaker on innovation in St. Louis [3]. Apparently, its penetration into the day-to-day activities is quite evident and creating a sense of dependency on them. The growing demand of Smartphone into the rural market as well creates more and more potential for the availability and usage of apps and particularly news apps in this case.

**Note:** This research study was presented in the 8<sup>th</sup> Great Lakes NASMEI Conference 2014 - An International Marketing Conference in India held at the Great Lakes Institute of Management, Chennai on 26<sup>th</sup> & 27<sup>th</sup> December, 2014.

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