JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

UNDERSTANDING INVESTOR BEHAVIOUR TOWARDS CROWDFUNDING: AN EMPIRICAL ANALYSIS FROM INDIA

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Abstract: Limited empirical literature exists on the behavior of investors towards crowdfunding investments in spite of the changing regulation landscape in India. To bridge this research gap, the present paper attempts to study (i) the level of awareness among investors regarding the financial investment opportunity offered by crowdfunding, and (ii) the various factors affecting crowdfunding investment decision-making. Primary data were collected from 378 respondents in North India with the help of a questionnaire based survey and analyzed using descriptive analysis and exploratory factor analysis. Findings reveal that the majority of the respondents have no knowledge about crowdfunding and prefer risk free instruments like fixed deposits. Six factors that influence the decision of crowdfunding investments have been identified, which include reward motivation, transparency, financial feasibility, mass communication, convenience and goal orientation.

Keywords: Crowdfunding; Crowd Investment; Start-up Financing; Investor Awareness; Factor Analysis

1. Introduction

Crowdfunding is a process of fundraising for projects or ventures whereby small amounts of money are collected from many people through the internet or social networking websites such as Facebook, LinkedIn, and Twitter, as well as through dedicated crowdfunding websites like Ketto, Kickstarter, GoFundMe, and Crowdrise. It provides a middleman function between the campaigner or entrepreneur of the project and the crowd who will be providing funds. The process was pioneered in the United States and the United Kingdom but has become popular worldwide since 2008 especially after the global financial crisis.

Industry forecasts indicate significant growth in the volumes of global crowdfunding during the last decade. The industry report by Massolution put the volume of global crowdfunding at about US$34 billion in 2015, while further market studies (such as the estimations by Technavio) forecasted continuous double-digit compound annual growth till 2020. Crowdfunding is a relatively new concept in India. It started to gain interest since about 2009, first in connection with funding start-up companies and independent film-making, and gradually became more popular as people started realizing the existence of other sources of funding. India is currently among the most rapidly growing start-up environments in the world, being ranked third only behind the US and the UK in terms of number of technology start-ups. Nevertheless, Indian start-ups still find themselves operating under relatively tough regulatory and tax legislation compared to Singapore and others.

Noting the role of other avenues of financing for funding SMEs and entrepreneurs, SEBI has taken various steps in its regulatory regime. In 2012, the Alternative Investment Funds Regulations were amended to provide for Angel Funds within the regulatory regime. In 2013, the Chapter XB of the SEBI (Issue of Capital and Disclosure Requirements) Regulations provided for a separate SME trading platform on stock exchanges. In 2014, SEBI published a Consultation Paper on Crowdfunding in India, wherein it invited comments from all stakeholders on the proposed regulatory framework for crowdfunding in India.

Considering the difficulties and legal constraints associated with conventional means of financing in India and the emerging status of crowdfunding, there is indeed a necessity for studying the awareness about crowdfunding and the determinants of the decision-making process regarding crowdfunding investments. This study tries to fill this gap by conducting an empirical study on (i) the awareness about crowdfunding investment and (ii) the determinants of the same among a set of investors from North India.

2. Literature Review

Crowdfunding research through empirical methods, especially in India, is not very extensive. Crowdfunding has been studied based on its different business models (such as donation model, reward model, equity-based model, and lending-based model) and that it is used as an alternate financing channel, however very few studies have been done concerning the problems faced by crowdfunding sites or the psychology behind individual investment behavior.

The study by Mitra (2012) was based on a review of the global market of crowdfunding and principles behind various models of crowdfunding, from which the author concluded that donation-based and reward-based crowdfunding are the most widespread types across the world, whereas equity-based crowdfunding has proved to be very popular in Europe and Australia. The paper by Macht and Weatherston (2014) defined crowdfunding as a fundraising mechanism that is particularly beneficial for small business as it not only allows to receive funds but also brings publicity, network opportunities, and future fundraising possibilities without losing ownership and control characteristic of venture capital investments. Meyskens & Bird (2015) looked into the importance of crowdfunding for funding social ventures and provided a typology of crowdfunding platforms and social value creation models. Golić (2014) considered crowdfunding as an alternative source of financing for SMEs.

According to Mollick & Robb (2016), crowdfunding reduces entry barriers for both entrepreneurs and investors since it eliminates intermediaries and allows the crowd to participate directly in funding and evaluating ventures. The work of Younkin & Kashkooli (2016) builds on the above idea in that it attempts to identify specific issues in the traditional entrepreneurial finance that crowdfunding can effectively address. As far as the issue of platform integrity is concerned, Siering, Koch & Deokar (2016) developed a framework aimed at identifying signs of fraud on crowdfunding platforms based on linguistic and textual analysis and designed to boost trust of investors in such platforms. In their IOSCO staff working paper, Kirby & Worner (2014) describe crowdfunding as a rapidly growing yet relatively new industry.

All considered, the above literature highlights the rising global significance of crowdfunding and captures the key operational models of this emerging phenomenon; yet it does not address two areas which are filled by the current research. The first gap lies in the fact that there is not much literature on the topic of crowdfunding from the perspective of the Indian experience, due to India having its own unique regulatory environment (incomplete and not yet finalized SEBI framework) as well as a large pool of investors who are digitally connected but not fully aware of their capabilities and options. The second gap relates to the fact that most studies do not empirically assess the drivers of investors' behavior.

3. Models of Crowdfunding: An Overview

Crowdfunding was defined by SEBI in its 2014 Consultation Paper on Crowdfunding in India as the collection of funds in small amounts from several investors via an online platform or social networking website for a particular cause or project or business venture. In similar fashion as other forms of financing, the type of crowdfunding to be used will depend on the particular product or service or cause to be funded. Four major types of crowdfunding include Donation, Reward, Equity, and Lending/Peer-to-Peer Crowdfunding.

3.1 Donation-Based Crowdfunding

Crowdfunding on donation basis is mainly used to address philanthropic and social issues, which include financing healthcare costs, providing disaster assistance, and community projects. The donors are driven to act because of social motivations rather than financial gain, and there is no tangible or measurable benefit from their participation.

3.2 Reward-Based Crowdfunding

Reward-based crowdfunding is considered one of the most recognized types of crowdfunding. In this type of crowdfunding, people put in their money in return for something that is not monetary in nature. It is usually the product or service that is going to be offered, similar to a pre-sale process. This form of crowdfunding is popular for funding creative and entrepreneurial projects and is the most prevalent form of crowdfunding on sites like Kickstarter and Indiegogo.

3.3 Equity-Based Crowdfunding

The equity crowdfunding mechanism entails the raising of capital from the public in exchange for equity or ownership of the firm in the form of stocks (Kirby & Worner, 2014). Equity crowdfunding is most similar to conventional venture financing, although the tickets are smaller in nature and the process is carried out via the internet.

3.4 Lending-Based (Peer-to-Peer) Crowdfunding

In the P2P lending process, there is an online intermediary that connects lenders and borrowers where lenders extend unsecured loans while the platform usually fixes the rate of interest for the loans. It is important to note that unlike bank deposits which are backed by deposit insurance, P2P loans have no form of deposit insurance and hence the investors bear the risk of loan default.

4. Need for the Study

India’s start-up ecosystem is growing rapidly, although the funding climate for Indian start-ups remains relatively tough: heavy taxes, cumbersome corporate formalities and an evolving system of intellectual property and patents. While SEBI has made some moves towards regulation of crowdfunding, there is as yet no law in place regarding crowdfunding in India. Due to the legal hurdles and complications involved in the traditional methods of finance in India, as well as the challenges involved in deciding on the risk/reward ratio of an unregulated form of investment, it has become necessary to study investor awareness of and motivations for investing in crowdfunding.

5. Objectives of the Study

Objective 1: To measure the extent of awareness regarding crowdfunding as an investment tool among investors in North India.

Objective 2: To uncover and deduce the hidden factors affecting investment decisions towards crowdfunding.

6. Research Methodology

The design of this research is descriptive survey research. The primary data was collected through structured questionnaire that covers four major aspects: (i) demographic variables of respondents, (ii) awareness about the crowdfunding as an investment opportunity, (iii) preferences towards various investment options, and (iv) 21 items representing perception and motivation towards crowding funding investment decision on the basis of five point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree). The primary data was collected from the respondents staying in North India through the method of convenience sampling. Total 400 questionnaires were distributed and out of that 384 were received and finally 378 were selected for analysis out of which 6 were dropped due to incompleteness. Thus, effective response rate was found to be 94.5 percent. IBM SPSS software was used for data analysis using descriptive statistics (frequencies and percentages) to achieve objective one and exploratory factor analysis (principal component method) to achieve objective two.

7. Limitations of the Study

1. Respondents may lack adequate knowledge regarding crowdfunding as an idea, and hence the validity of the results obtained from these questionnaires may be jeopardized.

2. The study takes place only in North India, and rural respondents and other urban areas are not included in the survey, making the results limited to North India only.

3. Inadequate digital/computer knowledge among certain individuals may impede their participation in crowdfunding due to its Internet base nature.

4. Like any survey results, there is a possibility that the questionnaire answers may have been influenced by various biases such as social desirability bias.

5. Due to the use of convenience sampling in one particular urban area sample, results obtained can only be generalized to this sample and cannot be assumed to reflect the entire country.

8. Data Analysis and Interpretation

8.1 Demographic Profile of Respondents

Table 1: Demographic Profile of Respondents (N = 378)

Variable	Category	Frequency	Per cent
Gender	Male	200	52.9
	Female	178	47.1
Age	Less than 30	34	9
	31–40	56	14.8
	41–50	84	22.2
	51–60	125	33.1
	Above 60	79	20.9
Qualification	SSLC	12	3.2
	PUC	137	28.8
	Graduate	109	36.2
	Post Graduate	120	31.8
Occupation	Salaried	136	36
	Self-employed	104	27.5
	Professional	78	20.6
	Business	55	14.6
	Others (pensioners, homemakers)	5	1.3
Annual Income (₹)	Below 3,00,000	81	19.3
	3,00,000–5,00,000	73	21.4
	5,00,000–10,00,000	96	25.5

10,00,000–15,00,000	87	23
Above 15,00,000	41	10.8

Source: Primary Data

Table 1 also shows that 52.9 percent of the respondents were males and 47.1 percent were females. The highest age category was 51-60 years (33.1 percent) followed by 41-50 years (22.2 percent), over 60 years (20.9 percent), 31-40 years (14.8 percent), and under 30 years (9.0 percent). In educational qualification, 36.2 percent of respondents were graduates and 31.8 percent were postgraduates, and the rest had PUC (28.8 percent) and SSLC (3.2 percent) qualifications. In occupation, salaried workers were the largest segment of the respondents (36.0 percent) followed by self-employed persons (27.5 percent), professionals (20.6 percent), businessmen (14.6 percent), and others (1.3 percent). With regard to annual income, 25.5 percent of the respondents were from ₹5-10 lakh, followed by ₹10-15 lakh (23.0 percent), ₹3-5 lakh (21.4 percent), under ₹3 lakh (19.3 percent), and over

8.2 Awareness of Crowdfunding

Table 2: Awareness of Crowdfunding as an Investment Option (N = 378)

Response	Frequency	Per cent	Cumulative Per cent
Aware (Yes)	129	34.1	34.1
Not Aware (No)	249	65.9	100
Total	378	100	

Source: Primary Data

According to Table 2, it can be seen that most of the respondents (65.9%) were not aware of crowdfunding as an investment tool, whereas only 34.1% had knowledge about crowdfunding. It is clear from the results that there is a significant gap in awareness of crowdfunding even among an educated and urban population sample.

8.3 Preference Across Investment Avenues

Table 3: Preference for Various Investment Avenues (N = 378, per cent responding 'Yes')

Investment Avenue	Frequency (Yes)	Per cent (Yes)
Fixed Deposit	278	73.5
Savings Deposit	200	52.9
Post Office Scheme	179	47.4
Recurring Deposit	154	40.7
Public Provident Fund (PPF)	127	33.6
Stock Market	66	17.5
Gold Bonds	98	25.9
Crowdfunding	98	25.9
Government Bonds	94	24.9
Real Estate	92	24.3
Mutual Funds	82	21.7
Derivatives	41	10.8

Source: Primary Data

Table 3 demonstrates that there was a clear inclination towards conservative or capital protection-oriented products; 73.5% respondents showed their preference for fixed deposits, then savings deposits (52.9%), post office products (47.4%), and recurring deposits (40.7%). Crowdfunding, gold bonds, government bonds, and real estate received almost the same percentage of the respondents' preference, between 24% and 26%, and were equivalent to several other non-traditional sources of funds. However, compared with traditional risk-free products, this source was way below.

9. Factor Analysis

The data obtained from the 21 questions measured on Likert scale have been subjected to factor analysis through principal component factor analysis in SPSS. The sampling adequacy of data was checked with the help of Kaiser-Meyer-Olkin (KMO) measure and Bartlett's Test of Sphericity before extracting factors. Inter-correlation of items was also checked to see whether the variables have some degree of correlation or not (a correlation less than 0.30 would mean unsuitable degree of correlation for factor analysis; Tabachnick & Fidell, 2007).

Table 4: KMO and Bartlett's Test

Test	Statistic	Value
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy		0.803
Bartlett's Test of Sphericity	Approx. Chi-Square	4332.3
	df	210
	Sig.	.000

A KMO value of 0.803 indicates that sampling adequacy was 'meritorious' by conventional benchmarks, and Bartlett's Test was statistically significant ($p < .001$), confirming that the correlation matrix was suitable for factor analysis.

Table 5: Communalities (Extraction Method: Principal Component Analysis)

Variable	Initial	Extraction
Safety	1.000	0.544
Feasible	1.000	0.710
Goal	1.000	0.596
Returns	1.000	0.663
Helping	1.000	0.495
Incentive	1.000	0.658
Reward	1.000	0.649
Amount of funds	1.000	0.828
Deadline	1.000	0.637
Easy process	1.000	0.724
Volume	1.000	0.672
Unsecured investment	1.000	0.596
Stock market risk	1.000	0.785
Popular	1.000	0.730
Monitoring	1.000	0.824
Exemptions	1.000	0.698
Transparency	1.000	0.737
Recognition	1.000	0.643
Monitoring agency	1.000	0.755
Trustworthy	1.000	0.554
Simplicity	1.000	0.693

Table 6: Total Variance Explained (First Six Components; Extraction Sums of Squared Loadings)

Component	Eigenvalue	% of Variance	Cumulative %
1	5.568	26.512	26.512
2	2.869	13.662	40.174
3	1.921	9.148	49.322
4	1.399	6.661	55.984
5	1.239	5.9	61.884
6	1.193	5.683	67.567

Components 7 through 21 each had eigenvalues below 1.0 and are omitted here for brevity; collectively they account for the remaining 32.4 percent of total variance and were not retained.

Based on Kaiser criterion (eigenvalue > 1.0), 21 variables were condensed into 6 factors accounting for 67.567% of variance which is considered as a satisfactory variance for exploratory factor analysis. After varimax rotation, the following 6 factors have been identified and labeled according to the items which constitute the factors:

Factor I (14.602% of variance) – Reward Motivation: help a start-up, reward, incentive, investment as reward for financing a project, and funds raised by the project, thus emphasizing the motivating effect of the anticipated reward and social evidence.

Factor II (12.912% of variance) – Transparency: transparency of financial data, volume of crowd funders, periodic monitoring of funds, and risk level similar to stock market, thus underlining the confidence-building effect of the transparency of platform and campaign.

Factor III (12.827% of variance) – Financial Feasibility: flexibility of the project, feasibility of the financed project, percentage of funding goal reached, and expected return on investment.

Factor IV (12.593% of variance) – Mass Reach: internet use, mass reach through internet, and trust related to periodic monitoring of financial data.

Factor V (8.647% of variance)- Convenience: the ease and simplicity of the crowdfunding process.

Factor VI (5.986% of variance)- Goal Orientation: the funding target and the project deadline.

10. Major Findings

1. The majority (65.9%) of the respondents were not aware of crowdfunding as an alternative investment mechanism although the sample population was educated and technologically savvy.

2. The respondents had a great inclination towards conventional and low risk investments, with fixed deposits (73.5%) and savings deposits (52.9%) ranking as the top preferred modes, thus a low risk-taking tendency.

3. There are six major criteria that govern the decision-making process related to crowdfunding investment, and these include reward, transparency, financial viability, mass appeal, convenience, and goal oriented. These criteria account for 67.6% of the variance in the perceptions of the respondents.

11. Discussion

The current low awareness rate (34.1%) is in line with descriptions of the Indian crowdfunding space as one that is new and developing (Mitra, 2012), and also explains the similar rate of investor interest in crowdfunding as a relatively unknown investment option (25.9%) along with others like gold bonds, government bonds, and real estate, despite significant worldwide growth in the sector recorded in industry reports. The strong preference for fixed deposits and savings reflects the perception of Indian retail investors being inherently risk-averse – a trend that is likely to limit the potential customer base for crowdfunding schemes based on lending or equity compared to donation/reward-based schemes, the former entailing greater risks (Kirby & Worner, 2014).

Indeed, the identified factor structure is both in line with and builds upon existing theoretical work. For instance, the fact that the Reward Motivation factor is prominent is in line with Macht & Weatherston's (2014) finding that "reward based crowdfunding is appealing to investors because it provides them with a reward other than money without dilution of ownership." The fact that Transparency is one of the factors that have been found in the data set is also in line with the findings of Siering, Koch & Deokar (2016), who identify platform trust and fraud risks as major factors for those who use crowdfunding platforms – the investors here seem to consider their readiness to invest conditional on the transparency of financial information and independent monitoring of that information. Financial Feasibility and Goal Orientation factors point to the fact that Indian investors assess crowdfunding opportunities via regular investment appraisal principles (expected return, probability of meeting funding goal and deadlines). Taken together, however, these results seem to indicate that the main challenge in the adoption of crowdfunding in India is less a lack of interest and more a matter of both limited awareness and outstanding worries about issues of transparency and risk, both of which are, in principle, addressable issues, rather than inherent in the concept of crowdfunding per se.

12. Conclusion and Implications

It is discovered that there is a lack of awareness about crowdfunding as an instrument of financial investment among investors in North India, and that the risk taking attitude of the investors prefers the traditional, risk free options over crowdfunding and other options. The six determinants of crowdfunding investments were found to be: reward motivation, transparency, financial feasibility, mass appeal, convenience and goal oriented nature.

These conclusions can have some practical implications for crowdfunding platforms as well as for policymakers. For crowdfunding platforms, the fact that the Transparency factor plays a significant role implies that regular updates of financial information as well as an independent control mechanism can serve as an efficient tool to increase investors' trust. For policymakers, the fact that there is little awareness about the issue and the lack of the regulation (the Consultation Paper of SEBI issued in 2014 did not lead to the development of the regulation) implies that creating the regulation will speed up the process significantly.

This research study is bound by the limitations mentioned in section 7, especially the geographical limitation of focusing only on North India and using the convenient sampling of an educated and financially well-off sample. Future researchers can build on this work through several means such as conducting the study in multiple cities and rural areas, conducting comparisons in terms of awareness and factor structure by comparing the different age groups, and testing the link between the identified factors and crowdfunding behavior.

Declaration: We the authors of the manuscript hereby state that this paper is original and that this article has never been published before in full or in part in any journal or conference proceedings and it has not been submitted for publication anywhere else.
Conflict of Interest: No conflict of interest for all authors.
Sources of Funding: None.

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