

## Street Vendors and Urban and Peri-urban Agriculture: Scenarios from Mumbai Metropolitan Region (MMR), India

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### ABSTRACT

Rapid urbanization in India creates social problems where urban and peri-urban agriculture (UPA) has a role of in reducing urban poverty and ensuring environmental sustainability. Mumbai Metropolitan Region (MMR) is a fastest growing region in India with a population of 21 million where high proportion of urban poor along with higher migration to MMR makes the region vulnerable to food crisis. This paper focuses on the current situation street vending and UPA production systems in MMR with special attention towards their contribution towards the local services. An over view about the various concepts of street vending were also presented. The question about the various social dimensions and aspects of these marketing systems were also mentioned. Based on primary and secondary data, this paper attempts to confirm that street vending in UPA production complement rural supply chains and reduce ecological food prints. These marketing systems should be better planned and incorporated into the city architecture for ensuring local food supply and employment opportunities in MMR.

**Keywords:** Gross domestic product, street vendors, urban and peri-urban agriculture, corporate social responsibility

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India is the largest democratic nation, occupies 3.3 million sq km<sup>-1</sup> and a population of 1.2 billion, where one third of the poor still lives below the poverty line of 1 US\$ per day (Datt and Ravallion, 2002; Deaton and Dreze, 2002; Census India, 2011). In 1950, it was estimated that more than 70% of the total population lives in rural areas and agriculture contributes 56% of the Gross Domestic Product (GDP). India's rate of urbanization is estimated to be about 3.5% per annum. Population explosion and migration of people towards urban area demands more pressure on food, shelter, water and basic necessities (Cohen, 2006).

Agriculture remains a promising sector in Indian economy where agricultural GDP accounts up to 40% of the total GDP. Recently UPA production systems

are popular in Indian cities as a part of awareness and local food production. These systems offer employment opportunities, supply products fresh and reduce transportation as well as storage costs. Against the backdrop of tremendous population growth, haphazard and unplanned urbanization, growing food scarcity and increasing fruit and vegetable prices, there is the growing presence of urban agriculture in some form or other in every city. In the Mumbai Metropolitan Region (MMR), the Indian Railways plays a major role in UPA production. Under the scheme "Grow more food", the Indian Railway companies has rented since 1975 unutilized land near railway tracks and stations to railway class IV employees and non-railway employees for promoting the cultivation of vegetables and as a part of corporate social

**Table 1:** Vegetables cultivated in UPA railway gardens of the Mumbai Metropolitan Region, India (Vazhacharickal *et al.*, 2013)

Sl. No.	Common name (English)	Local name (Hindi)	Botanical name
1	Lady's finger/Okra	Bhindi	<i>Abelmoschus esculentus</i> L
2	Spinach	Palak	<i>Spinacia oleracea</i> L
3	Red amaranth	Lal Maat	<i>Amaranthus cruentus</i> L
4	Fenugreek	Methi	<i>Trigonella foenum-graecum</i> L
5	White radish	Mula	<i>Rhaphanus sativus</i> var. <i>longipinnatus</i>
6	Malabar spinach	Mayalu	<i>Basella alba</i> L
7	Green amaranth	Chawli	<i>Amaranthus tritris</i>
8	Sorrel leaves	Ambaadi	<i>Hibiscus sabdariffa</i> L
9	Taro	Alu	<i>Colocasia esculenta</i> L
10	Dill	Shepu	<i>Anethum graveolens</i> L

responsibility (CSR). In the MMR, about 176 hectare of land were allotted among 282 railway employees who transformed this land to productive railway gardens by growing vegetables such as okra, spinach, red amaranth and taro which were predominantly irrigated with wastewater (Table 1; Vazhacharickal and Buerkert, 2011; Vazhacharickal *et al.*, 2013).

In most of the cities the urban poor survive by working in the informal sector. Substantial increase in migration from northern Indian states to Mumbai increased during 1961 to 2001 which were higher than the migration from own state Maharashtra. The influxes of migrants from rural and regional centers of India, makes the economic growth sustained and consequently makes the MMR one of the fastest growing regions of India (Desai and Yadav, 2007). People migrate to Mumbai for getting better employment, but most of them spend their life in city's sprawling slums and get employment only in low paid informal sector, unskilled manufacturing or collecting and selling rubbish (Jen, 2007; Vazhacharickal, 2014a). For the urban poor hawking/street vending is a major livelihood strategy as it requires minor financial inputs and skills (Bhowmik, 2000; Bhowmik, 2010). A rapid increase of the share of the informal sector and drastic changes in the employment situation happened in Mumbai from 1970s onward. The employment in the manufacturing sector declined while the finance and service sector increased. The street vendors contribute a larger section of the urban work force, with an estimate of 2% of the total population involved in this informal

sector. The total number would be 250,000 which sustain employment and market the products of industries (NASVI, 2015). This contributes to 12.5% of the total self-employment in the Mumbai city (Saha, 2011). Knowledge of UPA production and street vending in Mumbai Metropolitan Region (MMR) is still scarce. The main objectives of the study were (1) to characterize the different street vending activities (2) to study their role in local food supply and employment across MMR.

## MATERIALS AND METHODS

### Study area

Mumbai (18°53' - 19°04' N and 77°48' - 77°53' E), formerly known as Bombay has a population of 21 million in 2009, thus becoming the second largest urban agglomeration in India (Census India, 2011; United Nations, 2012). Mumbai Metropolitan Region (MMR) covers 4,355 km<sup>2</sup> with a population density of 4,065 per km<sup>2</sup>. The temperature varies between 22 and 37°C during hot months and from 15 to 22 °C during cold months (Vazhacharickal, 2014b).

### Study approach

The methodology used in this paper was based on primary and secondary data from various sources. Different research articles and books were collected from multiple academic databases. Thus, this paper built partially on own research work as well as based on a literature survey.

### Statistical analysis

The statistics using SPSS 12.0 (SPSS Inc., Chicago, IL, USA) were conducted to summarize the data and graphs were generated using Sigma Plot 7 (Systat Software Inc., Chicago, IL, USA).

### Results and discussion

There has been a tremendous growth in the informal sector for the past few decades. According to the draft plan of Mumbai Metropolitan Regional Developmental Authority (MMRDA), 65% of the total work forces engaged in informal sectors. The rapid increase in informal is an indication of the increased employment opportunities. Most of the workforces of the informal sectors consist of migrant non skilled laborers. During February 2014, the Indian Parliament passed the Street Vendors Bill aimed for proving social security and protection of livelihood of this informal sector.

#### Types of street vendors involved in UPA

The majority of the street vendors in MMR were involved in selling cooked food, vegetables and flowers, fruits, ornamental plants, electronics, household utensils, garments, leather items. The income of the street vendors varied form location to location and product to product.

#### Income level

The majority of the street vendors including female vendors had a daily income ranging from INR 60 to 125 with highest daily income up to 1600. A comparison of male and female vendors reveals that a smaller percentage of male vendors belong to the lowest income category. The income can be affected by type of business, age of business, location as well as products (Saha, 2011).

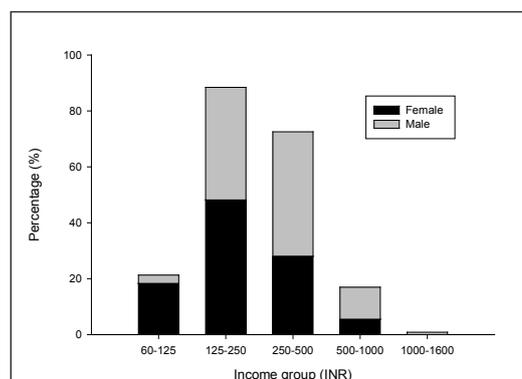


Fig. 1: Daily income and gender wise distribution among 400 street vendors in Mumbai (modified after; Saha, 2011)

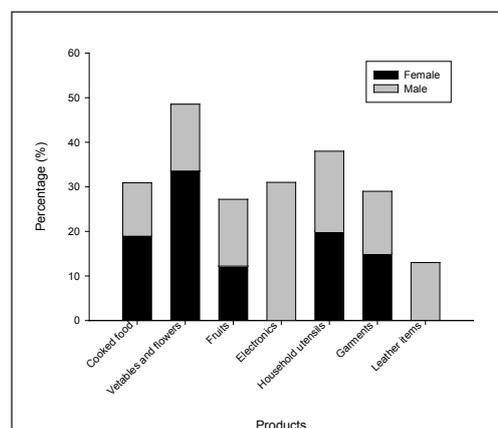


Fig. 2: Product and gender wise distribution among 400 street vendors in Mumbai (modified after; Saha, 2011)

#### Access to finance

Street vendors have a variety of access to various financial sources and depend on volume and type of the product they sell. The major access point of financial sources for the street vendors include relatives, friends, local trades, moneylenders, wholesalers, and banks (Saha, 2011).

Table 2: Urban employed by industry group and employment type (modified after Chen and Raveendran, 2011)

Industry group	Formal	Informal	Total
Agriculture	0.1	6.6	6.7
Manufacturing	3.6	20.0	23.6
Construction	0.7	8.8	9.4
Trade	0.8	20.0	20.8
Non trade services	13.5	24.5	38.0

**Table 3:** Gender wise sources of capital for street vendors across Mumbai (modified after Saha, 2011)

Sources of capital	Gender		Total (%)
	Female (%)	Male (%)	
Relatives	1.11	3.42	2.54
Friends	0	6.85	4.34
Local vendors	0	0.68	0.42
Moneylenders	64.44	52.74	57.20
Wholesalers	28.89	24.66	26.27
Banks	5.56	11.64	9.32
Total	100	100	100

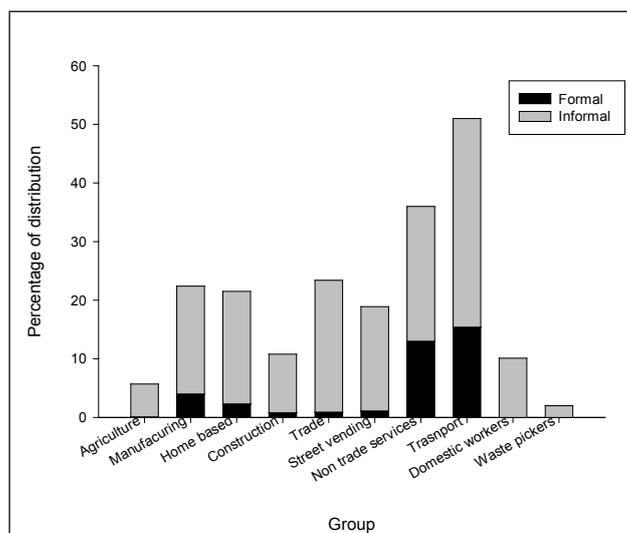
**Table 4:** Major UPA products sold through street vendors across Mumbai Metropolitan Region, India

Common name (English)	Local name (Hindi)	Botanical name
Okra	Bhindi	<i>Abelmoschus esculentus</i> L
Snake gourd	Chichonda	<i>Trichosanthes anguina</i> L
Eggplant	Baingan	<i>Solanum melongena</i> L
Cabbage	Pattagobhi	<i>Brassica oleracea</i> L
Spinach	Palak	<i>Spinacia oleracea</i> L
Red amaranth	Lal Maat	<i>Amaranthus cruentus</i> L
Fenugreek	Methi	<i>Trigonella foenum-graecum</i> L
Bitter gourd	Karela	<i>Momordica charantia</i> Descourt
White radish	Mula	<i>Rhaphanus sativus</i> var. <i>longipinnatus</i> L.H.Bailey
Malabar spinach	Mayalu	<i>Basella alba</i> L
Green amaranth	Chawli	<i>Amaranthus tritris</i> L
Sorrel leaves	Ambaadi	<i>Hibiscus sabdariffa</i> L
Taro	Alu	<i>Colocasia esculenta</i> L
Dill	Shepu	<i>Anethum graveolens</i> L
Bottle gourd	Dudhi	<i>Langenaria vulgaris</i> Ser
Luffa	Dodka	<i>Luffa acutangula</i> L
Cluster bean	Gawaar	<i>Cyamopsis tetragonoloba</i> L
Chilli	Mirchi	<i>Capsicum annum</i> L
Cauliflower	Phulgobhi	<i>Brassica oleracea</i> L
Tomato	Tamatar	<i>Solanum lycopersicum</i> L
Cucumber	Kheera	<i>Cucumis sativus</i> L

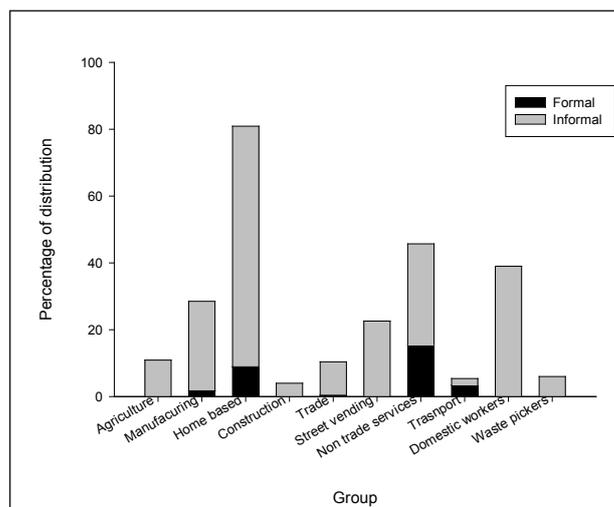
**Access to public space**

Urban public spaces include pavements, parks, beaches,

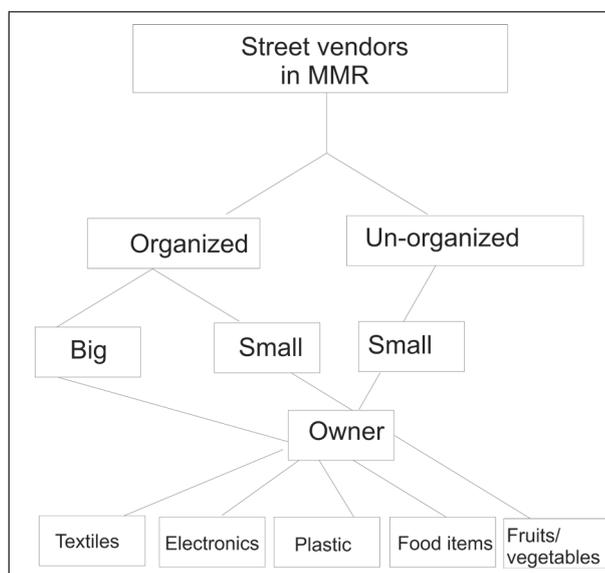
sport grounds, road and high way sides which provides a valuable livelihood option for urban poor (Bhowmik, 2000; Saha, 2011). Street vendors are an integral part of urban workforces with no permanent shops and market area. Street vending on urban public spaces leads to overcrowding, traffic conjunctions, accidents, and considered as illegal encroachers upon public spaces (Saha, 2011; Karthikeyan and Mangaleswaran, 2014).



**Fig. 3:** Urban employed male by industry group and employment type (modified after; Chen and Raveendran, 2011)



**Fig. 4:** Urban employed female by industry group and employment type (modified after; Chen and Raveendran, 2011)



**Fig. 5:** Schematic classification of street vendors in Mumbai Metropolitan Region (MMR) showing the level of organizations

### SWOT analysis

Strength, weakness, opportunities and threat (SWOT) analysis summaries the street vending in MMR.

#### Strength

- ❖ Co-operative membership help marketing and create a sustainable market
- ❖ Milk processing through co-operatives works efficiently with less wastage, high quality milk products and innovative marketing
- ❖ Supply of fresh fruits and vegetables
- ❖ Reduce ecological footprints

#### Weakness

- ❖ Lack of official license
- ❖ Lack of organization
- ❖ Lack of training and other extended services
- ❖ Over crowding, traffic jams and accidents
- ❖ Lack of financial credits

#### Opportunities

- ❖ Costumers get the desired quality and quantity of the products

- ❖ Reliable and continuous supply of the products
- ❖ Affordable prices and door step delivery
- ❖ Employment opportunities
- ❖ Located in strategic and convenient positions

#### Threats

- ❖ Challenge to waste disposal and neighbor complaints
- ❖ Health and hygienic condition of food vending stalls
- ❖ Lack of appropriate policy favoring street vending sector
- ❖ Pressure from real-estate mafia to shift the street vending position
- ❖ Harassments and bribes from municipal authority as well as police
- ❖ Competitiveness in the market
- ❖ Damage of fruits and vegetables

#### Actors involved

The major actors involved in street vending activities were young men, workers usually migrants from UP, MP and Bihar, house wives, old aged persons, and small children. In addition the role of associations, union leaders, municipal authorities, and police officers also a part in this network.



**Fig. 6:** Satellite map of Mumbai Metropolitan Region (MMR) showing major urban hubs.



**Fig. 7:** Various street vendors from Mumbai Metropolitan Region (MMR): (top left), Selling of water melon; (top right), Vadapav street stall, image source: [lensonpedal.com](http://lensonpedal.com); (middle left), Bhel street stall, image source: [urbanresto.com](http://urbanresto.com); (middle right), Selling of flowers; (bottom left), street vendor washing vegetables; (bottom right), sorted vegetable bundles ready for sale.



**Fig. 8:** Street vendors involved in selling of urban and peri-urban agricultural products in Mumbai Metropolitan Region (MMR): (top left), street vendor selling tender coconut; (top right), washing white radish; (middle left), selling of ornamental plants; (middle right), selling ornamental flowers (bottom left), weighing balances for the selling of vegetables; (bottom right), family labor involved in street vending of vegetables.

## Problems

The local authorities especially police and municipal authorities consider as encroachment of public spaces. Most of the street vendors are evicted during the widening of roads, beautification of the city or construction of new buildings and shopping malls. Gender discrimination is also a major issue where female vendors sell smaller quantities and earn fewer margins (Bhowmik, 2010; Saha, 2011).

## Policy making

Source of capital plays an important role in street vending business. These capitals are used for starting business as well procuring goods to run business. Since most of the vendors depend on local moneylenders with high rate of interest which may leads to the exploitation of their business. Street vending should be integrated as a part in urban city planning which provide a major livelihood option in for the urban poor in the informal sectors. Micro finance and micro credits to issued to the street vendors for prospering running of their business.

## CONCLUSION

The affordability and availability of vegetables and fruits plays a major role in sustainable developing process which improves nutritional balances and macroeconomic stability. Relationships among street vendors and customers are a key component of the social activity. Bribery as well as lack of financial credit may hamper the wellness of street vending business in MMR. Urban planning with the incorporation of street vendors may improve their livelihood and working conditions.

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