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## Mobile Credit: Credit Management System

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**ABSTRACT:** “Mobile Credit: Credit Management System” is a web application which works on any device having a web browser and access to the internet. The web application provides a platform for Local Kirana Shops to manage daily credit transactions and their inventory. The web-application focuses on developing a platform which can be accessed easily without any technical knowledge. The Mobile Credit web application digitizes the process of buying and selling of products in Local Kirana Shops. The Mobile Credit have three actors; first is Admin who monitors the whole system and responsible for providing access to shopkeepers. The Second actor is shopkeeper who can register through the web application and use the application interface. The third actor is a customer who can be added by the shopkeeper. The customer can order a product online or in-person and can use credit facility provided by the shopkeeper. All the transactions between a shopkeeper and customer are stored in the database and are available to the competent shopkeeper and customer, which increases the transparency.

**KEYWORDS:** Credit Facility, In-App Notification, Inventory Management, Web Application,

### I. INTRODUCTION

The Local Kirana Stores in India provides credit facility to its loyal customers. It is a strong point in favour of Kirana stores that it provides credit facility to its customer, on the other hand, it is the weakest point also that there is no proper system set by the government for the recovery of that credit which in terms puts the business in the loss. Usually, shopkeeper keeps a diary to write down daily purchases of customers by using a credit facility provided by the shopkeeper. This diary may get lost, stolen, tore apart or have some environment tearing. In short, the data can get lost. It is often observed that the diary-keeping system in a Local Kirana Shop is fragile and sometimes customer denies purchasing a product while paying for monthly dues even though he purchased it. Similarly, a shopkeeper can add a product to a customer's account even though he did not purchase it. By referring to such cases we can say that transparency cannot be achieved in the current Book Keeping system.

In “Mobile Credit: Credit Management System” we propose to digitize all the task take place during a transaction between a shopkeeper and a customer in Local Kirana Shop. We also propose to digitalize the daily credit transactions in the Local Kirana Shop. In this project, we focus on shopkeeper, customer, and daily transactions occur between them. The shopkeeper will have a web-based platform to manage his daily tasks like generating receipt of sold products, accepting online payments and managing stocks. This project digitizes the complete process of providing credit to customers by developing a web application. The web application allows shopkeepers to get registered through signup page and add their regular customers to the system. The added customers can get credit from the shopkeeper. The shopkeeper can add products to the inventory. The inventory management of this project provides a simple platform to organize the Local Shop more efficiently. By using the platform, the shopkeeper can provide a receipt of every purchased product easily through this platform. And also, the customer will receive an SMS confirming the purchase if he is registered on the system through the shopkeeper. Mobile Credit is a web-based solution for local Kirana shops and their customers that enables to record credit or cash transactions digitally across every platform. The online web application allows shopkeepers with a secure and reliable way of providing credit and storing payments records. The

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web application stores transactions and records payments which reduce the burden of maintaining an accounting ledger book. Mobile Credit web app helps customers to keep track of purchases made by cash or credit. The web app provides data on monthly purchases which will help customers to make purchases according to his/her financial conditions. The web application is easy to download and install. The shopkeeper can easily start using the application as it is available as an Android App. The shopkeeper can easily sign up by using a valid mobile number. The app is beneficial for small shops and supermarkets as it makes managing the inventory and finances very easy and effortless.

## A. Goals or Objective

- To provide business owners with a simple and reliable means of keeping credit and payments records.
- To provide a mobile-based solution to create receipts of purchased goods.
- To provide customers with the proof of purchased goods via SMS and in-app notification.
- To provide inventory management to business owners to keep track of products.
- To Provide Automatic and secure online backup for shopkeeper and customer.

## II. RELATED WORK

Raghavendra R.H., 2012. "An Overview of Unorganized Retail Sector in India", IJSTM Research Paper ISSN 2231-5985, International Journal of Science Technology and Management. It examines why the unorganized retail sector dominating in India and what are the reasons for its dominance in India. The motivation behind the investigation is to inside and out comprehension of chaotic retail division in India. In that manner, presently a day's Indian customers are indicating quick changes by moving their purchasing frame of mind from sloppy outlets to sorted out outlets. In the rising Indian retail condition, this investigation has brought bits of knowledge into the significance of the disorderly retail area in India and this examination will consequently assist sloppy retailers with framing methodologies to confront the changes and difficulties in this part. In littler towns and urban zones, there are numerous families who are customarily utilizing these Kirana shops' stores offering a wide scope of product blend. For the most part, these Kirana shops are the privately-owned company of these little retailers which they are running for more than one age.[1]

Ekta Rani, 2007. "Big Supermarkets Vs Small Kirana Stores", IOSR-JBM e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 10, Issue 1 (May. - Jun. 2013), PP 01-07, IOSR Journal of Business and Management. It briefly provides a difference between Supermarkets and Small Kirana stores. The Indian Retail segment works in a one of a kind and complex condition. Indian economy can't preclude the beneficial outcomes from securing FDI and self-claimed business for development. It should take exercise from the ongoing worldwide stoppage and ought not to overlook the job of the retail segment to spare India from its intense impacts. The need of great importance is to reengineer the tasks of Kirana stores generally the huge monsters will leave no space for them to develop. On the off chance that the Kirana stores improve their working and the region of activity be determined by the administration at that point, there will be win-win circumstances for both the gatherings. The retailing has been gotten from the French word "retailor" which intends to slice a piece off or to break mass. Retailing is characterized as a convincing arrangement of exercises or steps used to offer an item or an administration to purchasers for their own or family use. The voyage of the closeout of an item starts with the maker from whom an agent secures supplies of products or administrations and conveys to a definitive shopper by performing various arrangements of exercises. The activity of retailing is finished by the retailer who along these lines interfaces the makers with an assortment of provisions of the considerable number of makers.[2]

Piyush Kumar Sinha, Hari Govind Mishra & Surabhi Koul, 2016. "Small Retailer's Merchandise Decision Making: A Grounded Theory Approach," IIMA Working Papers WP2016-05-03, Indian Institute of Management Ahmedabad, Research and Publication Department. According to this paper, there are about 12 million small stores spread over 5,000 towns and 600,000 villages across India. These account for more than 70 percent of grocery sales in India (Jones, Lasserre & Gehlen, 2005) and play a strategic role in the Indian retail business (Ramakrishnan, 2010). The current research work is an initiative to understand the drivers of merchandise selection by small retailers. The factors considered by the retailers in selecting merchandise for their store. The figure explains a three-order construct that leads to small retailers' merchandise decisions. The approach of merchandise selection for small retailers is multidimensional. The retailers need to consider customer, supplier, environmental as well the profit-oriented factors when deciding the merchandise for the store. These small retailers need to manage their merchandise keeping in view customer demands and preferences. The most basic and important strategy of retailers is to decide the appropriate product assortments for the store. Customers are heterogeneous with some belonging to high economic groups and some to low economic groups. Each of the

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categories of products that the retailers present in the store is selected on different bases. Products with higher demand and longer shelf life are stocked more as compared to less-preferred products.[3]

Sunil Kakkar, 2016. "Dominance of Unorganized in Retail in India", IJSTN Research Paper, Vol. No.5, Issue No. 5, May 2016. International Journal of Science Technology and Management. The dominance of Unorganized Retail in India - This paper discusses the existence of unorganized retailing in INDIA. It identifies and examines the dominant role of unorganized retailing in India with respect to the goods of daily and regular consumption. The study focused on the understanding of the unorganized retail sector in India. This study has brought insights into the importance of the unorganized retail sector in India and will help unorganized retailers to frame strategies to face the opportunities and challenges in this sector. Also, the organized retailers can take help of the study to understand the significance of the factors which still makes the unorganized market-dominant and help organized market and marketers to draft strategies to win the customers. Retailing is one of the pillars of the Indian economy and with an increasing percentage in GDP. India is one of the fastest-growing retail markets all over the world, with 1.2 billion people. In the twentieth century, the infusion of western concepts brought about changes in the structure of retailing.[4]

Tazyn Rahman (2012). Organized Retail Industry in India – Opportunities and ND Challenges, IJRFM Volume 2, Issue 2 (February 2012) (ISSN2231-5985) India is being viewed as a potential goldmine. It has been positioned second in the Worldwide Retail Improvement File of 30 creating nations drawn up by A.T. Kearney. The legislature of India has too opened the entryway for the retailing goliaths to go into the business sectors. Numerous remote financial specialists are too demonstrating unmistakable fascination to go into the Indian market. In the event that FDI in the retail segment sees the light of the day, it will see numerous adjustments in the coming years. As increasingly more sorted out retail outlets are spotting the Indian geography, the rivalry is not anymore confined among sorted out and disorderly retailing, it is currently very apparent between composed retailers also.[5]

Gupta Himanshu, D. N. (2012). Effect of Organised retail on Unorganised retail in Indian retail market. Research Journal of Management Sciences, Vol. 1(1), August (2012), 7-13. The idea of retail is crude in an Indian setting. We had Supermarkets, therapeutic stores and a lot many other stores working shockingly well everywhere throughout the nation. As of late with the passage of enormous players like Walmart or Dependence, individuals are getting thought of the customary stores going to be evaporated. Be that as it may, just to remind us, we ought to always remember how profound established is this old idea. The very modern organized stores have taken retailing no place else then from these old shops concentrating on two parts of retail advertising for example store retailing and non-store retailing. Store Retailing as the departmental store, which is a store or multiple brand outlet, offering a variety of items in different classes under one rooftop, attempting to take into account not a couple but rather numerous portions of the society and Non-store retailing as the immediate selling, direct promoting, programmed distributing.[6]

Piyush Kumar Sinha, Sanjay Kumar Kar, "An Insight into the Growth of New Retail Formats in India" IIM-A, W.P. No.2007-03-04 March 2007. In the 2005 India Financial Summit, delegates passed on blended messages about FDI yet one last message was boisterous and clear that India's retail advancement is unavoidable. The majority of the sorted-out retailers in India are pestering quality, administration, accommodation, fulfilment and guaranteed advantages to draw customers into the store. Retailers ought to make an incentive for the buyer and must choose appropriate vehicles to convey wanted shopper esteem. Most likely that retail configuration is one of the vehicles to convey offer and furthermore it positions the store in the brain of objective customers. Most likely in a developing business sector, nobody discovers trouble in manoeuvring clients into the store however that may not be adequate to work productively. Retailers need to discover what matches customer prerequisite and offer superior to rivalry. Retailers surely should be inventive in planning the offer and choosing the configuration to convey that to the shopper. It isn't tied in with choosing the arrangement yet about serving the buyer better, quicker and at less cost. Retailers can utilize their store as a marker of a big motivator for them and what worth they offer. Retailers need to an out-think buyer in giving administration and worth.[7]

Dholakia, Nikhilesh & Sinha, Piyush Kumar (2004). Observations on Observation in India's Dynamic Urban Markets [38 paragraphs]. Forum Qualitative Sozialforschung/ Forum:Qualitative Social Research, 6(1), Art. 13, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0501131>. In the changing urban markets of India, an intriguing new scene for subjective research, particularly utilizing observational strategies, is opening up. Retail locations obviously give awesome and rich settings to contemplating practices with regards to a fast motion buyer culture. Different conceivable outcomes in business settings are additionally opening up: nourishment courts, beguilement arcades, inexpensive food eateries, nourishment courts, bistros, etc. These offer absolutely new business spaces that the Indian purchaser is venturing into with a few fears, yet with impressive pizzazz, and attempting to explore in socially novel ways. As these progressions occur, the conventional business segment isn't sitting still-it is

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developing, modernizing at the edges, offering forceful motivators or predominant administration. In this manner, from the point of view of examining retailing, "everything is new once more" even in the setup and adjusted retail arrangements.[8]

Bajaj Chetan, Retail Management, Oxford University Press. Retailing is defined as the indisputable arrangement of exercises or then again steps used to offer an item or administration to purchasers for their own or family use. It is in charge of coordinating individual requests of the purchaser with provisions of the considerable number of producers. The word 'retail' is gotten from the French word retailer, signifying 'to cut a piece off or 'to break mass'. A few of the key parts of retailing are immediate client communication, little unit size of offers, purpose of-offer advancements, the criticality of area, and accentuation on client care. The retailer performs different capacities like arranging, breaking mass, holding stock, the channel of correspondence, stockpiling, promoting, and certain extra benefits. Retailers can be classified on the premise of a number of outlets, edge versus turnover, area, and size. The key drivers of progress in the retail division are the changing socioeconomics and industry structure, growing PC innovation, accentuation on lower expenses and lower costs, complement comfort and administration, centre around profitability, included experimentation and proceeding with development of non-store retailing. It is significant for retailers to deliberately design their technique.[9]

Majumdar, S. (2002), 'FDI in retailing: India as a supermarket', Business Line, 17 September. Little retailers won't be packed out; however, they would fortify market positions by turning inventive/contemporary. Developing economy and expanding obtaining force would more than makeup for the loss of a piece of the overall industry of the disorderly division retailers. There will be starting and attractive relocation of mediators engaged with the inventory network of ranch produce, however they are probably going to be consumed by an increment in the nourishment handling segment incited by composed retailing. Inventive government measures could further alleviate unfavourable consequences for little retailers and dealers. Ranchers will get another window of direct advertising and thus show signs of improvement compensation, yet this would require governmental policy regarding minorities in society and the formation of satisfactory wellbeing nets. Customers would unquestionably pick up from improved challenge, better quality, guaranteed loads and money reminders. The administration incomes will ascend because of bigger business just as recorded deals. The Challenge Commission of India would need to assume a proactive job. The issue that India must think about now is the effect of decreased rivalry achieved by retailer fixation will have on different partners, what's more, the manners by which rivalry laws and strategy can manage this development of intensity before it is past the point of no return. The new Challenge Act, 2002 has all the required arrangements. It would, in any case, rely upon how it is executed.[10]

### III. PROPOSED WORK

The "Mobile Credit: Credit Management System" digitizes all tasks takes place in Local Kirana Shop. The proposed system tries to solve the problem faced by Local Kirana Shops. This system will get rid of the traditional book keeping system and replace it with a new advanced digital system. The web application also helps to manage all the credit-related activities in day to day life between a shopkeeper and its customer. This system will provide a simple, secure, automatic solution to that the business owner. With the help of this web application, small shop owners can run their business in a well systematic manner and with security and transparency. The complete flow of the system and functional modules of the system are as follows: -

#### A. The flow of the System:

The three actors; Admin, Shopkeeper and Customer shares same login form. After entering and submitting valid mobile number and password, all actors gets diverted to their respective dashboard. The dashboard is different for each user and it is consisting of the different tabs of their responsibilities.

The Admin is responsible to manage the system. Admin can see the list of registered shopkeepers. Admin can block or remove an account from the list and check the payment status of the shopkeeper.

The shopkeeper i.e. shop owner can register through signup form by providing a valid mobile number and some other details. Only shopkeeper's mobile number will be validated by the system through a one-time password. A shopkeeper can add their regular customer to the system. These customers can avail credit facility provided by the

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shopkeeper. A shopkeeper can add products to inventory, provide a receipt of purchased products and see reports of transactions.

The customer can login through Login form but cant registered through Sign Up form. The customer can ask any shopkeeper to create an account. The customer can ask a shopkeeper for the credit facility, order products online and see all transactions.

All actors can logout by clicking on the Logout button. After clicking on the Logout button, the system stops working.

## B. Functional units:

### 1. Login and Registration Module:

This module allows admin, shopkeeper, and customer to sign in by using a mobile number and password. Admin of the system is already registered; hence admin does not need to register. Also, customers are not allowed to register on their own. With the help of the Login and Registration module, we can enter the system and see the different responsibilities.

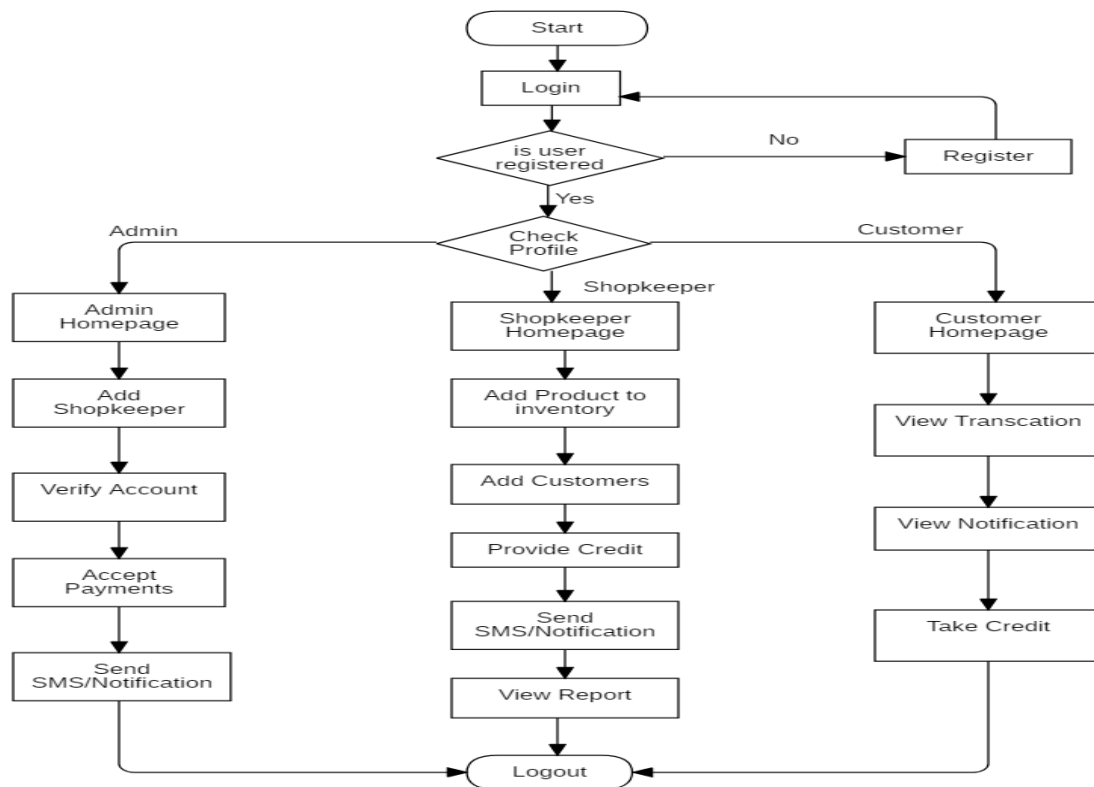


Fig. 1. Flow Diagram

### 2. Credit Module:

Credit module allows shopkeepers to give products on the credit-based facility so that the customer can buy products and pay for it later. This module provides credit to customers via shopkeeper and it stores credit data to the database.

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### 3. Payment and Receipt Module:

The system provides the facility for doing online payments for various purchases. The shopkeeper can make payment for using the “Mobile Credit: Credit Management System” and customers can pay for the purchases to the shopkeeper. This module also provides the facility to generate receipts for various purchases to ensure transparency.

### 4. SMS/Notification Module:

SMS/Notification module sends different types of notifications via SMS and in-app notification page. This module plays an important role to provide transparency and security. Also, it develops trust between shopkeeper and customer.

### 5. Report Generation Module:

Report Generation Module provides reports to admin, shopkeeper and customers. Admin will see the total number of accounts and money generated through monetization. The shopkeeper will see the sells reports and Customer will see the purchases of the month so that they can generate a strategy to manage monthly bill. The report generation module tries to make Local Kirana Shops more organized.

### 6. Inventory Module:

Inventory module allows shopkeeper to add products in inventory using the scanner. The products will be deducted after the shopkeeper sells the product. This module provides proper management for Local Kirana Shops.

## IV. EXPERIMENTAL RESULTS

➔ View Customers :

### Manage Customers

Sr.No.	Customer Name	Mobile	Status
1	Payal		<span>Block</span>

### Manage Customers

Sr.No.	Customer Name	Mobile	Status
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Fig. 2 Screen Shot of Registered Customers.

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The figure is a screenshot which shows the registered customers by the shopkeeper in the system. The shopkeeper can view the details of customers and can block the account of the customer. The customers are divided into two fields the first field contains customers whose account is active and the second field contains customers whose account is blocked by the shopkeeper.



Fig.3 Screenshot of Add Customers Page

The Add Customers Page is available for the shopkeeper. Through this page, the shopkeeper can Add Customers to the system. The customer's name, mobile number, address, photo and password is taken as input and stored in the database. The other profile details can be added by the customer after he accesses the system.

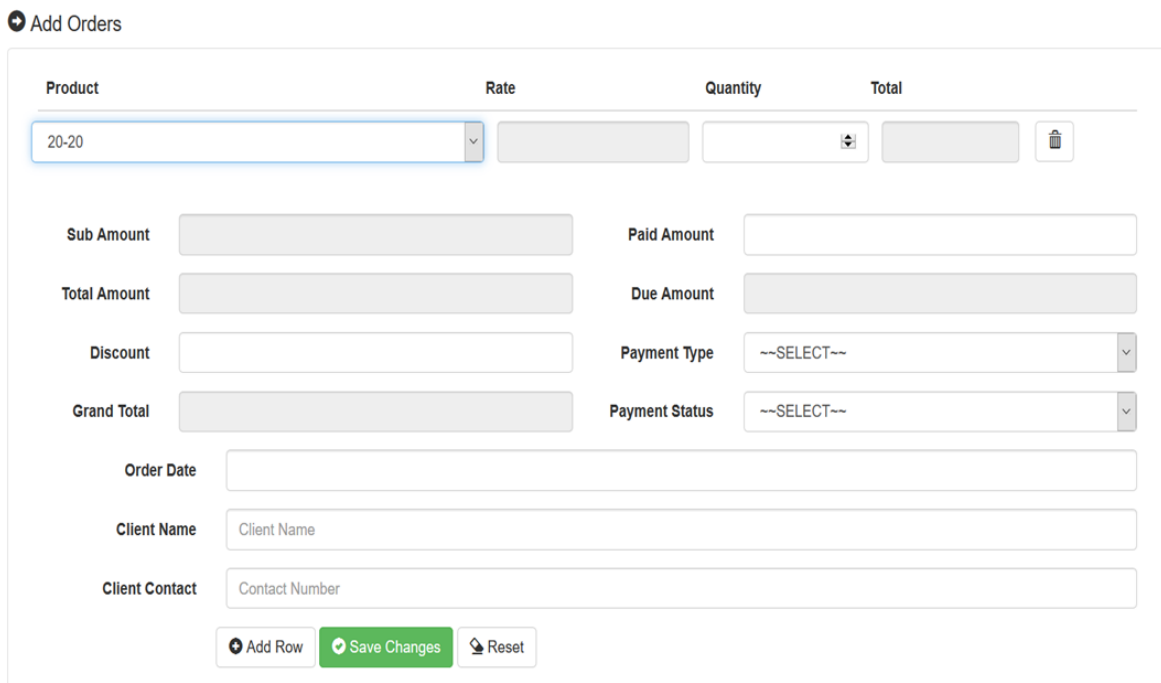


Fig 4 Product Sell Page

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This figure shows the Product Sell Page. The shopkeeper can sell products from the inventory by using this page. The Shopkeeper has to select the purchased product from the dropdown list. Once the item is selected, the price of the product is automatically retrieved by the system and displays on the page. Then the shopkeeper can add a quantity of the item, paid amount, Discount, Payment Type, Payment Status and Order Date to sell the product. If a customer wants to avail credit facility then shopkeeper can add the number and client contact to save Due Amount into the Database.

## V. CONCLUSION

This survey helps in developing a web application for shopkeeper and customer which help them manage the daily transactions. It also focuses on providing simple and reliable means of keeping credit and payments records of the business carried out on credit basis. The Mobile Credit web application digitizes all transactions and it records all the payments reducing the burden of maintaining paper account books. The availability of daily and monthly reports allows shopkeeper to manage the business. The customer can see all transactions of the purchased products which may help him manage the monthly household budget.

## REFERENCES

- [1] Raghavendra R.H., "An Overview of Unorganized Retail Sector in India", IJSTM Research Paper, International Journal of Science Technology and Management. It examines why the unorganized retail sector dominating in India and what are the reasons for its dominance in India, ISSN 2231-5985, 2012.
- [2] Ekta Rani. "Big Supermarkets Vs Small Kirana Stores", IOSR Journal of Business and Management. It briefly provides a difference between Supermarkets and Small Kirana stores, Volume 10, Issue 1 (May. - Jun. 2013), PP 01-07, IOSR-JBM e-ISSN: 2278-487X, p-ISSN: 2319-7668, 2007.
- [3] Piyush Kumar Sinha, Hari Govind Mishra & Surabhi Koul, "Small Retailer's Merchandise Decision Making: A Grounded Theory Approach," IIMA Working Papers, Indian Institute of Management Ahmedabad, Research and Publication Department. According to this paper, there are about 12 million small stores spread over 5,000 towns and 600,000 villages across India. These account for more than 70 percent of grocery sales in India (Jones, Lasserre & Gehlen, 2005) and play a strategic role in the Indian retail business (Ramakrishnan, 2010), WP2016-05-03, 2016.
- [4] Sunil Kakkar, "Dominance of Unorganized in Retail in India", IJSTN Research Paper, International Journal of Science Technology and Management. The dominance of Unorganized Retail in India - This paper discusses the existence of unorganized retailing in INDIA. It identifies and examines the dominant role of unorganized retailing in India with respect to the goods of daily and regular consumption, Vol. No.5, Issue No. 5, May 2016.
- [5] TazynRahman, Organized Retail Industry in India - Opportunities and ND Challenges, IJRFM. <http://www.dnb.co.in/IndianRetailIndustry/overview.asp>, Volume 2, Issue 2 (February 2012), (ISSN 2231-5985), 2012.
- [6] Gupta Himanshu, D. N. Effect of Organized retail on Unorganized retail in Indian retail market. Research Journal of Management Sciences, Vol. 1(1), August (2012), 7-13, 2012.
- [7] Piyush Kumar Sinha, Sanjay Kumar Kar, "An Insight into the Growth of New Retail Formats in India" IIM-A, W.P.No.2007-03-04 March 2007.
- [8] Dholakia, Nikhilesh & Sinha, Piyush Kumar, Observations on Observation in India's Dynamic Urban Markets [38 paragraphs]. Forum Qualitative Sozialforschung Forum: Qualitative Social Research, 6(1), Art. 13, <http://nbn-resolving.de/urn:nbn:de:0114-fqs0501131>, 2004.
- [9] Bajaj Chetan, Retail Management, Oxford University Press.
- [10] Majumdar, S., 'FDI in retailing: India as a supermarket', Business Line, 17 September 2002.