

## Online-To-Offline (O2O) Business: Empirically Examining the Adoption Vs. Non-adoption

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### **ABSTRACT**

The growth of Online-to-Offline (O2O) business is accompanied by a number of failures. Compounding the problem, theoretically-informed knowledge about “why firms adopt O2O” remains limited. The purpose of this study is to address this gap and examine the reasons that influence organizational decisions to adopt (or do not adopt) O2O.

Informed by synthesis of Diffusion of Innovation (DOI) and Technology-Organization-Environment (TOE) theories, the data collected from 24 qualitative semi-structured interviews were analyzed using content analysis techniques.

The results show that firms adopt O2O to: (1) cope with the shift in marketplace (one from sellers to buyers) by adding flexibility and security into offerings, (2) improve engagement with customers through expansion of scope of relationship and reach, and (3) enlarge customer portfolio and profitability. Unexpectedly, the results show that one of the reasons firms not adopt O2O is because they believe that their existing engagement with customers is mature and stable, changes to which could be determinantal. Managerial inertia is another roadblock. Theoretically, the findings build new knowledge on the adoption/non-adoption decision of O2O and reasons thereof. The results equip managers with insights from industry and provide them an understanding of the challenges as well as reasons for adoption/non-adoption of O2O.

## 1. INTRODUCTION

Online-to-Offline (O2O) is one of the latest business solutions which integrate the click-and-order features of online business with brick-and-mortar properties of physical business presence to offer a unique shopping and business experience to both, customers and business owners [1]. It promises to resolve some of the limitations of existing online businesses such as not being able to view/experience the products physically, and online scams/frauds [2].

While adoption of O2O has grown in popularity, the large-scale failures have raised alarms [3]. It is estimated that more than 300 O2O startups across 16 sectors in China failed and had to shut down their operations in the first half of 2015 alone [4], resulting in some authors calling O2O as “Zero-to-Zero” [5]. Yet, the research on O2O seem to be at an early stage of knowledge development and fragmentary. Some recent studies, for instance examining: interests about O2O among Chinese versus Asian consumers using text mining [6]; role of mental representation in product purchase intention [7]; influence of value system on purchase intention and adoption of O2O [8]; and effects of emotion and cognition in customer loyalty in O2O [9], highlight the disparate nature of current knowledge on O2O.

Moreover, O2O adoption-based studies [e.g., 10, 11] are very few and predominantly focused on examining individual level adoption [e.g. 12, 13]. The organizational adoption of O2O is under-researched, resulting in a gap in knowledge. Organizational adoption processes are precursor to effectively engage customers, provide best services and influence their

adoption. Therefore, developing knowledge about organizational adoption is vital for establishing a successful O2O business and reduce failures.

Adding to the problem, theoretically informed studies are scarce resulting in a lack of systematic knowledge development on O2O, which adversely effects the transfer of knowledge to industry to reduce O2O failures.

Another key issue is that O2O is different from traditional eCommerce businesses (B2C, B2B and C2C) mainly in logistics and consumption part of purchase. In B2C/B2B/C2C, the entire process of transaction and payment is done online. The purchased goods are then packed and delivered to the customers through seller’s logistics system at their provided address. Whereas, in O2O customers seek information, purchase and make payment online. But the logistics and consumption parts are typically carried out offline, as customers go to the offline facility to collect, experience and/or consume the product/service. In O2O, customer get to experience the offline service which is different from other eCommerce types.

Traditional eCommerce is advantageous where it is not possible for the customer to experience or view/touch/feel the product physically. For instance, when a customer buys a product online from a seller that is geographically far away (e.g. in another city or country), then traditional eCommerce will be advantageous as customer is able to take benefit of price and availability etc. In comparison, O2O will be advantageous where customer is able to experience and view/feel/touch/consumer the product/service.

Due to differences in O2O and other traditional eCommerce

types, we argue that current knowledge on eCommerce adoption may not be applicable, warranting development of knowledge specific to O2O. Hence there have been calls for more studies on O2O adoption and associated issues [e.g. 14]. Such a situation necessitates the need for more in-depth research to develop theoretical knowledge and practical solutions to guide industry in their decision-making processes and help reduce problems faced by O2O businesses.

The main idea of this study is, therefore, to develop theoretically informed knowledge on organizational adoption of O2O in a Chinese context. We take a Chinese context due to multiple reasons. First, China has been at the forefront of O2O adoption, and as such is a good place to build knowledge on O2O issues. Secondly, China has vast offline shop-fronts combined with online business growth, making it an important source of developing knowledge on O2O. Lastly, a number of O2O businesses have faced problems and failed in China, making it a good choice for further studies.

Given the above motivation, this study seeks to investigate the following research question:

***What are the reasons that influence firms' decisions to adopt (or do not adopt) Online-to-Offline (O2O) business in China?***

The study makes multiple significant contributions to advance knowledge on O2O. The results extend Diffusion of Innovation (DOI) and Technology-Organization-Environment (TOE) theories by building an understanding of organizational adoption decision stage of innovation process of O2O and reasons which drive such decisions. Implications including managerial significance are discussed in detail in Section 7.1.

The remainder of this paper is organized as follows: Section 2 provides a review of the relevant literature. Section 3 explains theoretical underpinning of the study, followed by methodology in Section 4. Findings are discussed in Section 5. Conclusion are detailed in Section 6, and implications, future research directions and limitations are presented in Section 7.

## 2. LITERATURE REVIEW

### 2.1 O2O business and its characteristics

O2O is defined as “e-commerce that combines searching and booking products or services online, and consumption in brick-and-mortar stores” [1]. It offers flexibility, convenience and added layer of security to customers while allowing business owners to promote their offerings and satisfy their customers through enhanced hybrid online-offline engagements. The value proposition comes from combining the online and offline features in many different ways, such as: (a) customers use online stores to seek information about products and services, order and pay online or order and pay offline after they have viewed/checked/experienced their chosen products/services at the physical stores, or (b) acquire information by scanning a QR code at a physical location/store, view/check goods and services offline, and/or make on the spot payments for their chosen goods and services [15]. In O2O case, logistics part is completed by the customers offline as explained in Section 1, thus O2O is different from other eCommerce businesses (e.g., B2C).

O2O uses tools such as SMS, emailing and social media services to inform potential customers about products/services and the physical store location where they can view or buy the products/services [14]. As such, online service helps to strengthen the relationship built by strong offline service. O2O

development has mainly been fostered by the growth of e-commerce and the need for physical stores to keep up with the pace of developments in online commerce [11].

Given the benefits, China is leading the world with large scale adoption of O2O business as a recent report suggests that the gross merchandise volume (GMV) of local life O2O market in China reached an estimated “612.44 billion Yuan in 2016 and it is expected to reach 964.79 billion Yuan in 2019” [16].

### 2.2 Adoption and development of O2O business

The current knowledge on the reasons for adoption of O2O is largely individual level focused with little research on organizational adoption of O2O. The elements such as: offline experience, integration of information (online and offline), savings in time and costs of visiting offline stores by seeking information online before actual purchase decision is made, remain to be some of the key drivers of customers' adoption of O2O [17]. However, to engage customers, it has been found that incentive based online promotions augment offline sales. Offering digital coupons generate online reviews and resultant increase in offline sales, whereas online banner advertisements do not seem to contribute to increase in offline sales [14].

Understanding emotional triggers is vital to design O2O adoption strategies [9]. Roh & Park, [8]'s study confirms such a notion, as they examined O2O adoption in case of cooking versus ordering a meal. They found that value system characterized by degree of moral obligation tends to influence customers' intention to adopt or not to adopt O2O.

Another reason that drives O2O adoption is the availability of supporting technological infrastructure. Mobile communication technology and payment methods are driving uptake of O2O adoption. Increased online-offline integration capabilities have positive influence on customer adoption of O2O [12]. However, customer loyalty dimensions for online and offline mediums have been found to differ, so organizations need to take into account such differences when adopting O2O [13].

Time savings and ease of shopping using QR scanning code terminals, third-party payment gateways are other reasons for O2O adoption [18]. Being able to experience and view goods/services at the offline shop fronts and make payments there if needed, make transaction environment more secure for customers and business owners alike, and reduces risks of fraud from scrupulous eCommerce traders.

Business owners benefit from lower costs of advertising online and having an online presence help them avoid being cut-off from mainstream eCommerce developments and stay competitive in the changing marketplace [19].

In the same coin, pure online shopfronts also see benefits of adopting O2O. The expanding eCommerce market is becoming saturated and with all the technicalities and security issues involved, online business owners can gain benefit by having dual online and offline shop-fronts [1]. Brining customers to offline shop-fronts for picking up the purchased goods create opportunities for more sales. Additionally, not every customer is using internet and a lot of customers prefer to view/feel/experience the product/service before making a purchase decision, hence having an offline shop complementing an online presence is beneficial. A PWC [18] report lend credence to such a notion suggesting that Chinese consumers like to use online-offline convenience and shopping experience much more than compared to consumers

globally.

The extensive review of literature discussed above not only highlights the gap in knowledge on organizational adoption of O2O, but also shows that despite some work the knowledge on O2O (in particular underpinned by a theoretical lens) is still in its infancy. The situation merits further in-depth research to develop theoretical and practical solutions for successful O2O adoption to reduce problems (as reported in Section 1). This study contributes towards achieving such objectives.

### 3. THEORETICAL FRAMEWORK

Given the motivation and the research question, this study uses Diffusion of Innovation [20] and Technology, Organization, and Environment [21] as theoretical lens to understand the decision-making process of why firms adopt (or do not adopt) O2O. These two theories have been extensively used to investigate IT adoptions including enterprise resource planning, E-procurement and E-business [see, 22 for an overview]. We discuss the tenets of these two theories below.

#### 3.1 Diffusion of innovation (DOI)

DOI theory proposes that, “diffusion is the process by which an innovation is communicated through different channels in a certain period of time among the members of a social system” [20: p. 5]. Based on the theory innovativeness is linked to three characteristics: (1) individual characteristics which demonstrate leaders’ attitude towards change, (2) internal characteristics of an organizational structure including control system(s), members’ knowledge and expertise, rules and procedures, linkage between social systems and interpersonal networks, and uncommitted resources available to an organization, and (3) external characteristics [20].

The uptake of O2O platform can be understood through both adoption and non-adoption lenses [23]. DOI theory provides a useful underpinning to understand adoption versus non-adoption. Factors such as compatibility effect reasons to adopt in a positive way, and complexity of the innovation impacts adoption negatively [22]. Firms in their initial stages

of adoption process, if perceive that the innovation is complex and risky could decide not to adopt. When an organization is not fully aware of technology and its benefits, it could also impact the adoption decision [24].

#### 3.2 Technology, Organization, and Environment (TOE)

TOE framework proposes that adoption decisions of technological innovations are influenced by three dimensions: technology, organization, and environment [25]. Technology dimension includes both, the internal and external technologies present in an organization’s business eco-system. Organization dimension includes scope, size and managerial functions. Environmental dimension relates to industry, competitors and firm’s relationship with other institutions including government.

#### 3.3 Synthesis of DOI and TOE theories

This study uses a synthesis of DOI and TOE theories as both theories not only complement each-other, but also provide a more comprehensive underpinning through addition of dimensions that are exclusively covered by each of the theories (Table 1 shows the synthesis). From a complementarity perspective, the internal characteristics dimension of DOI is coherent with the organizational dimension in the TOE framework. Additionally, the external characteristics proposed in DOI complements environmental dimension of TOE factor. Synthesizing the two theories provide a four-dimensional underpinning to investigate O2O adoption process. These dimensions are: (1) individual related factors, (2) external / environment related factors, (3) internal / organization related factors, and (4) Technology related factors. Given, the complementarities explained above and established nature of the two theories, it is argued that using synthesis of these two theories provide a robust and comprehensive mechanism to investigate the reasons why firms adopt and not adopt O2O, which is also consistent with earlier studies on technological innovation process [22]. The synthesis helps us to look into O2O adoption in a more holistic way combining dimensions that are exclusive to each of the two theories and develop a better understanding of nascent O2O types of businesses.

**Table 1.** Synthesis of factors based on DOI and TOE

Theories	Individual related factor	External/ environmental related factor	Internal/ organizational related factor	Technology related factor
DOI	✓	✓	✓	✓
TOI		✓	✓	✓

### 4. METHODOLOGY

#### 4.1 Research design and sample selection

Given limited body of knowledge on the adoption/non-adoption of O2O, we chose to use an exploratory qualitative research design. Such an approach is considered appropriate to discover ideas, gain new insights about the issues under investigation and hypotheses development stage of building scientific knowledge [26-27].

The study used convenient sampling technique to identify respondents from personal network initially, followed by use of snowballing technique to identify additional respondents,

which is consistent with prior studies [28]. The respondents with industry experience and having dedicated involvement in O2O business were chosen, as they were likely to have the knowledge and understanding of the issues under investigation. The respondents included managers belonging to diverse industries, including: catering, real-estate, banking, life service, manufacturing, telecommunication, tourism, and transportation. It afforded seeking an in-depth and inclusive perspective and enhancing the validity and reliability of data collection and analysis. It also helped in acquiring diversity of expert opinion and building new knowledge in an area where little to no research exists [29].

China, being the hotbed for developments of online

commerce and O2O, presented a perfect opportunity to build further knowledge on O2O adoption. The sample frame was drawn from main business centres including Shanghai, Beijing, Ningbo, and Suzhou in China.

#### 4.2 Interview questionnaire development

A review of the literature led to construction of a semi-structured questionnaire for data collection purposes. We used multiple sets of key words (e.g., Online to Offline, O2O business model, O2O + China, O2O + adoption) to identify the relevant literature [e.g. 19]. The review of relevant articles led to identification of some critical issues for further probing and developing insights in relation to the research question. These issues were then used to construct questions to capture respondents’ knowledge and expert opinion. The questionnaire consisted of following components:

- (1). Sample characteristics: The first part of the semi-structured questionnaire included questions seeking interviewees’ profile and characteristics.
- (2). The second part comprised of questions that drew upon respondents’ understanding why firms adopt or do-not adopt O2O. Questions covered issues such as: reasons that make firms unwilling to adopt; motivation(s)/reasons to adopt; and possible reasons for other firms in same industry to adopt/not to adopt.

The initial draft of questionnaire was reviewed by the authors to ensure clarity, appropriateness of language, and inclusion of questions on the pertinent issues to gather relevant knowledge during the interview process. The questionnaire was created, both, in Chinese and English.

#### 4.3 Data collection

The data collection involved 24 semi-structured interviews conducted face-to-face or online, and the average length of interviews varied between an approximately 30 minutes to an hour. The respondents were provided the questionnaire in advance which facilitated them in preparation for the interviews. The semi-structured format of the interviews allowed respondents to express their views freely and share their insights, experience and knowledge in their own way and words. One of the authors’ setup appointments and conducted all the interviews which ensured consistency and reliability of data collection process.

As the respondents were known to be comfortable with speaking in their native language, the interviews were conducted in Chinese. It enabled respondents to share their opinions and provide details of relevant knowledge with ease. The responses were recorded and notes were taken by the interviewer during the interview process. The data collected were then translated into English for analyses purposes. The details of the respondents are provided in Table 2.

**Table 2.** Respondents’ profile

Interview Firms	Respondent’s position/job title	Core business	Number of employees
Respondent 1	Marketing manager	Tourism	20-99
Respondent 2	Senior manager	Tourism (hotel, tickets booking)	200+
Respondent 3	Chief Correspondent	Technology media	20-99
Respondent 4	Marketing manager	Online group-buying platform and offline maintaining	200+
Respondent 5	Marketing manager	Online group-buying platform and offline maintaining	200+
Respondent 6	Marketing manager	Online group-buying platform and offline maintaining	200+
Respondent 7	Store Owner	Catering	0-19
Respondent 8	Shop Manager	Catering	20-99
Respondent 9	Shop Manager	Entertainment	20-99
Respondent 10	Store Owner	Catering	0-19
Respondent 11	Technical manager	Real estate	200+
Respondent 12	Registered broker	Real estate	200+
Respondent 13	Senior manager	Real estate	200+
Respondent 14	Founder	Online platform	20-99
Respondent 15	Bank president	Banking	200+
Respondent 16	Office worker	Banking	200+
Respondent 17	Sales manager	Telecommunication	200+
Respondent 18	Marketing manager	Making QR code	20-99
Respondent 19	Operating Manager	Transportation	200+
Respondent 20	Operating Manager	Telecommunication	200+
Respondent 21	Technical manager	Online platform/e-Commerce	200+
Respondent 22	Assistant manager	Tourism	200+
Respondent 23	Sales manager	Transportation	200+
Respondent 24	Store manager	Manufacturing and sales (electrical equipment)	200+

#### 4.4 Data analysis

The study relied on open coding to code the interviews data. Two authors coded the data independently. To familiarize themselves with data, the researchers read the transcripts several times. Initially, the data were coded based on the

themes derived from the original questions in the semi-structured questionnaire (e.g. reasons/motivations to adopt). Then the data were inductively analyzed to identify patterns within the main themes and as a result sub-themes emerged (second-level coding). Such an approach is considered appropriate for qualitative data analysis [30, 38].

For example, for the main theme (first-level code) 'reasons for adopting O2O', we identified three sub-themes based on the patterns in the data including 'meeting emerging demands of macro-economic dynamics', 'improving engage-ability', and 'intra-organizational drivers' (Section 5.1 and sub-sections). During further data reduction process, repetitive occurrences and relationships were identified in sub-themes data in order to combine them and gain a granular understanding of the reasons for O2O adoption. As an example, under the sub-theme 'meeting emerging demands of macro-economic dynamics', we identified that 'developments in mobile technologies', 'competitiveness and sustainability', and 'demographic changes' as some of the reasons explaining O2O adoption.

During the analysis process, the coding was reviewed and refined until the themes and sub-themes were grouped appropriately. Resultantly, the refinements led to identification of a number of reasons that influence adoption/non-adoption of O2O. A detailed discussion and implications thereof are reported in the section 5.

#### 4.5 Reliability and validity

To ensure reliability and validity, verification strategies such as methodological and sampling coherence were used. Attention was paid while designing the study so that there is a methodological coherence between the research question and method employed [27]. The respondents were carefully chosen so that they are expected to have knowledge of O2O platform and issues related to its adoption. Data were coded by two authors independently to assess the inter-rater reliability. Firstly, the respondents' inputs and views were extracted carefully from the interview data and coded under relevant themes and sub-themes leading to understanding of why firms adopt or not adopt O2O platform. Secondly, both the authors individually coded the descriptive statistics as to how many respondents agreed and disagreed to the themes informed by the analysis. Later the codes were compared for agreement. The result showed 95 % agreement in coding done by both the authors. Where coding inconsistencies existed, they were discussed until an agreement was reached among the authors.

## 5. DISCUSSION OF RESULTS

### 5.1 Reasons influencing adoption decision of O2O

The analysis of the data shows that firms adopt O2O for a number of reasons broadly classified in three themes: 1) Macro environmental dynamics, 2) Improve engage-ability, 3) and Interorganizational drivers.

#### 5.1.1 Macro environment dynamics

The analysis shows that macro environmental drivers influence the adoption of O2O. A number of respondents (e.g., respondents 11,12 and 15) confirmed that they adopted O2O to meet the emerging demands of current macro environment, and the trends in the market. Some of these trends include an increased access and browsing pattern of websites for informational and transactional purposes, growing internet industry. unprecedented surge in mobile usage and increased online orders.

Respondent 11 and 22 explained the reasons succinctly as below.

*The appearance of online property is not only because of the change from real estate market, but also due to the upgrading of internet industry (Respondent 11).*

*Mobile internet is the current trend. Because of the tourist law, many travel agents lose profit so that they turn to O2O business model (Respondent 22).*

The findings show that the technological trends, in particular developments in mobile technologies, availability of high-speed broadband and payment technologies have encouraged more customers to use internet resulting in businesses using online channels for marketing and sales. In addition, smart phone and associated apps have facilitated easy access to information seeking, online purchasing first and collecting/experiencing goods/services offline influenced the growth of O2O.

Corresponding to the above discussion, respondents 1 highlighted that their reason for adopting O2O was the trends in increased online orders by saying:

*To conform the trend that an increasing number of customers choose to browse websites and make orders online when they want to get a trip. To remain competitive, our company also applies the O2O business model (Respondent 1).*

The issue of competitiveness and sustainability highlighted above is certainly giving many reasons to traditional brick-and-mortar storefronts to adopt O2O to ensure they are not left behind. Not only it helps traditional businesses to stay relevant in the marketplace but adopting O2O give them opportunities to diversify risks involved in choosing one medium of delivery i.e. offline, strengthening earlier findings in Dubelaar, Sohal and Savic, [31].

Similar sentiments were also expressed by few other respondents (e.g., respondents 15 and 21) who agreed that O2O is a current trend in china which was a reason for their adoption. This is highlighted in the quotes below:

*The first reason is that join in the business mode is the current trend (Respondent 15).*

*It is the new trend and our company is working on join in this business model (Respondent 21).*

The analysis also points to the demographic trends as another macro environment driver which complements technological developments. China is witness to a major demographic shift such as increased millennials, who access more internet than the other age groups. Millennials tend to access information through online sources rather than print media. This also seems to have contributed to the reasons why firms adopt O2O.

Additionally, a number of respondents (e.g., respondents 9,15, and 18) gave the reason that adopting O2O platform will lead to enlarging customer portfolio. Respondents 9 and 17 explain their reasons in following words:

*Joining in the platform is to maintain competitiveness and attract more consumers (Respondent 9), and it is convenient; moreover, offering online coupons can attract more clients (Respondent 17).*

One of the key benefits for customer to adopt O2O is to get enhanced personalized experience. Customers can receive product(s)/service(s) recommendations based on their preferences from online mediums to make purchasing decisions by visiting offline stores [32]. The results extend earlier findings that have emphasized the role played by recommendations systems [33-34]. Factors such as public popularity, user-specificity, location relevance and real-time display facilitates specialization [32] leading to enlargement of customer portfolio.

The results also confirm to tenets of DOI and TOE theories that have emphasized the influence of environmental factors on the reasons to adopt technologies. Environmental trends such as increased use of online infrastructure for informational and transactional purposes, growing internet industry, unprecedented surge in mobile and portable devices usage, availability of online payment technologies and increased online orders are instrumental to the decision of firms adopting O2O based on our findings in conformance to the theories underpinning this study.

### 5.1.2 Improve engage-ability

The results show that firms adopt O2O to enhance their nature and reach of engagement with customers and suppliers; and to overcome location limitations. By adopting O2O, firms can expand their scope of engagement by having both dual offline and online presence, overcome limitations that may be inherent in either having an online or having an offline presence, and improve customer satisfaction.

Respondents (e.g., 3, 19 and 23) subscribed to such a view as they suggested that O2O brings customers and suppliers closer to the business. Following quotes highlight their understanding:

*O2O can avoid the situation that suppliers cannot find customers or customers cannot find suppliers (Respondent 3).*

*Taxi is an important vehicle for people; however, sometimes it is hard to call a taxi. An APP can connect drivers and passengers conveniently (Respondent 19).*

*At the peaks, consumers need to wait in queues a long time for buying tickets. Applying the O2O business mode, passengers can buy tickets online, which will save their time. Moreover, it is easy to manage for us (Respondent 23).*

One of the key points that emerged from the above discussion is the diversity and inclusiveness of O2O. Its utility seems to transcend a wide variety of businesses e.g., transportation, entertainment. Another element that is driving its adoption is the abundance of business scenarios in which O2O can be used. The wide-scale applicability offers opportunities to business owners to benefit from O2O adoption and remains to be one of the reasons for its uptake.

Few other respondents (e.g., respondents 2 and 22) highlighted another reason for O2O adoption suggesting that O2O helps in overcoming location limitations. Such benefits facilitate building closer relationship with customers and suppliers. One of the respondents explained the reason as:

*The traditional travel agency contains geographic restrictions. However, internet gets rid of these territory limitations and attracts customers around the world (Respondent 2).*

Adopting O2O platform certainly closes the gap between customers and suppliers. Suppliers can market their products and services online and customers can search for their requirements online first, before going to physical store location. With the help of O2O platform businesses can overcome the location disadvantage by reaching out to wider customer base through online presence ultimately bringing them to physical store(s) later. It enhances customer satisfaction and saves their time.

The results are aligned with theoretical underpinning of this study. The combination of internal and external technological factors as espoused in TOE theory facilitates improved engage-ability between businesses and customers and reasons to adopt as found in this study.

### 5.1.3 Intra-organizational drivers

Numerous respondents (e.g., respondents 14,4 and 21) suggested that their reason for adopting O2O was to achieve organizational gains such as reduced costs, greater market share, and meet the market changes. This is highlighted in the quotes below:

*If a company needs to achieve the market share in that case they support their company join in O2O business model (Respondent 4).*

The online property website is the inexorable outcome of internet booming. Although it seems that the appearance as real estate O2O platform is because of benefit entanglement between online and offline, the essence reason is the marketing environment change. The market was transferred from and has turned from a sellers' market to a buyers' market which indicate that the traditional business model can only create limited profit to customers. As the result of it, some property agents fled. To conclude, property (businesses) apply the O2O business model is to deal with these changes. (Respondent 12)

The essence of discussion with respondents is that adopting O2O increases visibility and presence of a company in the marketplace, an observation also confirmed in e-Marketplace context [37]. As such, it helps in increased sales, ultimately contributing to an increase in market share. Among the major market changes, technology is the biggest change driver which influences every aspect of internal and external business operations. By adopting to O2O, businesses can cope with technological changes, achieve sustainability and increased profits [31].

Another key point that emerged from above is the occurrence of shift of power in the marketplace from sellers' to buyers' market. Such a shift is changing the dynamics and the nature of engagement. Businesses need to create and sustain value to retain existing and acquire new customers. O2O provides that balance of online-offline features to enable businesses to provide added value to entice and retain customers.

A number of respondents (e.g., respondents 7,8,10 and 22) expressed that adopting O2O leads to gaining more profits as eloquently put by respondent 10.

*My friends, who run a restaurant, recommended this platform to me and said that after adopting this platform, leads to more profit (Respondent 10).*

By adopting O2O, businesses can increase profits in many ways. These include, but not limited to, reduction in marketing and operational costs (e.g., by having less number of staff members at physical stores due to online presence), increased customers, enhanced brand image, improved customer satisfaction due to dual presence, discounts bringing more customers and increased revenues. Combination of these reasons lead to sustainable operations and profits and adoption of O2O

The findings confirm the existence of internal characteristics that influence adoption of O2O as emphasized by the DOI and TOE theories [25]. Building internal systems and managerial competence play a major role in the growth of an organizations and adoption of O2O facilitates such growth as highlighted by our findings.

## 5.2 Reasons influencing non-adoption decision of O2O

Analysis of the data show that firms in industries such as entertainment, banking and finance, communication, travel and automotive are using O2O and benefiting from its

potential value. But at the same time, our study identified a number of reasons that influence firms to not to adopt O2O. These are broadly classified along five major themes: 1) Maturity of existing business model, 2) Managerial inertia, 3) Lack of resources, and 4) Unwillingness to offer discounts. We discuss these findings in more details below.

#### 5.2.1 Maturity of existing business model

Our analysis shows that many respondents (e.g., respondents 5,6 and 21) subscribe to the view that their existing business (traditional) model is mature and profitable. In addition, respondents suggest that changing or replacing the existing tradition model is complex. These views are reflected in respondents' quotes below. In fact, a respondent from housing firm stated that they have their own bespoke platform making it difficult for them to change and adopt hybrid O2O approach.

*Their stiff business mode obstructs their advance. Moreover, current business mode is profitable* (Respondent 21).  
*Some housing resources have their own selling channel and they do not need to be posted online* (Respondent 13).

Adopting O2O could be complex and fraught with dangers of failure as technology is advancing at a rapid pace. Transitioning to O2O from existing mature business models could make some firms insecure and risk prone. Some firms may consider adopting O2O to be a complex endeavor due to a lack of awareness of benefits of O2O. Overall, it seems that by raising awareness, such hurdles can be overcome, particularly for those industries where having an online channel is critical for business survival.

The results confirm the tenets of DOI and TOE theory. Internal or organizational related factors play a major role in decision making related to technology. Organizations having a mature business model may find it challenging to transition towards more dynamic technology such as O2O resulting in non-adoption of O2O.

#### 5.2.2 Managerial inertia

The results also show that managerial inertia is one of reasons to not to adopt O2O. A number of respondents (e.g., 3,18 and 24) suggested that managers' opinions/views/motivation play an important role in adopting or not adopting O2O. Respondent 3 puts this succinctly as:  
*The conventional and insular opinions of managers* (Respondent 3)

Managers exercise influence and enjoy large decision-making powers in Chinese firms. The primary decision makers making decision about adopting O2O will be the managers as they handle business operations. So managerial inertia and resistance to change could be crucial deciding factor in non-adoption of O2O. Managerial inertia could be due to their appetite and liking for maintaining status quo and avoiding any power shifts and position changes due to adoption of new technology.

Managers may also be concerned that their position may weaken or become irrelevant due to changed circumstances because of O2O adoption. Managerial inertia could also happen due to a lack of knowledge resulting in their lack of motivation to adopt O2O.

This finding can be explained through individual related characteristics as espoused in theories underpinning this study. Manager's attitude plays a major role in technology related decision making, so if a manager has a negative attitude

towards the O2O adoption, then this will lead to an impediment to O2O adoption.

#### 5.2.3 Lack of resources

One of the reasons that emerged from analysis of the data was that a lack of resources such as lack of funds, technology, and knowledge could play a limiting role and contribute adversely to O2O adoption. Some respondents (e.g., 2 and 4) noted that lack of resources determine whether firms adopt O2O. They mentioned this by saying:

*The first reason is lack of funds to build its own O2O platform. This business model costs a plenty of money to support in the earlier stage, after that, you can probably gain profit in the later stage. Another reason is the O2O business model is not suitable for business mode* (Respondent 4).

*Another reason is lacking of technology* (Respondent 2).

Organizational business improvements and changes cannot be achieved without having the required resources. These could be both financial and non-financial resources. To make a shift from a traditional business to an O2O platform requires funds. When firms lack funds, it will make the proposition difficult to adopt O2O. Similarly, to implement O2O, firms need basic technologies such as web-presence, hardware, software, and network access. Without having these or the funds to implement required technological infrastructure will make it impossible to transition to O2O. The findings extend work by earlier studies in O2O context [1].

Not having human capabilities with right skill sets, expertise, knowledge, and people with experience will also make it difficult to effectively implement and operate on an O2O business.

Organizational size influences adoption decision as proposed by theories underpinning this study. Small firms may have difficulty in adopting O2O due to a lack of both tangible and intangible resources as also pointed in this study.

#### 5.2.4 Unwillingness to offer discounts

The analysis also shows that one of the reasons firms do not adopt O2O is because they are worried about the resultant cost escalations due to discount and promotional offers typically associated with O2O business. Few respondents (e.g., 5,6 and 8) stated that companies did not want to adopt O2O because they did not want to give discounts as highlighted in the below quotes:

*Other restaurants that do not want to join in our platform, they may do not want to offer a discount for consumers and their traditional business mode is profitable* (Respondent 6).

*As to other restaurants that do not want to join in our platform, they may not want to give a discount for consumers* (Respondent 8).

Adopting O2O may necessitates offering discounts and promotions. It seems that some firms consider it as an impediment and are not willing to offer discounts as they fear that it might impact their profitability. Offering discounts might also impact the day-to-day cash flows. The benefits of offering discounts such as increased customers may not be visible immediately and could only be evident in long-term. So, firms that are still in the early stages of their developments or have scarce resources may not be willing to offer discounts, resulting in reluctance to adopt O2O.

The results point to the internal characteristics of a firm as specified by the DOI and TOE theories. If a firm's internal structure and control systems are too rigid, it will be difficult

to adopt a technology such as O2O, resulting in a non-adoption decision.

### 5.2.5 Structural reasons

Our findings also identified some assorted internal structural reasons for firms deciding not to adopt O2O. Respondents including respondents 3,13,15 and 24 stated that other issues such as, suitability of business models, overcoming inherent problems, and difficulties in breaking value chain are the possible reasons for not adopting O2O. For instance, some respondents said:

*Applying the O2O business mode cannot fix inherent problems of the company* (Respondent 15).

*After dabbling in the O2O business mode, the result is not satisfactory* (Respondent, 24).

The above issues point to the fact that not everyone sees or realize the potential value of O2O adoption. While millennials constitute the major chunk of O2O consumer-base, businesses need to also focus on other age groups. Mature-age consumers might still prefer the traditional purchasing ways. A business dependent on mature age group consumers may not be willing to transition to O2O.

Moving to O2O may mean achieving benefits in long-term. If a business is looking for immediate returns on their O2O venture, they may not find it challenging to adopt O2O. The findings resonate organizational/internal characteristics of DOI and TOE theory, where firms that do not see technology as beneficial or fitting to their context may decide not to adopt.

## 6. CONCLUSIONS

O2O offers value added business solution to satisfy diverse needs of customers and businesses alike, resulting in a strong growth of O2O in China. However, there have been large scale O2O failures too. Compounding the problem, little knowledge exists on the organizational level adoption of O2O. Given that O2O is different from traditional eCommerce businesses (B2C, B2B and C2C) mainly in logistics and consumption part of purchase, it is critical to build knowledge on O2O adoption. In particular, uniqueness of its features requires an understanding of both online and offline channels of transactions, hence knowledge about traditional eCommerce which is focused on online medium alone may not be sufficient to make decisions about O2O.

Underpinned by DOI and TOE theories, this study, therefore, examined the reasons that influence adoption versus non-adoption decisions of O2O, particularly in a Chinese context. In summary, our results show:

(1). Emerging macro-environmental dynamics play a key role in firms' decision to adopt O2O. Trends such as increased use of online infrastructure for informational and transactional purposes, growing internet industry, unprecedented surge in mobile and portable devices use, availability of online payment technologies and increased online orders, are instrumental to O2O adoption. As O2O provides an added layer of security, satisfaction and personalized experience by facilitating a dual online and offline access to customers, it alleviates some of the concerns with just having either online or offline presence [35].

(2). O2O changes the nature and scope of customer engage-ability. By facilitating dual online-offline engagement, O2O enlarges the scope, value and the nature of engagement. Organizations have more options to satisfy customers in

different ways using online and offline resources, capabilities and presence. These findings extend earlier work where customer satisfaction is found to be fundamental to the success of businesses that offer products using online channels [13].

(3). Intra-organizational drivers such as technological influences, catching up with market developments and competition are also some of the other reasons driving O2O adoption. But more importantly, the shift of power in marketplace from 'sellers to buyers' market is becoming one of the key reasons to adopt O2O. Adopting O2O helps organizations to take a balanced dual online-offline approach to deliver value-added experience and build sustained win-win engagement with customers. O2O increases visibility and presence and helps in an increase in sales, ultimately contributing to an increase in market-share. Adopting O2O also means implementing new technologies and coping with the market trends achieving sustainability and increased profits.

Unexpectedly, the study found that organizations seem to believe that changing or replacing the existing tradition model is complex. But such an understanding could stem from a lack of awareness of the potential benefits. Organizations not adopting O2O may soon find themselves left behind by the competition and become unsustainable in the marketplace.

Additionally, another non-adoption reason that emerged from the findings was the fear of costs escalations. One should not forget that while operational and maintenance costs could escalate post O2O implementation, the long-term benefits potentially outweigh such costs escalations. By having a proper business plan/strategy, organizations can allay such fears.

The findings confirm the tenets of DOI and TOE theories and support earlier studies on technology adoption [23, 36]. The results strongly point to the fact that individual and internal/organizational related factors play a major role in O2O adoption/non-adoption.

## 7. IMPLICATIONS, FUTURE RESEARCH DIRECTION AND LIMITATIONS

### 7.1 Implications for research and practice

The results offer several significant implications for theory and practice. Theoretically, the findings extend DOI and TOE theories by applying them to O2O based new e-Commerce. The results, therefore, contribute to the developments of theories of innovation in relation to adoption decision stage and the reasons driving such decisions.

Another significant theoretical contribution of this study is that it has identified and documented some of the key reasons that influence decision making process of adopting O2O business. Therefore, it adds to the adoption stage knowledge of DOI and TOE theories.

This is one of the first studies that have investigated reasons for adopting or not adopting O2O. The new knowledge created by this study in an area with little research is of significant importance for further theoretical developments on O2O business.

Managerially, the findings will help perspective O2O/eCommerce managers, Chief Information Officers (CIOs), Business development and Senior management to learn from the experience as discussed in respondents' expert opinions. These managers then can use the knowledge to make



informed adoption decisions and develop tailored strategies to adopt O2O and overcome any challenges that they may face.

Secondly, the results provide managers with an understanding of areas of focus for O2O adoption, e.g., enhancing scope of engagement by implementing marketing programs and reach out efforts through social networks such as WeChat, Weibo, QQ etc. The identification and documentation of some of the reasons for non-adoption decision of O2O will help potential adopters overcome challenges, such as managerial inertia and lack of resources.

Thirdly, knowledge developed by this study will help organizations to put into place a dedicated team to develop a business plan and implement O2O. Managerial inertia can be overcome by continuous upgrade of knowledge within organization, training and industry engagement activities. One of the reasons indicated in the study is the fear of costs escalations and managers can overcome such concerns by doing a proper cost-benefit analysis for adopting O2O.

The knowledge created by this study will help policy makers to understand the bottlenecks in O2O adoption and develop policies, required infrastructure and environment to accentuate O2O adoption.

## 7.2 Recommendations for future research and limitations

This study has opened-up a number of avenues for future research. Firstly, the study has laid the foundation for further work on the decision-making process of O2O adoption to develop understanding of key decision-making criteria for adopting versus not adopting O2O. Additional work can be undertaken to investigate these decision-making criteria from various industrial concentration perspectives to identify similarities and differences across those concentrations.

Further work may be done involving a larger sample to gather an enlarged and broader understanding of the reasons for adoption and non-adoption of O2O. Future work can use cross-sectional survey to firm up reasons for adoption or non-adoption from a large sample population. The quantitative data collected as such can be empirically analyzed using regression, correlation and for multi-collinearity.

Further studies should also look into the experience of those who have adopted O2O to remove any misconceptions about O2O adoption and reduce or eliminate the reservations and concerns among some of the potential adopters. More work should look into triggers to decision making process of adopters versus non-adopters. Lastly, future work should capture the adoption experience through a longitudinal study to provide an in-depth understanding of the adoption process.

The study has some limitations as well. This research adopted qualitative design for data collection and analysis which is considered subjective. Sample size of the study involved 24 respondents which could be considered medium-sized. However, given that O2O developments are still in infancy, the sample is quite adequate to build new knowledge. As the results are based on the qualitative study in a Chinese context, generalizations of the findings should be done with caution.

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