

# Crowd Funding as a Tool of Business Transformation to Micro Enterprises in India - A Conceptual Framework

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## Abstract

India has seen the development of the capital market since its globalisation and liberalisation policies which took place in 1992. The Government introduced various reforms in the capital market to give boost to economy. It has recently introduced a few changes which helped MSMEs to raise funds from the capital market. These reforms specially include dedicated stock exchange for SMEs and another step is towards Crowd Funding.

Crowd funding provides a channel for SMEs to raise funds through capital market. The crowd funding is still at a consultation stage for SMEs. This paper proposed to study the framework and its applicability for micro-enterprises. Crowd funding is used with the help of extending small amounts by large number of investors on online platform/social media. There are various models of crowd funding. We propose a model of crowd funding along with its financial evaluation for Micro Enterprises.

**Keywords:** Crowd Funding, Micro Enterprises, Model, Business Transformation, SME, Capital Market

## 1. Introduction

### 1.1 MSME Sector

The MSME sector consists of Micro, Small and Medium Enterprises and governed by the MSMED Act (Micro, Small and Medium Enterprise Development) of 2006. This sector covers non-agricultural sector and is very important to the Indian Economy in terms of employment, export and production. According to 'All India Census of the Sector' Micro Small & Medium scale enterprises contribute to more than 40% of India's export and more than 45% of the industrial output. The number of enterprises in MSME sector till 2011-12 has increased by 23.8 % from 2006-07 (Refer to Table 1). The performance of the sector in terms of total working enterprises, employment and market value of fixed assets is also improving over a period of time as per the Annual Report on MSME Sector 2013-14 (Table 2).

According to MSME Development Act, 2006, there are two types of MSMEs i.e. Manufacturing Enterprises

and Service Enterprises. These enterprises are further classified into micro, small and medium enterprises as per the following criteria:

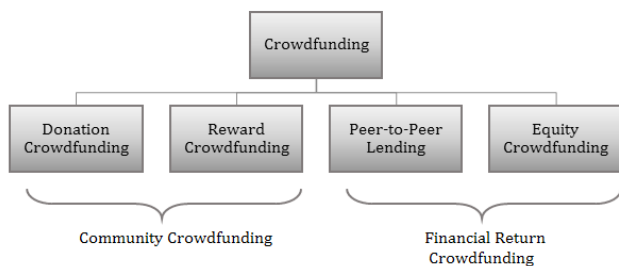
### 1.2 Crowd Funding

Crowd funding is the way funds are raised in (solicitation) small amounts from various investors through an e-platform or social platform for a specific endeavour, a business venture or a benevolent cause<sup>1</sup>. The funds are raised in small amounts from a large number of investors. It is a potential alternate course of fund-raising for SMEs, micro organisations and start-ups in India. It is at its nascent stage with no licit, fundamental or regulatory framework, yet. Unlike the capital raised from an angel broker or venture capitalist, the funds amassed by the crowd funding platform neither promises the investor a share nor does it ensure the repayment of the funds on the success of the venture. The types of Crowd funding are:

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**Table 1.** The categorisation of these enterprises in each type of MSME based on investments

	<b>Manufacturing Enterprises (Investment in Plant and Machinery)</b>	<b>Service Enterprises (Investment in Equipment)</b>
Micro Enterprises	Less than 25 Lakhs	Less than 10 Lakhs
Small Enterprises	25 Lakhs to 5 Crores	10 Lakhs to 2 Crores
Medium Enterprises	5 Crores to 10 Crores	Crores to 5 Crores



**Figure 1.** Types of crowd funding.

### 1.2.1 Donation Crowd Funding

The funding is given in the form of donations and thus donors do not expect any tangible benefits as return. In most of the cases, it is for social/philanthropic purpose.

### 1.2.2 Reward Crowd Funding

In this case the funding is given with an expectation of some benefits may be immediate or future rewards. These rewards should be tangible (in the form of future customer/membership). The reward crowd funding can range from ‘a thank you note or some returns in the form of token of appreciation. It also includes the pre-purchase option which allows investors to receive the product that the entrepreneur is making, often at a reduced price (Griffin 2012).

### 1.2.3 Peer-to-Peer Lending

The funding is arranged between two individuals using an online platform. In this on line platforms matches lenders and investors wherein loan amounts and interest rates are set by the platform. However in this type, investor protection is a challenge for regulators.

### 1.2.4 Equity Based Crowd Funding

The funding is given in exchange of issue of equity shares of the company. The investors will receive number of

equity shares against the investments made online. However in this type, investor protection is a challenge for regulators.

There are various benefits of crowd funding which include rising of money by SMEs/new start-ups. It is a new possibility apart from raising funds from various resources like capital market (stock exchange), banks and financial institutions and others. However raising the funds through this mode may not be sufficient and cost effective thus making crowd funding an attractive mode for them. However main concern is to have well designed website so that investors can keep a tap on their progress.

## 2. Objectives

The focus of the study paper is on financing to micro enterprises. The MSME sector consists of micro, small and medium enterprises. Out of these three sectors, small and medium enterprises can tap funds in the capital market by way listing their shares on the stock exchanges, by way of crowd funding as per recent consultation paper issued and SEBI guidelines, raising funds from banks/ financial institutions (since they have special schemes for small and medium enterprises) etc. Thus for these two sectors access to capital market and debt market is comparatively easier as compared to micro enterprises. As per the recent study, micro enterprises form almost 94% of the MSM enterprises. So we have selected micro enterprise for constructing our model. In our opinion, the role of Micro Enterprises is also important, so is the importance of finance for them. The access to capital market and banking finance needs to be extended to them however we need to consider any other model which can focus on Micro Enterprises, alternative financing model and their growth.

Thus the objectives are as follows:

- To study the financing patterns of Micro enterprises;
- To study specific issues related to Micro Enterprises;
- Design a conceptual model for Micro Enterprises to address their needs;
- To evaluate and suggest crowd funding model in a co-operative set up;
- To design financial evaluation model suitable for funding to micro enterprises.

Our attempt, through this paper, is to analyse the pros, cons, feasibility and future success or failure of the crowd

funding platform or mode of financing with reference to the start-ups and micro industries. In our model we propose the collaboration of crowd funding with co-operative set up.

### 3. Literature Review

In most of the cases, start-ups face challenges in terms of raising funds from traditional sources. This has led to tapping alternative sources of financing. According to Schwinbacher and Larraide (2011), crowd sourcing helps in outsourcing activities to make or sale of its product to the general public (the crowd) with the aid of an open call over the internet. The related concept is crowd sourcing. Consumers volunteer to contribute to production processes and create value. Crowd funding can be viewed as combining concepts of crowd sourcing and microfinance<sup>15</sup>.

Based on the literature review it is observed that there is a definite role to play for customers in crowd funding model. The literature supports various roles of consumers in the entire chain such as target consumers (Barksdale and Darden, 1971), a key information sources (Kohli and Jaworski, 1990), co-producers (Fisk et al., 1993), partners for innovative purposes (von Hippel, 1986), and, key resources and co-creators of value (Vargo and Lusch, 2004). Thus in crowd funding, the consumer's role is also as an investor (Andrea Ordanini, Lucia Miceli and Marta Pizzetti, A. Parasuraman, 2011).

The crowd funding typically tries to resolve the issues of marketing and finance together with a model where customers invest in an entrepreneurial business activity. It is an investment (financial aspect) by customers (marketing aspect). This blend would really help micro enterprises for overall development by overcoming the issues of finance and marketing.

For SMEs where crowd funding is applicable, the participants of investing through crowd funding would have to be permitted, as Accredited Investors (such as QIBs, HNIs and Eligible retail investors), by SEBI. This is to ensure alternative funding for SMEs and also to assure that retail investors do not have to bear the risks of start-ups. However in case of Micro enterprises, the amount of investment may be smaller, retail investors must be encouraged with various benefits including tax benefits.

Crowd funding platform is helpful and likely to be the next big trend in funding in India not only because it is a convenient and less risky but it also increases flow of credit to SMEs and start-ups.

## 4. Methodology

We have reviewed the present structure of financing to Micro enterprises and their financial and other needs. Based on the entire study and literature we propose a model for micro enterprises.

### 4.1 Definition of Problem: Specific Issues of Micro Enterprises

There are various issues faced by Micro Enterprises. The problems faced by this sector are as follows;

- Access to domestic and international markets.
- Access to finance.
- Using modern technology.
- Marketing of products.
- Skilled manpower.
- An unorganised and scattered sector.

A Micro-Enterprise is an enterprise where investment in plant and machinery does not exceed Rs. 25 Lakhs, in case of an enterprise engaged in manufacturing, and where the investment does not exceed Rs. 10 Lakhs for an enterprise engaged in services.

The incumbent financing options available with such enterprises are:

- Funds rose from personal savings.
- Funds rose from relatives or family members.
- Funds rose from Private Money Lenders.
- Funds rose from Banks.

These sources of funds are either high in interest, not easily accessible or include dilution of ownership.

There is a development of the SMEs from production of traditional goods to advanced technology items such as electronics control systems, micro-wave components, electro medical equipment, etc. The MSMEs are also facing competition from domestic and global levels. Thus in this scenario, cluster development for the sector is important. As a result, the Government is also encouraging cluster development initiatives.

Clusters are defined as sectoral and geographical concentration of enterprises, particularly, small and medium enterprises. These enterprises face similar opportunities and threats. The cluster development creates a conducive ground for the development of inter-firm cooperation. This helps in to promoting local production,

technology innovation, learning and improvement by competitiveness. India has over 400 SME clusters and about 2000 artisan clusters.

There are many policies which are initiated by MSMED Act, 2006 which are in favour of the micro, small and medium enterprises but two of them are much debatable:

#### 4.1.1 Procurement Preference Policy

This policy has created a schism between the micro enterprises and the large/medium enterprises. Now, the FACSI (Federation of Associations of Cottage and Small Industries) demands a separate procurement regulation for the micro and small industries (Lahiri 2012<sup>2</sup>).

#### 4.1.2 Exit Policy

This policy has many issues which have created complications in the closing of MSME (Lahiri 2012).

With the entry of private financial institutions, there has been an increase in the number of lenders to micro and small enterprises and also to the medium enterprises. But there has been an observation that the banks are in favour of the big players, with an MSME umbrella, for lending (Panigrahi 2012<sup>3</sup>). The MSMED Act, 2006 has tried to bundle the small and medium enterprises along with the micro enterprises which has led to the “crowding effect” of the micro enterprises within the MSME umbrella (Lahiri 2012). The MSMED Act, 2006 has included lending to MSME sector under the priority sector lending according to which the banks and other financial institutions have to extend 40% of their existing portfolio and therefore, under the compulsion and to look after their profitability, banks have found a leeway to lend to the big players under MSME category so as to weed out their risks (Lahiri 2012).

There are some inherent problems in the micro enterprises which restrict the banks and financial institutions to lend to them. Micro enterprises, no doubt, are small in size and as a result, they do not have sufficient cushion to sustain an economic shock. Also they generally run with insufficient capital which affects their profitability (Bose 2013<sup>4</sup>).

According to CII – Price Waterhouse Coopers 2013 report<sup>5</sup> on MSME in India, in 2010, the Prime Minister formed a task force under the Principal Secretary to go into the details of the challenges faced by the MSME Associations which came out with the result that micro

enterprises does not get adequate and timely credit. If at all they get credit, it is very costly and also they face problems with meeting the collateral requirements of the banks and financial institutions.

## 4.2 Non-Financial Challenges Faced by Micro Enterprises

Apart from finance, there are multiple other problems faced by the small and micro enterprises. For starters, micro enterprises do not have the skilled workforce. They also face problems in processing the raw materials. They lack robust marketing capabilities and also capability to create their own distributive channels (Nisanth and Zakariya 2014<sup>6</sup>). Micro enterprises are cash strapped and cannot spend much on advertisement and marketing research (Jaswal 2014<sup>7</sup>). This becomes a huge hurdle for these enterprises to frame their own marketing strategies. Absence of any coherent marketing strategy hides them under the shadow of large enterprises and thus the revenue realisation becomes problematic for them. Insufficient and inconsistent cash flows creates problems for them in getting loans from the banks and financial institutions.

Thus crowd funding with subscription model involving consumers as investors would be an attempt to resolve marketing issues and financial issues. The other issues may be resolved by forming a co-operative society where by micro enterprises of the similar businesses/vocations will be the members of such society.

## 4.3 Comparative Analysis

The overall demand for finance in the MSME sector is \$ 650 million (\$520mn debt + 130mn equity).

Financial institutions face challenges in financing these sectors since these sectors are assumed to be having high business risk and high cost of delivery, and have limited collateral. The entire demand of this sector cannot

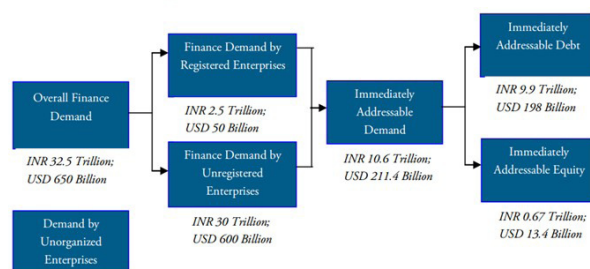


Figure 2. Overall finance demand in MSME sector.

**Table 1.** Enterprise types and their respective demand of debts

Type of enterprises	Share of debt demand (in percentage)
Sick enterprises in default	13%
New enterprises with less than one year of operations	23%
Portion of enterprises rejected by formal financial institutions	1%
Voluntary exclusions of micro services sector enterprise segment	25%
<b>Total</b>	<b>62%</b>

be met immediately by these financial institutions. The following Table provides these exclusions and their share of the total debt demand.

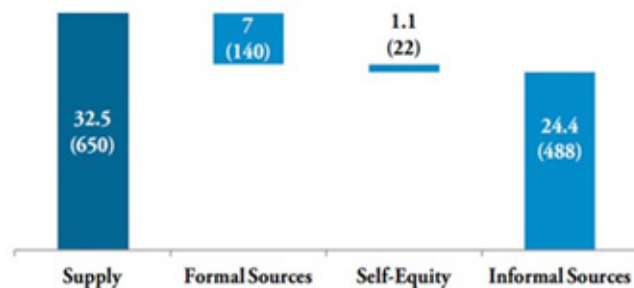
The overall flow of finance to the MSME sector is depicted with the following:

## 5. Possible Solutions

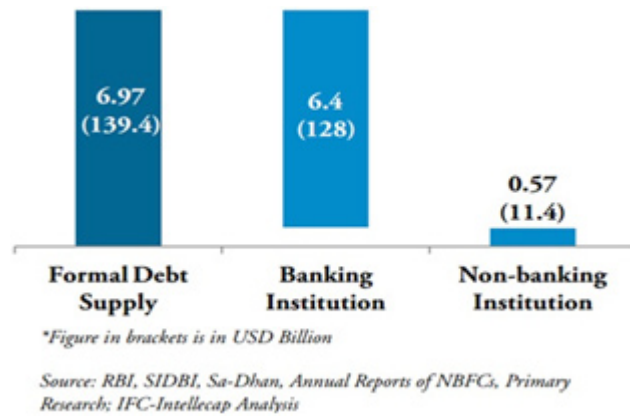
There are various possibilities of funding to micro enterprises however considering above discussions we propose two aspects of the proposed model which consists of crowd funding and role of co-operative movement/ society.

### 5.1 Crowd Funding as a Tool of Finance

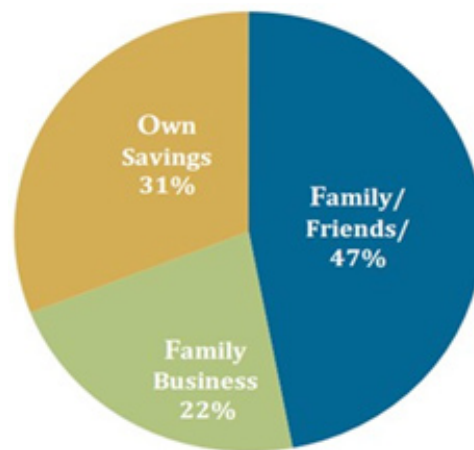
Any business venture cannot take off without the adequate support of finance. Financing is an important



**Figure 3.** Supply of finance to the MSME sector.



**Figure 4.** Structure of formal debt supply to the MSME sector.



**Figure 5.** Share of non-institutional informal sources of finance.

**Table 2.** Cost of funds in select institutional informal sources

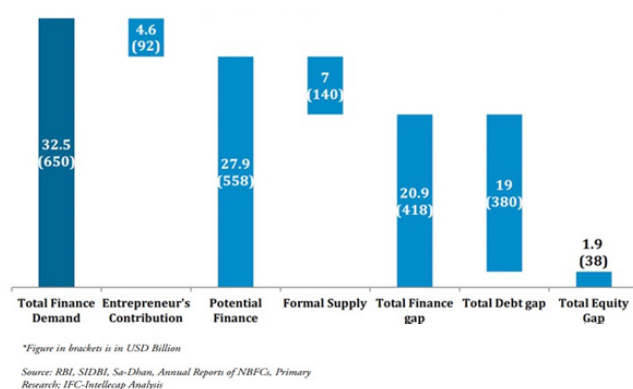
Source	Cost of Funds (per month)
Registered Chit Funds	0.5% – 3.5%
Unregistered Chits Funds	1% – 2%
Registered Moneylenders	1% – 10%

*Source: IFMR<sup>TM</sup>, All India Association of Chit Funds, IFC – Intellectap Analysis*

part of any business strategy. Today there are multiple sources available for finance right from equity based funds to debt funds to angel investments. Rate of interest

**Table 3.** List of key fund-based products offered to the MSME sector

Products	Financial Institution	Tenure	Collateral	Credit Size Limit <sup>(80)</sup>
Overdraft*	Commercial Banks	1 year; revolving credit, renewed annually	Primary Security – Hypothecation of stocks in trade and receivables Collateral Security – A minimum value of the loan amount in the form of mortgage of immovable property and/ or other liquid security	50% – 60% of the amount of receivables
Cash Credit*	Commercial Banks	3 months – 1 year; revolving credit, renewed annually	Primary Security – Hypothecation of stocks in trade and receivables Collateral Security – A minimum value of the loan amount in the form of mortgage of immovable property and/ or other liquid security	50% – 60% of the amount of receivables
Short-Term Loan	Commercial Banks NBFCs	3 months – 1 year; revolving credit, renewed annually	Mortgage of fixed assets such as land, building, factory	-
Long-Term Loan	Commercial Banks NBFCs	1-5 years	Mortgage of fixed assets such as land, building, factory	60-80% of the cost of the collateral
Asset-Based Financing	Commercial Banks NBFCs	3-7 years	Secured by an asset (e.g., a purchase order, contract, accounts receivable, invoice, letter of credit, inventory, machinery, equipment)	80-90% of the cost of asset



**Figure 6.** Overall finance gap in MSME sector.

varies with the type of funding and so as the terms and conditions. To ease the accessibility of debt funds banks have been coming up with scores of schemes. But everything is not so rosy. Due to certain regulatory constraints and uncertainty of return on investment many ventures are not able to avail conventional funding sources. This compels the entrepreneurs to turn to money lenders who offer high rates of interests and thus making the venture unviable.

Crowd funding is a platform where small or micro enterprises can get funding on easy terms. This makes the business venture viable and also encourages entrepreneurship in the country. Crowd funding can be on equity basis or as a debt. Enterprises can leverage this platform in their capital budgeting exercise.

## 5.2 Crowd Funding – Solution for Micro Enterprises

Crowd Funding can have multiple model like reward based, charity based etc. The model which is proposed here is based on the subscription model. Most of the funding is based on two important characteristics – Equity based and Debt based. Equity based funding based on shared ownership. The contributors become the owner of the business for which the funding is done. This model of financing is not suitable for Micro enterprises considering its size of business and it has its own limitations such as equity finance is costly and time consuming. Whereas for debt based funding is based on taking loans in return of some guarantee. Here there always is the obligation of repaying the principle along with interest even if you made the losses in the venture. Most important part of debt funding is the requirement of collateral and/or guarantor. This becomes a major restriction for the micro enterprises to tap the debt market.

With the liberalisation of the Indian economy, MSME sector is facing stiff competition from the imports and therefore they are compelled to upgrade their machines and equipment which is a capital intensive venture. This again brings them at the critical juncture where the entrepreneurs have to make the grave decision whether the source of fund should be through equity channel or debt channel. To make this matter worse, according to 4th MSME census the micro enterprises consists of 94.94% of the total MSME enterprises, these micro enterprises are not allowed to tap the capital market in India. This leaves them with only one option i.e. Debt Market.

There are various types of crowd funding and amongst them all reward based and equity based platforms are higher in numbers in Europe and North America. Since the enterprises have a challenge in the form of lack of access to capital (bootstrapping); they raise the funds out of personal savings or loans from friends and relatives, credit cards etc. For instance, scarcity of funding could result in promising projects going unfunded costing an economy jobs and loss of potential innovations (Devsh Mitra, Bradford, 2012).

## 5.3 Role and Importance of Cooperative Societies

The co-operative movement in India is at a matured stage. In our proposed model, a cooperative society will be

intermediary which can also work as an internet platform including a lending crowd funding website. Cooperative Societies in India are a body corporate and have a perpetual succession having a common seal. Mostly, the office bearers of the Cooperative Society are selected/elected democratically. In a Cooperative Society capital does not dominate and hence “one member one vote” principle is pervasive in cooperative parlance. Moreover, the membership is open to anyone. Any profit earned by the Cooperative Society is distributed amongst the members in form of dividends.<sup>8</sup>The major advantage of a Cooperative Society is that they can get easy credit from banks. Also a Cooperative Society is exempted from taxes, stamp duties, etc. they have capabilities to market their products and can access administrative and training from the government (Anbumani 2007).

## 6. Proposed Model

Thus MSMEs play an important role in the economy. This sector needs finance for overall development. However MSMEs consist of Micro, Small and Medium Enterprises. Out of this three, small and medium enterprises can now tap funds from capital market through stock exchange. Even due to various policy measures and banking finance and recently a consultation paper for SMEs on crowd funding will ensure possibility of smooth flow of funds to SMEs.

So we intend to propose a model for only Micro Enterprises in India located at various geographical areas/cluster centres. Since micro enterprises are scattered and unorganised the co-operative set up will be more useful. However considering the importance of crowd funding we propose a model of co-operative set up with crowd funding way of financing for micro enterprises. In this model following are the participants:

### 6.1 Government (State/Central)

It is a Governing body and set the final policies and laws in place to promote the model. It will be working close with highest Cooperative governing body at the State level for approval

### 6.2 Co-Operative Society Targeting a Specific Type of Micro Enterprises

It is a society formed under law for promoting the interests of a specified group;

### 6.2.1 Web Support Enterprise

These are the entities that will support various new technologies to help society/micro enterprises to speed up the development process like consumers/entrepreneurs can login/make changes in their requirement or proposals. (a form of social network). Considering mobile penetration these web based application can be available on mobile.

### 6.2.2 Customer/Donors/Investors

They will provide the funds and bear the risk. The funds will be provided with returns in the form of dividends/interest (equity/peer to peer/loan funding) or without any expectation of returns (social funding)

### 6.2.3 Micro Enterprises/Entrepreneurs

They are interested in getting the funds in the form of crowd funding

Since we propose a subscription model where direct investment in the form of equity/debt with an anticipation of interest/dividend as a return and repayment of this investment anytime in future is not involved, SEBI will not have any role to play.

The model proposed here is a blend of Cooperative Society and a Subscription based crowd funding for micro enterprises. The model tries to solve the problems faced by the micro enterprises in India. Under this model, the micro enterprises come together to form Cooperatives form of organisation. These cooperatives then help these micro enterprises to market and promote their products. The model is applicable to both types of micro enterprises (i.e. manufacturing and service, as mentioned earlier) as classified under MSMED Act 2006.

The central body will be co-operative society designated for a specific type of business such as agriculture, agro based manufacturing industries, tourism at a remote place, music – artist shows, cloth making with specialities such as ‘Paithani Sarees’ in Maharashtra, jewellery items etc. There are a lot of examples of such instances of businesses. It would also include micro enterprises providing special services/products to industries. Similarly the basic objective of crowd funding is also to promote a particular sector/industry such as music/artists etc. If we use these two concepts to benefit micro enterprises then it will help a lot for overall economy.

## 7. Practical Application

Thus starting point is to form a co-operative society with a different set up. (Wherever possible the Government needs to make changes in the law). It will have an objective of development of a particular industry/sector or overall development of a region (cluster) including all micro enterprises. The existing micro enterprises along with likely entrepreneurs will become the members of the society. The Society must have its website and a portal which promote the crowd funding for these enterprises. The Society will accept the money from customers of various micro enterprises and pass the money to relevant micro enterprises (crowd funding). The money may be received from two types of persons. The first type is of those who give the money to society and the same is given to any micro enterprises with no intension to receive any benefits (called as social funding). It is called as 'donors'. It is one of the popular modes in Europe as mentioned above. Thus a cooperative society will receive the funds and finance Micro enterprises. Since it is for social cause no interest will be payable and after some years principle amount can be repaid if so opted by the donor. In a few case micro enterprise may repay the principal amount and the same can be given to another micro enterprise on need basis. The second type would be a subscription model in which the customers will pay the amount as an investment in the micro enterprise by way of crowd funding platform hosted by a co-operative society. The customers in this case would expect certain benefits from the micro enterprises called as a subscription model. In this case, the actual working of the model is explained in the Annexure.

A cooperative society can charge 5-10% for arranging the funds and cover its operating cost. Apart from arranging the finance, the society should offer specialised services to its members such as marketing, branding, quality assurance, specialised needs of training to employees etc. with pre-defined fees or out of donor's funds for above purposes. The marketing of these ideas will be done by a cooperative society. The society will provide a web based platform; receive the funds from investors for the benefit of micro enterprises. A co-operative society can also arrange the funds for micro enterprises at attractive interest rates apart from receiving funds from customers or donors. At present the SEBI guidelines are for SMEs only, it does not cover micro enterprises, so we propose the model for micro-enterprises.

There are two possibilities i.e. consumers will invest for some returns (our proposed model i.e. subscription model) or social model i.e. consumers will not expect any returns however get some intangible benefits such as status, social esteem or recognition in the society or designated circles.

In crowd-funding models, the participants are expected to contribute knowledge, play promotional and investment roles in support of the initiatives being crowd-funded. The literature on brand community also suggests some aspects that relate to crowd-funding contexts. The consumers are expected to be actively engaged in activities such as new product development, quality reassurance, experience sharing, and joint consumption (Ouwensloot and Oderkerken-Schroder, 2008). (Journal of Service Management).

The risk management framework will include regulations, technology, social, and cultural.

Examples of the industries covered in Micro Enterprises and with cooperative movement are: agro based traditional industry. Coir industry, hotel and tourism at rural areas, khadi and village industry

If above industries are covered under cooperative movement along with crowd funding and crowd sourcing then it will help a lot to support Government initiatives to develop micro enterprises. According to Annual report of 2013-14 of Ministry of Micro, Small and Medium Enterprises, the Government has initiated various programs to promote MSMEs such as,

We propose combination of two types of crowd funding i.e. reward Crowd funding which is normally motivated in the form of contribution as donation/pre-purchase with rewards and intangible benefits. In this social motivation is also included. Similarly in case of crowd funded lending the form of contribution is in the form of loan and the return in the form of interest on loan and in case of socially motivated project loan would be interest free. The reward funding model is most used across the world. This model is used for social and creative projects. This model allows investors to contribute in the project and in turn receive non-financial returns. In these cases entrepreneurs or artists crowd fund the production cost of their record, movie, game or product and allow the donors to be the first recipients once the production is complete.

The subscription works in the following manner:

- The customer invests in the micro enterprise and gains a subscription, for a pre-specified time period.
- The subscription will offer discounts, on the product/service offered, at a particular rate (r%) on the orders



**Table 4.**

Sr. No.	Type of Schemes/Programs	Role of Cooperative Society	Type of Crowd funding
1	Flow of Credit/arranging finance		Lending (Peer-to peer), Social funding, Reward funding Subscription model
2	Modern testing/quality certification, support of technology up gradation	To arrange the funds: As peer to peer lending (Society will act as an agency)	
3	Access to modern management techniques/entrepreneurial/skill development/training facilities	Reward crowd funding (either Social funding/ Subscription model) (Society will act as an agency)	Reward funding – Social funding/subscription model
4	Product development/Access to domestic or export markets		
5	Cluster wise measures to promote capacity building		

placed by the customer to the Cooperative Society within the period of subscription.

- These discounts would act as returns on the investment (i.e. initial amount) made by the customer.

Our contribution to the research is the proposed role which can be played by consumers as investors in a new model and second the role of cooperative society in the crowd-funding and third is that how this model is possible for micro enterprises.

## 8. Subscription Model

A mathematical derivation for the returns realised through crowd funding to a micro enterprises shown below:

### 8.1 Notations

- Initial Investment = I
- Per Unit Price of Goods = P
- Qty. of Goods Purchased = n
- Opportunity Cost = K%
- Discount given for Subscription = r%

### 8.2 Derivation

Total cost for purchaser before subscription = n\*p  
 Discounted price of the good  

$$= \frac{p - rp}{100} = p * \left( \frac{1 - r}{100} \right)$$

Total savings/return

$$= np - \left( \left( \frac{1 - r}{100} \right) * np \right) = np * \left( 1 - \frac{1 - r}{100} \right) = \frac{npr}{100}$$

$$NPV = \left[ \frac{npr}{100(1+k)^1} + \frac{npr}{100(1+k)^2} + \dots + \frac{npr}{100(1+k)^t} \right] - I$$

Where t is the number of years for which the subscription is given

$$NPV = \left[ \frac{npr}{100}(1+k)^1 + \frac{npr}{100}(1+k)^2 + \dots + \frac{npr}{100}(1+k)^t \right] - I$$

Therefore,

$$\text{Return} = f(n, p, r, k, t)$$

Return is directly proportional to n,p,r,t. while inversely proportional to k.

### 8.3 Interpretation of the Subscription Model

For a micro enterprise there might not be bulk orders and hence “n” might not be too large. Again as the model does not talk about the type of micro enterprise therefore the price of a particular item depends upon the type of industry a micro enterprise is serving. Most of the micro enterprises do not deliver high pricing products thus “p” cannot be high. Micro enterprises in essence cannot give huge discounts as the margins are not much for most of the micro enterprises therefore the rate of discount “r”

cannot be huge. In a dynamic environment like today long term sourcing contracts are not feasible as the product requirements keep on changing everyday hence time period “t” also cannot be too high. This leaves us with the conclusion that in the wake of large opportunity costs because of the presence of developed capital markets, it is prudent to have low payback period along with low investments in order to have low risks. These low investments from large number of investors are nothing but “Crowd Funding”. This proves that this model is prudent for the well-functioning of micro enterprises in India.

### 9. Our Contribution

The contribution to research is by way of suggesting a conceptual model for increasing finance base to micro enterprises by combining features of Co-operative form of organisation and crowd funding for overall benefit of micro enterprises. In case of financing to micro enterprises we also recommend subscription model. We have reviewed the issues faced by micro enterprises in India, the present structure of financing and proposed a new model.

### 10. Limitations

The new model has a few inherent limitations which include legal and regulatory changes if required for implementing it at various states. Since it is a conceptual model survey or interviews have not been conducted to test its applicability. Based on the views expressed, the model will be revised and subsequently a survey can be conducted to find out its feasibility. Since technical solution of crowd funding is worldwide accepted, its application through co-operative form of organisation must be evaluated before implementation.

### 11. Scope for Further Research

The proposed model is conceptual in nature and attempts to solve issues of micro enterprises with the help of existing co-operative set up in India with a newer concept in India i.e. crowd funding. The model need to be discussed and a survey should be conducted regarding its applicability in India. The scope of survey is extended to feasibility of the proposed model entirely or in parts, suggestions to changes in the proposed model for implementation,

checking feasibility of the model in the present economic and legal framework etc. It is also recommended that forming an Index for class of micro enterprises is also essential to know strength of micro enterprise in the industry/sector.

Table 5. Working enterprise for MSME sector

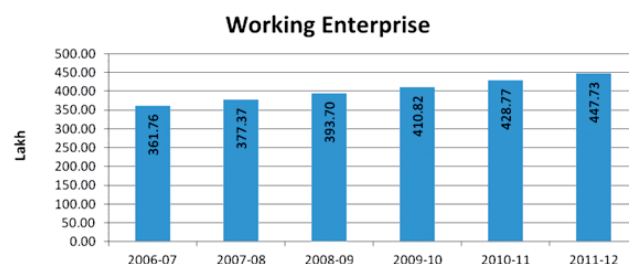


Table 6. Performance of SSI/MSME: employment, investments

Sl. No.	Year	Total Working Enterprises (in Lakh)	Employment (in Lakh)	Market Value of Fixed Assets (Rs. in Crore)
I	II	III	IV	V
1.	2001-02	105.21	249.33	154,349.00
2.	2002-03	109.49	260.21	162,317.00
3.	2003-04	113.95	271.42	170,219.00
4.	2004-05	118.59	282.57	178,699.00
5.	2005-06	123.42	294.91	188,113.00
6.	2006-07	361.76 *	805.23 *	868,543.79 *
7.	2007-08*	377.36	842.00	920,459.84
8.	2008-09*	393.70	880.84	977,114.72
9.	2009-10*	410.80	921.79	1,038,546.08
10.	2010-11*	428.73	965.15	1,105,934.09
11.	2011-12*	447.66	1,011.80	1,183,332.00
12.	2012-13*	467.56	1,061.52	1,269,338.02

\* Including activities of wholesale/retail trade, legal, education & social services, hotel & restaurants, transport and storage & warehousing (except cold storage) for which data was extracted from Economic Census 2005, Central Statistics Office, MOSPI.  
 - Estimated on the basis of per enterprises value obtained from sample survey of unregistered sector for activities of wholesale/retail trade, legal, education & social services, hotel & restaurants, transports and storage & warehousing(except cold storage) which were excluded from Fourth All India Census of MSMEs, unregistered sector.  
 # - Projected.

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