

Waste Pickers in Pune, India

by Poornima Chikarmane

April 2014

● Pune



Informal Economy Monitoring Study: Waste Pickers in Pune, India

Field research for this report was conducted in Pune between August–October 2012. The Pune Research Team consisted of: Poornima Chikarmane, Malati Gadgil, Aparna Susarla, Nagmani Rao and Maitreyi Shankar.

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About the Informal Economy Monitoring Study

The Informal Economy Monitoring Study (IEMS) is a major, longitudinal study of the urban informal economy being undertaken initially at two points in time, 2012 and 2015, in 10 cities around the world: Accra, Ghana; Ahmedabad, India; Bangkok, Thailand; Belo Horizonte, Brazil; Bogota, Colombia; Durban, South Africa; Lahore, Pakistan; Lima, Peru; Nakuru, Kenya; and Pune, India. The study combines qualitative and quantitative research methods to provide an in-depth understanding of how three groups of urban informal workers – home-based workers, street vendors, and waste pickers – are affected by and respond to economic trends, urban policies and practices, value chain dynamics, and other economic and social forces. The IEMS will generate panel data on the urban informal economy.

In each city, a team of five researchers worked in collaboration with a local membership-based organization of informal workers from April 2012 to April 2013 to collect and analyze the first round of the data.

All city research reports, as well as sector reports (one each for home-based work, street vending and waste work), a global report, and other information on the study can be found at www.inclusivecities.org and www.wiego.org.

Table of Contents

Executive Summary	1
The Research in Pune	1
Key Findings	1
Policy and Advocacy Recommendations	3
Introduction	6
Study Objectives	6
Conceptual Framework	6
Methodology and Sampling	7
Challenges	8
MBO Profile	9
Summary of City and Sector	9
Part 1: Characteristics of Workers, Households and Enterprises/Sectors	11
1.1 Characteristics of Individual Workers and Households	11
1.2 Characteristics of Individual Enterprises	13
Methods of Collection According to Types of Waste Pickers	13
1.3 Sources of Recyclable Materials	15
1.4 Materials Collected, Recovered and Purchased	16
Materials Not Collected	17
1.5 Employment Status and Paid /Unpaid Help	17
1.6 Business Expenses	18
1.7 Earnings and Hours of Work	19
1.8 Earnings and Work Stability	20
1.9 Characteristics of Sector and Value Chain	21
Waste Generators	21
Informal Waste Pickers	21
Municipal Solid Waste Collection System	21
Recyclable Waste Transporters	22
Scrap Dealers	22
Organic Waste Processing Units	22
1.10 Analysis and Commentary on Part I	22
Part 2: Changes in the Sector	24
2.1 Driving Forces in the Sector	24
2.2 Negative Forces	25
Macroeconomic Negative Factors	25
Government Policy and Planning-Related Negative Factors	29
Negative Factors Related to Value Chain Dynamics	33
Other Negative Driving Forces	36
2.3 Positive Forces	36
Positive Factors Related to the Macroeconomy	36
Positive Factors Related to City and Urban Policies and Planning	37
Positive Factors Related to Value Chain Dynamics	38
Positive Factors Related to Other Driving Forces	
2.4 Responses to Negative Driving Forces	41
Response to Primary Macroeconomic Difficulty	43
Response to Secondary Macroeconomic Difficulty	44

Table of Contents (cont'd)

2.5 Intermediary Factors (Institutional Environment)	45
Institutional Actors	45
MBOs	49
2.6 Further Analysis and Commentary on Part 2	49
Negative Driving Forces	49
Part 3: Linkages and Contributions to the City	52
3.1. Linkages to Formal Economy	52
Relationship Between the Waste Generator and the Type of Collector	53
Value Addition, Aggregation and Transport	54
Sale of Recyclable Materials	54
Purchase Prices of Recyclable Materials	55
3.2 Linkages to Local Government	55
Municipal Solid Waste Collection	55
3.3 Contributions	56
1. Contributions to the City	56
2. Contributions to the Value Chain	57
3. Macroeconomic Contributions	58
4. Contributions to the Environment	58
Part 4: Key Findings and Policy Implications	59
Introduction	59
4.1 Summary of Key Findings	59
4.2 Conclusion	65
4.3 Policy Recommendations	65
References	68
List of Tables	
Table 1 - Respondent's Level of Education by Sex (%)	11
Table 2 - Age of Respondents by Category of Worker (%)	11
Table 3 - Respondents Caste by Type of Collector (Numbers)	12
Table 4 - Basic Household Characteristics by Sex	12
Table 5 - Main Source of Household Income by Sex (%)	13
Table 6 - Monthly per Capita Income	13
Table 7 - Types of Waste Collecting Activities by Type of Worker (%)	15
Table 8 - Materials Collected	16
Table 9 - Status in Employment, by Sex (%)	17
Table 10 - Main Reasons for Not Having Worked the Previous Week (%)	17
Table 11 - Types of Support When Unable to Work, by Sex and Type of Worker (%)	18
Table 12 - Mean Monthly Expenditure (Rupees) on Business Expenses, by Type of Worker	18
Table 13 - Mean Turnover and Working Hours by Sex and Type of Worker	19
Table 14 - Monthly Turnover by Type of Waste Picker	19
Table 15 - Length of MBO Membership and Earnings (Thirds) (%)	20
Table 16 - Earnings and Work Stability by Type of Worker (%)	20
Table 17 - Frequency of Mention of Negative Driving Forces	24
Table 18 - Frequency of Mention of Positive Driving Forces	24
Table 19 - Problems Related to Markets and Competition, by Type of Worker (%)	25
Table 20 - Difficulties Related to Macroeconomic Driving Forces	26

List of Tables (cont'd)

Table 21 - Negative Factors Relating to Government Policy, Practices & Planning at the City Level	29
Table 22 - Negative Factors Related to Value Chain Dynamics	33
Table 23 - Status of Buy-back Centres by Type of Worker	34
Table 24 - Other Negative Factors Affecting Waste Pickers	36
Table 25 - Positive Macroeconomic Forces	36
Table 26 - Positive Factors Related to Government Policies	37
Table 27 - Positive Factors in Value Chain Dynamics	38
Table 28 - Other Positive Forces	40
Table 29 - Responses to Negative Driving Forces at Individual, Household and Collective Levels	41
Table 30 - Individual, Household and Collective Responses to Negative Driving Forces	
Table 31 - Perceived Inability to Respond	42
Table 32 - Types of Responses Disaggregated by Category of Collector	44
Table 33 - Types of Organizations that Are Identified as Being 'Helpful', by Sex and Type of Worker (%)	45
Table 34 - Participants Perception of Relevance, Importance and Impact of Institutions	45
Table 35 - Institutions that Support or Obstruct	46
Table 36 - Perceptions about Support from Local Authorities	48
Table 37 - Main Customers or Buyers by Type of Worker (%)	52
Table 38 - Destination of Collected Materials	56

List of Figures, Diagrams and Charts

Pune at a Glance	10
Figure 1 - Method of Collection by Type of Collector, Revealed in the Opening Exercise	14
Box 1 - Earnings versus Turnover	19
Figure 2 - Spatial Map of the Sector	21
Graph 1 - Frequency of Mention of Negative Driving Forces	24
Graph 2 - Frequency of Mention of Positive Driving Forces	25
Graph 3 - Difficulties Related to Macroeconomic Driving Forces	26
Figure 3 - Causal Flow Diagram of Primary Macroeconomic Forces	27
Graph 4 - Negative Factors Relating to Government Policy, Practices & Planning at the City Level	29
Figure 4 - Causal Flow Diagram of Primary Difficulty Related to Government Policies	30
Box 2 - Excerpt from an Interview with a Key Informant	30
Focus Group Member on the Issue of Contract Labour	31
Figure 5 - Spatial Map	32
Graph 5 - Negative Factors Related to Value Chain Dynamics	33
Figure 6 - Causal Flow Diagram of Primary Difficulty in the Value Chain	34
Graph 6 - Positive Macroeconomic Forces	36
Chart 1 - Prices of Secondary Commodities	37
Graph 7 - Positive Factors Related to Government Policies	38
Graph 8 - Positive Factors in Value Chain Dynamics	39
Graph 9 - Other Positive Forces	40
Figure 7 - Causal Flow Diagram of Primary Difficulty	43
Figure 8 - Causal Flow Diagram off Response to Secondary Difficulty	44
Figure 9 - Institutional Map	49
Figure 10 - Diagram of Economic Linkages	53
Figure 11 - Diagram of Contribution to the City	56

Executive Summary

Recent statistics show the majority of workers in developing countries earn their livelihoods in the informal economy. The Informal Economy Monitoring Study (IEMS) is a qualitative and quantitative study designed to evaluate the reality of these workers' lives. Through research conducted over three years in 10 cities, the IEMS aims to provide credible, grounded evidence of the range of driving forces, positive and negative, that are affecting conditions of work in the informal economy. Informal workers and their membership-based organizations (MBOs) are at the centre of the analysis.

The Research in Pune

In Pune, India, the IEMS sample of 150 was randomly drawn from the membership database of Kagad Kach Patra Kashtakari Panchayat (KKPKP), a trade union with over 9,200 members, and SWaCH, a workers' cooperative. Sex and source of materials were the study's two main variables. In 2012, focus groups were held with 73 waste pickers; a survey was administered to the focus group participants, as well as 77 other waste pickers. Of the 150 participants, 93 were women and 57 were men (women account for more than 70 per cent of the KKPKP membership).

Three categories of waste pickers were involved: itinerant waste buyers, itinerant waste pickers, and fixed waste collectors. The latter are those who have been integrated into door to door collection as members of SWaCH, which has a memorandum of understanding with the Pune Municipal Corporation. Fixed waste collectors gather co-mingled or segregated organic and recyclable waste. Itinerant waste pickers recover recyclables from the street and dump sites on the street, and from businesses but not from residences. Itinerant waste buyers purchase recyclables. Categories of workers have different sources of income: fixed collectors receive payment both from households and from the recyclables they sell. Itinerant waste pickers earn revenue only from the sale of recyclables. Itinerant buyers purchase from the collectors and waste pickers and earn income from re-selling the recyclables up the chain.

Key Findings

The study finds that waste picking in Pune remains confined to the Scheduled Castes and has disproportionately large numbers of women. The population is characterized by high levels of illiteracy – only 1 per cent of adults in the households having completed secondary school – and a larger household size than in the general population. The informal waste sector offers employment opportunities to illiterate, socially excluded jobless workers.

An overwhelming majority of the survey respondents (85 per cent) reported that they are the main income earners in their households, and more than 95 per cent of their households depend on the informal economy for survival. The participants are primarily own account workers, usually working alone without any paid or unpaid help, and the work is year-round.

The study captured the total turnover for the waste pickers in each category, though not their incomes, as it did not consider all inputs costs related to earnings. It was clear that men have higher turnovers than women, and that women fixed collectors enjoy higher turnovers than other types of women waste pickers as well as more stability in their earnings. Itinerant waste buyers clock the longest working hours and have overall turnovers about 30 per cent higher than in the other categories.

Overall, 47 per cent of the survey respondents complained of fallen revenues over the previous year. Most respondents cope with fallen revenues by cutting down personal expenses and by borrowing. Fifteen per cent of the survey respondents had taken up additional jobs.

Driving Forces

During the research, the waste pickers ranked and discussed factors that helped and hindered their pursuit of a living. Waste pickers all perceived a threat to their ability to access recyclables and thus to their livelihoods. However, the effects of driving forces varied by type of waste picker. Factors related to the city – specifically, the threat that private companies could be contracted to collect waste and competition from large companies interested in recycling – affects fixed collectors, while removal of municipal skips for “beautification” affects itinerant waste pickers most. A proliferation of scrap dealers is particularly threatening to itinerant waste buyers. The value of the itinerant waste buyers' “trade knowledge” was said to be eroding, as the increasing presence of scrap dealers encouraged waste generators to by-pass the itinerant waste buyer and sell directly to the dealer.

Direct sale by industrial waste generators to waste management companies and large traders also negatively impacts the waste pickers. “We used to pick stuff from a place where this company used to burn their waste. We would still find things.... now they don’t burn it – they call a truck and it all gets taken away.... What’s left for us?”

Macroeconomic Forces

In the survey, waste pickers identified a range of negative macroeconomic forces, particularly large variations in income and too many competitors. Seventy per cent of survey respondents reported instability of prices of recyclables to be a problem, and several mentioned that they assume the risks of market fluctuations and seasonal variation. Overarching macroeconomic factors – the rising costs of living and the proliferation of waste pickers, including through migration – affects all types of pickers and were the two most cited problems in focus groups. The absence of social protection in the context of rising costs of living was also a concern.

Value Chain Dynamics

Those who generate the waste were ranked as the most positive force in the value chain; scrap dealers were in second place. Focus group participants reported that scrap dealers provide them with a market for their materials, easy credit, working capital, annual bonuses, and transport for the materials.

Itinerant waste pickers occupy the lowest rung on the value chain, and itinerant waste buyers just a rung above. A male itinerant waste buyer highlighted the injustice in the sector when he said, “The entire recycling industry depends on us. However they are not ensuring their profits reach us in equal measure.”

Relations with Government

Relations with local officials were cited as both negative and positive. Provision of push carts, safety equipment and storage/sorting facilities to fixed collectors by the city was considered an important positive factor. The focus groups also highly valued provision of medical insurance. The data available from the MBO revealed that 14 per cent of the survey respondents had benefitted from the medical insurance scheme in which the municipality paid the premium; however, employees of the municipal government in waste-related work get full medical cover for all ailments, unlike informal waste workers.

Fixed collectors interacted most with city officials, but only 23 per cent said police and city officials helped them in their work. Some said that they were admonished for not segregating properly, and one complained about having to pay the driver of the municipal vehicle to take the organic waste. Some waste pickers felt the municipality blamed them for problems, but took credit for their work. Others noted that inadequate service by the municipality confounded their work. Itinerant waste pickers did not have too much interaction with the municipality, but mentioned being blamed and fined for littering around the municipal skips.

A lack of allocated space was also a problem. Some mentioned losses because of rotting or degradation of picked waste during the monsoons due to lack of sheltered storage space; others said there were health issues related to having to use the vicinity of their home for dumping and sorting work.

Connections with the MBO

The workers’ organization was accorded relatively greater positive importance than the scrap traders. Focus group participants spoke about the benefits that the organization offered, including life insurance, medical benefits and support for children’s education. The role of the workers’ organization in facilitating consultative processes for resolving issues was brought up in a focus group discussion related to the entry of private waste management companies. Some waste pickers mentioned with appreciation the organization’s advocacy on larger issues such as food security and universalization of old age pension, though older members expressed concern that demanding changes could threaten the programme’s existence.

The data also offer some possibility that survey respondents who had been involved with their MBO for longer had higher earnings.

Waste pickers' Contributions

Waste pickers' sourced their materials primarily from private households (82 per cent), the "general public" (88 per cent), and formal businesses (93 per cent), indicating they are closely linked to the formal economy and highly relied upon by Pune's residents. A third also reported selling to informal businesses. Fixed collectors and itinerant waste buyers had more direct relationships with residents and businesses; 73 per cent of fixed collectors and 68 per cent of itinerant waste buyers believe that the general public recognized and appreciated their services, compared to only 40 per cent of the itinerant pickers.

Primary waste collection (from generators) is carried out by fixed waste collectors as part of a Memorandum of Understanding between their cooperative and the city government. These fixed collectors supply organic waste to composting plants operated by or with the permission of the municipal government and to municipal or municipally-contracted bio-methanation waste to energy plants. Itinerant waste buyers purchase better quality recyclables and other junk from waste generators. This prevents junk and better quality recyclables from entering the municipal waste stream. The recovery of recyclables from municipal skips, transfer stations and the streets by itinerant waste pickers reduces the quantity of waste handled by the municipal secondary waste collection system. In addition to providing services to residents and businesses, and offering low-cost or no-cost service to the municipality, the waste pickers take pride in helping to clean the city.

Waste pickers face an indifferent or hostile policy environment and increasing competition from recycling formats considered more "modern." Yet today's waste pickers noted some positive developments – many are embracing new technologies and efficiencies and adapting to changes in the external environment. Itinerant waste buyers and fixed collectors routinely referred to the use of mobile phones to be in touch with customers, municipal officials and each other. Motorized transport or push carts are replacing head loading as a way of transporting goods. There was also mention of electronic weighing scales and the collection and sale of e-waste in the focus groups.

Regardless of their pride in contributing to the city, many waste pickers said they face hostility and ill treatment by some citizens, and that the work remains dangerous and difficult. Occupational health and safety was identified as a problem by three-quarters of all waste pickers, and 91 per cent of itinerant waste pickers, who manually segregate co-mingled waste. As one focus group participant expressed, "The city gets healthier, but we get sicker. Big needles, glass, rose thorns, all those things injure us."

Policy and Advocacy Recommendations

1. Recommendations for National and State Social Security and Welfare Policy

- a. **Create a universal, state-funded non-contributory social security floor to address vulnerability of informal waste pickers and other workers** – The IEMS findings clearly reveal that waste pickers' households are vulnerable to economic stresses against which they do not have the cushion of social security and welfare measures. Universal provision of a basic social security floor that includes subsidized food rations; free primary, secondary and tertiary medical care; disability and death insurance; maternity benefits and early childhood care; and old age pension, disability pension/allowance and destitution pension/allowance, is a socially just and efficient option.
- b. **Use occupation as a criterion for rights-based entitlements** – Entitlements for socially excluded castes and communities exist, but certification of caste is stringently monitored and often recorded during passage through formal education channels. The data show most present day waste pickers have been outside the formal education system and are thus unable to secure the 50-year proof required in Maharashtra State. Occupational status, on the other hand, is easily established through survey and/or registration. The occupational criterion has been accommodated in the national Socio-economic Caste Census (SECC), and waste pickers feature in the list of socially vulnerable groups in the SECC.

2. Recommendations for City and State Policy

- a. **Create a comprehensive Municipal Solid Waste Resources (Handling, Management and Recycling) Act** – Solid waste management falls in the municipal-government/public domain, governed by multiple official Acts, while recycling falls in the industrial-private domain and is

subject to industrial policies. Sustainable integrated solid waste management requires that the public/government domain in-source the private recycling domain so that they complement each other. This study reveals that informal waste pickers handle and manage resources, not only waste discards. The required coordination demands a comprehensive municipal solid waste resources handling, management and resources law based upon economically, socially and environmentally sound principles of waste management.

- b. **Develop land allocation policies and building control rules to recognize waste workers' needs** – Land allocation policies must reflect that informal waste pickers' need space to carry out classification of recyclables and to process organics. Private property owners who generate waste, as well as municipalities that need to arrange for collection, transport and processing, must allocate private/public land for waste management operations (just as building construction rules require the allocation of space for parking and amenities). Municipalities should also consider appropriate decentralized land allocations for small scrap traders and scrap markets; intermediate scrap processing units; weekly "junk" and second hand goods markets; and depots for collecting used clothes, books and other items.

3. Recommendations for Labour Policy

- a. **Explore processes for registration and decent work for all waste pickers** – While some informal workers are protected by labour legislation pertaining to specific occupations, there is no set process for registration of informal workers not covered by occupation specific legislations. The Unorganised Workers Social Security Act, enacted in 2008, has been ineffective. A national policy or Act – such as a Recovery and Recycling Workers Protection of Livelihoods and Employment Act or a Solid Waste Management and Recycling Workers (Promotion, Regulation, Welfare and Conditions of Service) Act – should be explored.
- b. **Create enabling conditions for occupational health and safety of waste pickers** – All three classes of workers involved in this study – own account waste free collectors, itinerant waste buyers, and own account worker members of the cooperative – provide important services on which the municipality relies. The municipal government needs to create the enabling conditions that will allow better working conditions, occupational health and safety, and worker benefits.
- c. **Promote upskilling, infrastructure, credit for waste and recycling enterprises** – Waste pickers, for the most part, are illiterate and not formally skilled. The upskilling of younger waste pickers has promising potential for increasing efficiency and remuneration in existing work as well as for moving them up the value chain. The provision of infrastructure and credit can enable them to diversify into other services and industries. Waste pickers organizations should advocate upskilling, credit and infrastructure support from municipal, state and specific agencies that have the mandate to provide support to disadvantaged groups.
- d. **Promote the organization of waste pickers** – The study finds the organization of waste pickers in Pune has brought significant gains to waste pickers. Waste pickers are often overlooked by trade unions, development NGOs and politicians because they are numerically smaller, women more often than men, and therefore less likely to be organized or involved in local political processes. They are largely without voice and "invisible" and this is exacerbated by their caste. Greater efforts to organize waste pickers are required, especially as contractor-led and corporate privatization are aggravating the vulnerability of waste pickers.

4. Recommendations for Energy, Industrial and Commerce Policy

- a. **Recognize the legitimacy and vibrancy of the recycling sector** – The scrap market is not recognized as a legitimate commodities market and the robust, market-driven informal waste collection/recycling sector is absent in policy documents (except when addressing the desire to supplant indigenous models in favour of corporatization and newer systems). The private-public partnership policy of the government as it exists in waste management favours large multi-year corporate contracts. Worker owned micro-small-medium enterprises would be able to do segments of the work at lesser costs, enabling far greater returns to the municipalities.
- b. **Provide incentives for informal trade and processing of secondary commodities** – Secondary commodities are a boon to formal manufacturing industries. The use of secondary materials avoids extraction costs of virgin materials and lowers manufacturing costs, thus the labour

of informal waste pickers produces savings through the low energy, low cost, high efficiency recovery, collection, trade and intermediate processing of materials. Provision of subsidized infrastructure, low interest credit, tax concessions and providing for better, safer and more remunerative options for workers would have social benefits. Because waste management and recycling are labour intensive, for example, employment could increase.

Introduction

Study Objectives

It is now widely recognized that the majority of workers in the developing world earn their livelihoods in the informal economy. Advancements in official statistics show that informal employment accounts for more than half of total non-agricultural employment in most regions, and as much as 82 per cent in South Asia and 80 per cent in most of sub-Saharan Africa (ILO-WIEGO 2013). Though many studies offer theories to explain the persistence, characteristics and growth of informal employment, few have evaluated the grounded realities of work in the informal economy – and none have done so over time and across a sufficiently large number of sectors and cities. The Informal Economy Monitoring Study (IEMS) seeks to fill this gap.

More specifically, the objective of the study is to provide credible, grounded evidence of the range of driving forces, both positive and negative, that affect conditions of work in the informal economy over time. The study places informal workers and their organizations at the centre of the analysis, examining not only the impact of these forces but also informal workers' strategic responses to them. It is based on a collaborative approach between researchers and member-based organizations (MBOs) of informal workers to monitor, on an ongoing basis, the state of the working poor in three sectors – home-based work, street vending, and waste picking – and also to build the capacity of MBOs to assess and mediate the driving forces that affect their work.

The study is based in 10 cities, as follows:

	Sector(s)	Local Partner
Africa		
Accra, Ghana	Street Vending	Institute of Statistical, Social and Economic Research (ISSER) and StreetNet Ghana Alliance
Durban, South Africa	Street Vending, Waste Picking	Asiye eTafuleni (AeT)
Nakuru, Kenya	Street Vending, Waste Picking	Kenya National Alliance of Street Vendors and Informal Traders (KENASVIT)
Asia		
Ahmedabad, India	Home-Based Work, Street Vending	Self-Employed Women's Association (SEWA)
Bangkok, Thailand	Home-Based Work	HomeNet Thailand
Lahore, Pakistan	Home-Based Work	HomeNet Pakistan
Pune, India	Waste Picking	Kagad Kach Patra Kashtakari Panchayat (KKPKP)
Latin America		
Belo Horizonte, Brazil	Waste Picking	Instituto Nenuca de Desenvolvimento Sustentável de Belo Horizonte
Bogota, Colombia	Waste Picking	Asociación de Recicladores de Bogotá (ARB)
Lima, Peru	Street Vending	Federación Departamental de Vendedores Ambulantes de Lima y Callao (FEDEVAL)

Conceptual Framework

In the IEMS, the term “driving forces” is used to refer to systemic factors that may impact, in either positive or negative ways, the occupations or livelihoods of urban informal workers. Three categories of “driving forces” anchor the study. First, the IEMS explores **the economy** as a driving force: that is, the macroeconomic conditions such as inflation, recession, and patterns of growth that may influence working conditions in the informal economy. Second, the IEMS examines **government policies and practice, specifically, but not exclusively, at the city level**, including urban planning and policies, zoning regulations, sector-specific policies, regulatory norms, and urban infrastructure and service

delivery. Third, the IEMS considers sector-specific **value chain dynamics**, including the power relations between informal workers and their suppliers and buyers, and the role of intermediaries in the value chain. The framework also allows for the identification of other driving forces, such as migration, that may have a significant impact on working conditions in a particular sector or city.

The IEMS assumes that the impact of these driving forces is mediated by institutions and actors related to the particular sector under study in each city. The study examines a range of institutions including government institutions, civil society organizations, and, fundamentally, MBOs of informal workers. It explores the responses of informal workers to key driving forces in each city, and on the economic, political, and spatial linkages within each sector. Finally, through its sampling design, the study allows for comparisons at the individual level by sex (in cities in which both men and women belong to the partner MBO), employment status and location of the workplace.

Methodology and Sampling

The IEMS is based on both qualitative and quantitative methods. The qualitative component consists of a participatory informal economy appraisal (PIEA), an innovative method designed to capture systematically the perceptions and understandings of informal workers in their own words, in a focus group setting.¹ Each city team conducted 15 focus groups (per sector) in which nine tools – organized around the themes of sector characteristics, driving forces and responses, the institutional environment, and contributions of the sector to the city – were used to generate data related to the conceptual framework. The results of the focus groups were recorded in reports of about 12 pages, on average, immediately after each focus group was conducted, and those reports were then analyzed.

The quantitative component consists of a survey questionnaire administered to approximately 75 focus group participants per sector, plus another approximately 75 workers for a total of about 150 in each city-sector. The questionnaire is designed to supplement the data collected through the focus groups by collecting information on the household profile and income sources of the workers; the assets profile of the workers’ households; detailed information on the enterprise or occupation of the workers; and linkages between the informal economy and the formal economy. The questionnaires were administered using a data-capture tool. It took approximately 90 minutes for each respondent to complete the questionnaire.

Collectively, the focus groups and questionnaires provide data on the context within which informal workers earn their livelihoods, and the forces that impact, both positively and negatively, on workers’ incomes and working conditions. We are also able to understand how workers adapt their work strategies in the face of these economic, social and institutional forces.

The sampling approach was designed to maintain comparability in the results across the 13 city-sectors, on the one hand, and to allow some flexibility as demanded by local circumstances, on the other hand. To the maximum extent possible, the following principles were followed in every city-sector:

- Only MBO members were included in the sample.²
- Each sector sample was based on two variables, as follows, where possible:

Sector	Sampling Variable 1		Sampling Variable 2	
Home-Based Work	Employment Status		Product Category	
	Self-Employed	Sub-Contracted	Category 1	Category 2
Street Vending	Sex		Location of Workplace	
	Women	Men	Central city	Periphery
Waste Picking	Sex		Source of Materials	
	Women	Men	Fixed	Variable

¹ The methodology was developed collaboratively with Caroline Moser, Angélica Acosta, and Irene Vance, who also trained the city teams in the data collection methods and later in data analysis. PIEA is an adaptation of earlier participatory methodologies developed by Chambers (1994), Moser and Holland (1997), Moser and McIlwaine (1999, 2004), and Moser, Acosta and Vásquez (2006).

² Substantively, being a “member” of an MBO means different things in different cities; in some cities it means being formally registered, for example, while in other cities it implies a looser affiliation.

- Each city team developed the “best sample possible,” based on the sampling variables outlined above. “Best” was defined as (a) the most representative sample possible of the study population of MBO members, and (b) the most sensible, feasible, and locally appropriate sample possible. In cities where the partner MBO maintains an updated registry of members with data on the sampling variables, for example, it was possible to develop a stratified random sample that was statistically representative of the MBO population on the sampling variables; in cities where there was no accurate registry, the city team used a quota sampling approach. In each city, the local researchers worked with the MBO to identify what the best possible sample would be, based on local circumstances.
- The second sampling variable – product category for home-based workers, location of workplace for street vendors, and source of materials for waste pickers – was designed to correlate with a degree of vulnerability that stems from sector-specific circumstances. In the street vending sector, for example, vendors who work in the central city are typically more vulnerable to evictions than those who work in the periphery. Each city team identified the best way to operationalize this variable according to local circumstances.

The sampling design was implemented as follows in Pune.

The sample for Pune was randomly drawn from the membership database of 9,326 members of KKPKP (waste picker trade union) and SWaCH (waste cooperative) that comprised three categories of waste pickers, namely: Itinerant Waste Buyers, Fixed Waste Collectors and Itinerant Waste Pickers.³ Fixed waste collectors were those itinerant waste pickers who had been integrated into door to door waste collection as members of the workers’ cooperative, SWaCH, which has a memorandum of understanding with the Pune Municipal Corporation.

Category of Waste Worker	No. of Women	No. of Men	Total
Itinerant Waste Buyers (IWB)	9 (8)*	32 (18)	41 (26)
Itinerant Waste Pickers (IWP)	32 (12)	3 (1)	35 (13)
Fixed Waste Collector (DTDC)	52 (23)	22 (11)	74 (34)
Total	93 (43)	57 (30)	150 (73)

* Note: Sample size for quantitative (survey): 150; for qualitative (focus groups): 73. Numbers in parentheses are for qualitative sample

Challenges

The high level of illiteracy among participants posed a challenge for the data collection through focus groups. Participants insisted that they preferred to speak rather than answer the questions through the exercise. Quite often the facilitator had to actually draw the maps and figures but the participants were happy to direct the process, pointing animatedly in different directions. Questions about the purpose of the study and the outcomes were a feature of every focus group. The facilitators explained that the study would convey the situation and concerns of focus group participants and the survey respondents to policymakers and decision makers. The fact that the groups had been organized over a long period of time meant that there was a degree of comfort among the participants as well as with the MBO coordinator.

The survey questionnaire was unable to capture a lot of work-related information about the materials purchased, collected and traded probably because they are highly sector specific. Home-based workers are engaged in production, street vendors in selling goods while waste pickers were involved in the selling of post-consumer goods and services. The complexities could not be captured in the standard questionnaire resulting in some loss of richness. The focus groups however made up for some of that.

As mentioned in the section on methodology and sampling, sex and source of materials were the two main variables in the study. Consequently, men constituted 41 per cent of the sample for the qualitative study and 38 per cent in the quantitative study, which is much higher than the proportion of men (28 per cent) in the membership. The voices of men, many of whom are itinerant waste buyers,

³ In this report, the term waste picker is used to refer all three categories unless otherwise specified.

are therefore “louder” and some of their concerns find greater representation in the focus groups. Four focus groups each had exclusively itinerant waste buyers and fixed collectors, while the rest of the seven groups were a mix of all types of collectors.

MBO Profile

Kagad Kach Patra Kashtakari Panchayat (KKPKP) is a trade union of itinerant waste pickers and itinerant waste buyers based in Pune, India. It was registered in 1993. Over the years it asserted the rights of workers to be recognized as workers and established the workers’ contribution to municipal solid waste management in the city as well as the environment. Strategically, the organization has restricted expansion to the Pune Urban Agglomeration comprising the municipalities of Pune and Pimpri Chinchwad, but it works in helping local groups in other cities to organize waste pickers.

KKPKP has predominantly Dalit women members not by intent or design, but because that is the way the worker segment of the sector is structured. Likewise most of the membership is itinerant waste pickers; itinerant waste buyers are a very small proportion. Members pay an annual subscription that entitles them to identity cards endorsed by the municipal government and other benefits of the organization such as life, disability and health insurance coverage, low interest credit and educational support for children. The organization also takes up issues and grievances of members as well as enabling entitlements to government schemes.

While KKPKP has evolved specific programmes to help their members with livelihood issues such as interest-free loan schemes for education, thrift shops for clothes and household goods, a member-owned fair deal scrap shop, health insurance, and small savings groups, members have also mobilized extensively on broader issues such as police harassment and extortion; municipal apathy; exploitation by scrap traders; non-settlement of insurance claims; municipal recognition; securing school admission; health issues; women’s rights and violence against women; and social security for unorganized workers.

Since its inception, KKPKP has emphasized the need to integrate waste pickers into the city’s waste management system. The organization successfully documented and quantified the immense economic contribution that waste pickers make to the city in terms of waste collection and recycling. It advocated for and secured official recognition for its members.

The Municipal Solid Waste (Management and Handling) Rules, passed in 2000, required municipalities to organize door to door waste collection and segregation as well as processing to divert waste away from dumping in landfills. Most municipalities in Maharashtra and across the country looked to outsourcing waste collection and management services to private contractors.

Experiences of contracting out of waste collection in pockets of the city and in Delhi, Bangalore, Nashik, Nagpur and other Indian cities had shown that this approach has often reduced waste pickers’ access to recyclables. Often, the waste pickers had to pay the private contractors to collect waste, or worse, they were displaced entirely. KKPKP proposed a model that would integrate waste pickers into door to door collection work, thereby improving their working conditions. SWaCH, a wholly owned cooperative of waste pickers, was registered in 2008 to provide door to door collection pursuant to a general body resolution of the Pune Municipal Corporation.

SWaCH is authorized to recover user fees by the PMC, which also provides the equipment, infrastructure and management costs. SWaCH has extended itself to include livelihood upgrading and income enhancement activities that go beyond door to door collection of waste into junk collection (discarded household items / clothes, e-waste); compost production and sale; production and sale of ST dispo bags for sanitary waste; and public education on waste issues. SWaCH also organizes regular training and skill-upgrading workshops for its members – such as free driving lessons, computer skills training and communication skills workshops.

Summary of City and Sector

Historically considered a sleepy pensioners’ town, Pune and its environs have seen unprecedented industrial and economic growth as well as migration-led population increases during the last decade. Sixty-two per cent of Pune’s population is aged less than 30 years. The 25-34 age group forms a larger proportion of the total population than the national average. It is estimated that about 50 per cent of the population increase is due to in-migration (Revised CDP 2012).

Pune at a Glance

Pune City is part of the Pune Urban Agglomeration (UA). Pune City occupies 243 sq. km and has a population of 3.11 million.

Pune City is the jurisdiction of the Pune Municipal Corporation (PMC), which was established in 1959.*

The average literacy rate is 95% for men and 87% for women.*

Per capita income is Rs. 140,570 per annum.**

The estimated daily waste generation in Pune is 1.400 metric tonnes.****

Sources:

*Census of India 2011

**Economic Survey of Maharashtra 2012-13

**** Assessment of Status of Municipal Solid Waste Management in MetroCities and State Capitals. MPCB and NEERI, as referenced from http://www.cpcb.nic.in/pcpdiv_plan4.htm 2

Pune has 564 slums, of which 211 are undeclared or not notified. More than 1.2 million people can be classified as slum dwellers. Undeclared slums house 27 per cent of the slum population (Revised CDP 2012).

The city's main economic drivers are information technology (IT), biotechnology, manufacturing industries and education (Revised CDP 2012).

The work force participation rate for Pune, according to the 2001 Census, was 34 per cent, which was higher than the national level of 25 per cent but lower than the state level of 42 per cent. Workers classified as main workers (those who had worked for more than six months during the reference period) constituted 94 per cent of the total workforce. The rest were classified as marginal workers. Two thirds (62 per cent) of the non-workers, 21 per cent of the main workers and 39 per cent of the marginal workers were women. In terms of sectors, 47 per cent of the primary sector (agriculture), 52 per cent of the secondary sector (industry and production) and 20 per cent of the tertiary sector workers (trade, commerce and services) were women. Almost one third (32 per cent) of total workers in Pune were in the tertiary sector (Census of India 2001).

Waste pickers and itinerant waste buyers comprise 76 per cent of the workers in the recycling market (Chikarmane et al. 2001: 148). In numerical terms there are about 9,000 registered waste pickers and itinerant waste buyers (KKPKP 2013) and about 556 traders (Revised CDP 2012) in Pune.

Part 1: Characteristics of Workers, Households and Enterprises/Sectors

1.1 Characteristics of Individual Workers and Households

The IEMS presented an opportunity to examine the characteristics of individual waste pickers in Pune and the make up of their households. Tables 1, 2 and 3, in conjunction with each other, reveal the relationship between the occupation of waste collection and caste, gender and literacy.

	Men	Women	Total
None	50.88	74.19	65.33
Some primary	22.81	12.90	16.67
Completed primary	5.26	2.15	3.33
Some secondary	12.28	10.75	11.33
Completed secondary	7.02	0.00	10.75
At least some tertiary	0.00	0.00	0.00
Completed tertiary	1.75	0.00	0.00
Total	100.00	100.00	100.00
N	57	93	150

Source: Pune IEMS survey data (2012)

Survey respondents comprised 62 per cent women and 38 per cent men. Overall there were considerably fewer literate individuals in the sample population in comparison with that in the rest of the city. Men were more likely to be literate than women and not a single woman had completed secondary school.

Survey respondents were almost exclusively from among the Scheduled Castes, irrespective of type of collection. Muslims were more likely to be itinerant waste buyers than waste pickers.

The proportion of Scheduled Caste population to the total population in Maharashtra was 10 per cent and in Pune District was 11 per cent (Census of India 2001). But in Pune city, 94 per cent of waste pickers are from the Scheduled Caste population.

The modal age for all waste pickers was 45 years. Interestingly, in table 2 we see that there were more fixed collectors in the younger age group and more itinerant waste pickers in the older age group, indicating that there was perhaps a generational shift away from itinerant waste picking. Since fixed collection was intended to be an upgrade from itinerant waste collection (as discussed earlier in the MBO Profile), the data indicate that younger workers could have made that shift. The upgrade from itinerant picking to doorstep collection did not, however, alter the caste proportions in the occupation in any significant manner over a period of 6-7 years.

Age	Fixed Waste Collector	Itinerant Waste Buyers	Itinerant Waste Pickers	Total
21 - 40	63.00	21.00	16.00	100.00
41 - 60	41.00	35.00	24.00	100.00
61 +	25.00	17.00	58.00	100.00
N	74	41	35	150

Source: Pune IEMS survey data (2012)

The present study finds that the occupation of waste collection remains confined to the Scheduled Castes and has disproportionately large numbers of women. A study carried out over a decade ago

had found a similar composition (Chikarmane et al. 2001). The change during the past decade seems to be limited to younger members transiting into door to door collection and some improvement in literacy levels.

Caste	Fixed	IWB	IWBP	Total
Special Backward Class	0	0	1	1
Scheduled Castes	70	36	34	140
Other Backward Castes	0	1	0	1
Scheduled Tribe	2	0	0	2
Muslim	1	4	0	5
Total	73	41	35	149

Source: KKPKP database, 2013

The IEMS survey data also indicated that waste pickers' households included in the study were larger than households in the general population.

	Men	Women	Total
Household size*	5.71	5.20	5.40
Number of children	1.63	1.24	1.39
Number of working-age adults (16-65)	3.75	3.49	3.59
Number of pensioners	0.14	0.17	0.16
Number of adults who completed secondary school	1.19	1.25	1.23
Ratio of workers to household size	0.45	0.50	0.48
Percentage with:			
Other workers in the household	80.70	73.12	76.00
Other informal workers in the household	71.93	54.84	61.33
Other formal workers in the household	29.82	43.01	38.00
N	57	93	150

Source: Pune IEMS survey data (2012)

*Note: Household size does not represent a total of children, working adults and pensioners

The median household size for the state of Maharashtra was less than four for urban areas (Census of India 2011). Most households had more than one worker, usually informal workers. The data in table 4 show that more women's households had formal workers. The quantitative researchers clarified that all salaried workers had been classified as formal workers during data collection. Thirteen per cent of the women respondents were widowed (KKPKP database).

As with the respondents themselves, education levels of household members were also quite low, with only 1 per cent of adults in the households having completed secondary school.

An overwhelming majority of the survey respondents (89 per cent men and 82 per cent women) reported that they were the main income earners in their households. Nearly all of the remaining 11 per cent reported that the income of other informal workers was the main household income. Less than 1 per cent of the survey respondents reported any income from government grants, unemployment payouts and rental income. Only 3 per cent reported pension income. No respondent reported any income from worker's compensation, child maintenance or remittances. There was no significant difference in the economic dependency ratio for men and women. The data are presented in table 5.

Table 5 - Main Source of Household Income by Sex (%)			
	Men	Women	Total
Your own informal business/enterprise/work	89.47	81.72	84.67
Earnings from informal work by other household members	7.02	12.90	10.67
Formal sector wage employment (respondent) in public sector	1.75	4.30	3.33
Formal sector wage employment (respondent) in private firm	0.00	1.08	0.67
Other	1.75	0.00	0.67
Total	100.00	100.00	100.00
N	57	93	150

Source: Pune IEMS survey data (2012)

Further analysis of the income data of survey respondents showed that a quarter of the survey respondents (26 per cent) were the only income earners in their households; of these, over half were fixed collectors.

The Government of India uses the poverty line as an estimation of destitution and vulnerability. Although the poverty line is a much contested subject, it is used here as defined by the Government. The data presented in table 6 indicate that more than 3 per cent of the survey respondents were below the threshold of Rs. 591.20 (about US \$10.64⁴) per capita per month that constitutes the poverty threshold in Pune, according to the Pune Municipal Corporation. If using the threshold set by the Planning Commission of India, 24 per cent of the households are below the poverty line of Rs. 981 (about US \$17.66) per capita per month. For households where the respondent was the sole income earner, the number increased to 34 per cent.

Table 6 - Monthly per Capita Income		
Per Capita Income (rupees)	N	%
0-600	5	3.42
601-1200	41	28.08
1201-1800	53	36.30
1801-2400	16	10.96
2401-3000	22	15.07
3001-3600	3	2.05
3601-4200	2	1.37
4201 and above	4	2.74
	146	100.00

Source: Pune IEMS survey data (2012)

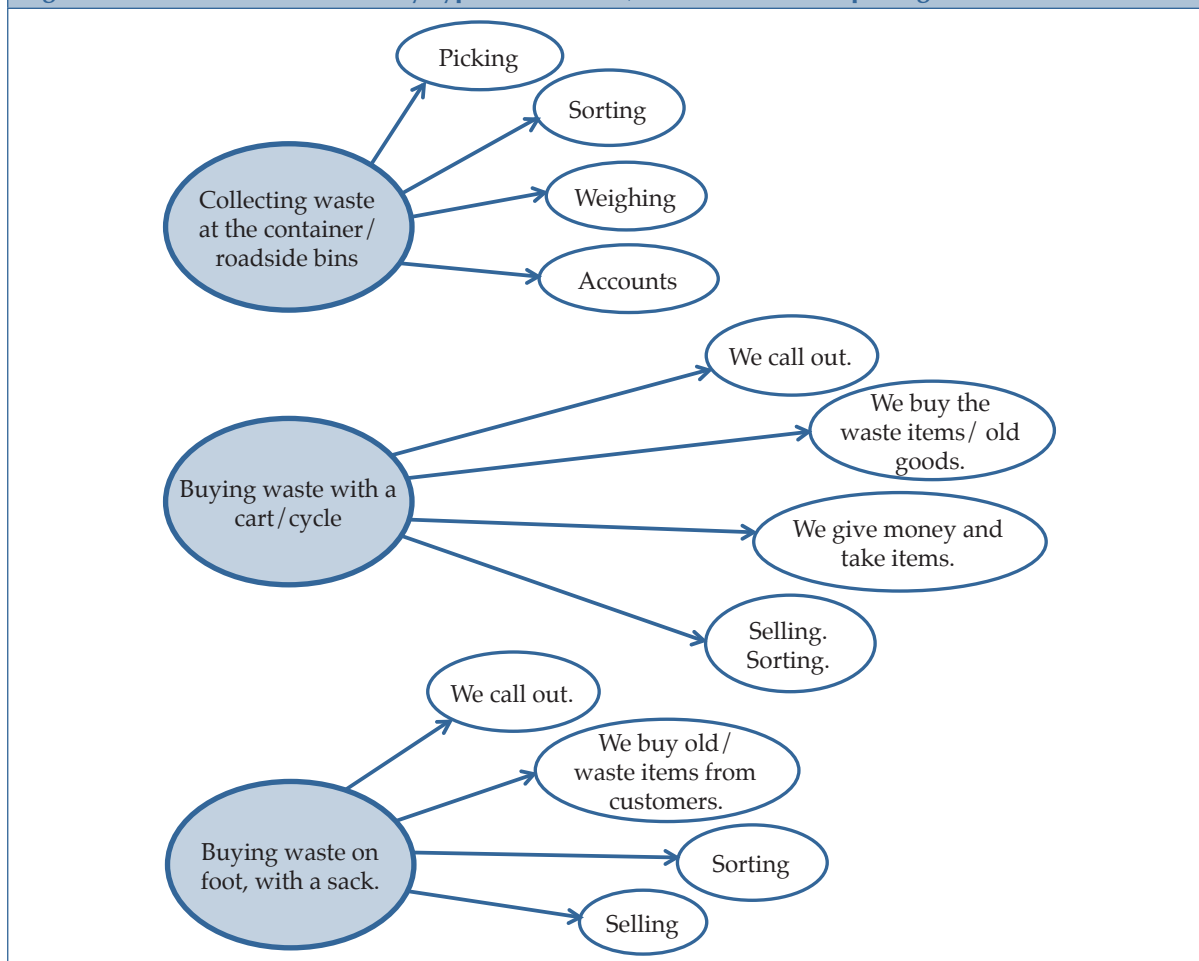
1.2 Characteristics of Individual Enterprises

Methods of Collection According to Types of Waste Pickers

The survey sample comprised three groups of informal waste pickers: 41 itinerant waste buyers (27 per cent), 74 fixed collectors (50 per cent), and 35 itinerant waste pickers (23 per cent). While all three groups handled recyclables, each had their own *modus operandi* that determined the nature of their work and earnings. Figure 1 illustrates the specificities of how each type of worker carried out her/his work.

⁴ 1 Indian rupee was equal to US \$.018 on August 1, 2012 per the mid-market rate reported by www.xe.com. This rate is used for all conversions throughout this paper.

Figure 1 - Method of Collection by Type of Collector, Revealed in the Opening Exercise



Source: Focus Group Report 13

Itinerant Waste Pickers (IWPs)

Waste pickers described their work as recovering recyclables from municipal skips, waste bins placed on the streets and shops in residential and commercial areas while traversing a fixed route. They had no direct engagement with waste generators.

“For us, it’s like this – we collect waste. Then we signal to the tempo and bring it all to the shop and do sorting. We sort and place glass on one side, paper in a sack, cardboard in one pile and bottles to one side. Then we weigh each pile, and sell it. Do our accounts and come home.”

Itinerant waste picker from Focus Group Report 13

Itinerant Waste Buyers (IWB)

Calling out, making an offer, weighing/ assessing, buying, sorting, dismantling, packing, transport and sale are the typical activities carried out by itinerant waste buyers. Itinerant waste buyers call out *dabba batliwali* or *bhangar wala* (tins, bottles woman or iron monger) to customers as they walk the streets on their route and buy recyclables directly from waste generators. The women quote a buying price based on visual assessment of materials while the men are more likely to use weighing scales. Men and women itinerant waste buyers refer to their work as a *dhandra* (business). They operate along fixed routes and have a regular customer base of households, offices, shops and small commercial establishments. Mobile phones have reportedly improved their access to customers who call when scrap materials accumulate. The men trundle their push carts or bicycles and some even mini trucks. Women are usually on foot and use baskets on their heads or hire auto rickshaws and mini trucks to transport their collected material. Men and women operate with their own small working capital, or source it interest “free” from scrap dealers. The credit market is tied to the product market. A secure customer base allows them to purchase scrap on credit. On lean days, working capital is used for consumption needs.

After that is exhausted, they borrow from scrap dealers or from friends and relatives.

Some spoke to the importance of building trust within the neighbourhoods where they worked:

“If you have a big beard and very dirty clothes, no one will dare to call you to their door. Unfamiliar faces arouse suspicion so it’s important to be a familiar face in the neighbourhood. Trust is important. We don’t buy stolen goods. We don’t operate after dark. We don’t make shady deals.”

Male itinerant buyer, Focus Group Report 4

Fixed Waste Pickers

Fixed waste collectors see themselves as providers of daily waste collection and handling services for domestic waste generators or households. They operate with the permission of, or under contract to, the generators in a specific geographical area to which they are assigned and where they collect user fees. They collect organic and inorganic waste generated at those points; separate it if co-mingled; hand the wet waste to the municipal truck or deposit it in the municipal skip along with the non-recyclables; and sort and sell the recyclable material. Those who also compost the organic waste or who have to send it to the biogas plant reported having to do very fine segregation. One participant from Focus Group 8 explained, “We collect ‘wet’ and ‘dry’ waste. Left-over food, mucky stuff, vegetables, chapattis, rice are ‘wet’. Wet is put into one bucket. And we take out cardboard, bottles, glass, plastic, *phooga* [plastic], white paper that we keep aside.”

Cleaning and sweeping of the premises, cleaning toilets, carting other kinds of waste (e.g. debris) on specific request and payment were also reported. One focus group respondent complained bitterly about having to handle soiled diapers and other filth that put her off her food for the whole day. She rued that she had to do this work to support her family. She described the way citizens tied everything up in plastic bags and the waste pickers had to untie each bag in order to separate the plastic. Others had tried to educate waste generators. One described how they had managed to get citizens to segregate into the basic three categories after repeated messages to them.

“Each goes in a separate stream – organic to the municipal truck, the non-recyclables to the skip and the recyclables to the scrap dealer for recycling. The non recyclables include tyres, broken tube lights and other stuff the scrap dealer will not buy from us. Today citizens are very careful about segregating this waste and keeping it separately. They tell us not to open the black bag – as it has all these [non-recyclable] materials.”

Fixed collectors, Focus Group Report 14

1.3 Sources of Recyclable Materials

Participants in all 15 focus groups collected from domestic sources. Those in four collected from offices, three from shops and companies, and ten from municipal skips. The findings presented in table 7 indicate that the survey respondents primarily sourced domestic waste and some commercial waste.

Types of activities	Fixed	Itinerant buyer	Itinerant picker	Total
Collecting from a street	8.22	41.46	62.86	30.20
Collecting directly from people’s homes	94.44	78.05	34.29	75.68
Collecting from a dump site	6.85	5.00	58.82	18.37
Collecting from businesses	13.70	52.50	14.29	24.32
Sorting at a recycling warehouse	15.07	9.76	25.71	16.11
N	73	41	35	149

Source: Pune IEMS survey data (2012)

Fixed collectors and itinerant waste buyers sourced recyclables from people’s homes, offices and businesses. Itinerant waste pickers collected recyclables from the street and dump sites on the street. They did not collect directly from homes but did collect from businesses.

1.4 Materials Collected, Recovered and Purchased

Itinerant waste buyers purchased recyclables while itinerant waste pickers recovered recyclables. Fixed waste collectors collected co-mingled or segregated organic and recyclable waste. The list of recovered and purchased recyclable materials, as reported by the focus groups, is presented in table 8. The survey was not able to capture this information. The list compiled from the focus group reports is by no means exhaustive and does not uniformly apply to all categories of waste pickers. The quality and the value of materials progressively declined from itinerant waste buyer to fixed collector and finally to itinerant waste pickers.

Table 8 - Materials Collected	
Recyclable Material	Total Groups
News Paper	11
Phooga (Plastic)	6
Broken Glass	14
Corrugated board	15
White	11
Milk bags	5
Polyethylene Terephthalate (PET)	13
Bottles	13
Beer bottles	9
Tin	8
Ferrous Metal	8
Other metals	3
E-waste	6
Clothes	5
Shoes / Chappals	7
Low-density Polyethylene (LDPE)	4
Sacks	2
Notebooks	5
Bandha Road scrap paper	2
Rags	1

Source: All Focus Group Reports, N=15

Focus group respondents reported that what was collected was determined by access to particular materials, efficiency (input effort and costs relative to output), mode and feasibility of transport, marketability of materials and their market price, and in the case of itinerant waste buyers, margins as well. The frequency of sale of recyclable materials was also influenced by daily needs and household events or crises.

Fixed collectors and itinerant waste buyers collected newer materials such as PET, beer cans, e-waste, furniture, tetrapak (multi-layer packaging).

Product specialization was seen among some itinerant waste buyers. Two enterprising itinerant buyers explained they purchase only steel and scrap metal from construction sites. Their area of operation is not restricted to a particular beat. Most of their dealings happen over their cell phones. They receive calls from construction contractors and simply kick start their motor bikes and get to the site. They transport the scrap in their mini truck. As buyers of a single type of item, they do not have to sort the scrap. They sell the materials to two traders who provide them with capital.

Materials Not Collected

Seven groups reported on materials that they did not collect, either because they had no market – such as tyres and broken tube lights – or because the prices were too low to make it worth their while (as is the case with beer bottles, rum bottles, certain plastics, thin carry bags and road scrap paper). Larger electronic items such as computers and black and white TVs are avoided, as are refrigerators because recent models have less metal than the older ones. The waste pickers also reported avoiding two-wheelers and bicycles because these invite attention from the police.

1.5 Employment Status and Paid /Unpaid Help

	Men	Women	Total
Own-account worker	96.49	98.92	98.00
Employer	0.00	0.00	0.00
Contributing family worker	1.75	0.00	0.67
Employee	1.75	0.00	0.67
Member of a cooperative	0.00	1.08	0.67
Total	100.00	100.00	100.00
N	57	93	150

Source: Pune IEMS survey data (2012)

All survey respondents were own account workers, including the fixed collectors who were self-employed members of a cooperative. Waste collection is not a seasonal activity as 90 per cent of the survey respondents worked for all 12 months of the year. They could therefore be classified as main workers as per the Census of India definition. Only 29 per cent had not worked the usual week during the week prior to when data was collected. Absence from work was due to illness or accidents; personal or family reasons or vacation and holiday breaks (table 10) rather than issues related to the work itself. No respondent had missed work the previous week on account of forced evictions or power shutdowns, or on account of other temporary work.

	Fixed	Itinerant buyer	Itinerant picker	Total
Work reduction or suspension	6.25	0.00	0.00	2.27
End of an employment contract or end of the working season	6.25	0.00	0.00	2.27
Because of the weather (e.g. monsoon)	6.25	0.00	0.00	2.27
Vacation time or holidays/festivals	12.50	42.86	14.29	22.73
Illness or accident	18.75	21.43	42.86	27.27
Child care	0.00	0.00	7.14	2.27
Care for an elderly person	6.25	0.00	0.00	2.27
Other personal or family reasons	12.50	28.57	28.57	22.73
Less materials from the selective collection	6.25	0.00	0.00	2.27
Other	25.00	7.14	7.14	13.64
N	16	14	14	44

Source: Pune IEMS survey data (2012)

The practice of using paid or unpaid family workers was prevalent among fixed workers. Survey data indicated that among male fixed waste pickers, 20 per cent relied on paid and unpaid helpers when they were unable to work or during busy times. Fixed male collectors (18 per cent) were more likely to use unpaid family labour as compared with women (4 per cent). However, twice as many men used paid labour (23 per cent) as compared with women (10 per cent). Itinerant waste buyers and itinerant waste pickers worked by themselves without any assistance from family or hired help, irrespective of whether it was a busy or lean time of the year.

About a third of the men in fixed collection and itinerant waste buying, and a quarter of the women itinerant waste pickers, admitted to having no support when unable to work (table 11). Workers employed in fixed collection were expected to provide substitutes and so they relied upon family members and other informal workers at such times. Some fixed collectors worked in couples or in pairs (e.g. mother-daughter/son), which may have been reflected here as paid family workers according to SWaCH.

	Fixed collector		Itinerant buyer		Itinerant picker	
	Men	Women	Men	Women	Men	Women
No support	31.82	15.69	34.38	0.00	0.00	25.00
An employee will take over	9.09	5.88	0.00	0.00	0.00	0.00
Household member will take over	59.09	31.37	12.50	0.00	33.33	3.13
Friend will take over	13.64	7.84	6.25	0.00	0.00	0.00
Another informal worker will take over	40.91	50.98	3.13	0.00	33.33	3.13
Will work more on return to work	13.64	9.80	0.00	0.00	0.00	3.13
N	22	51	32	9	3	32

Source: Pune IEMS survey data (2012)

1.6 Business Expenses

	Fixed	Itinerant buyer	Itinerant picker	Total
Transport	1247 (34)	1722 (24)	921 (16)	1328 (76)
Membership fees	14 (39)	8 (24)	280 (11)	51 (74)

Note: Number of observations (N) in parentheses

According to the data, transport costs accounted for the main business expenditure incurred by survey respondents. Forty-eight per cent of the fixed collectors paid 5 per cent of income from user fees into the cooperative. The survey respondents did not respond to questions about expenditure on materials, stock, wages, storage and utilities.

1.7 Earnings and Hours of Work⁵

	Fixed		Itinerant buyer		Itinerant picker	
	Men	Women	Men	Women	Men	Women
Mean hours per week (last week)	37	32	48	23	7	28
Mean months per year	11	12	12	12	4	11
N	22	51	32	9	3	32

Box 1 - Earnings versus Turnover

The data presented here were generated through a question designed to capture *turnover*—that is, the total value of sales (and in the case of fixed collectors, sales plus household fees). They **do not** take into consideration the cost of stock (in the case of waste buyers) or other expenses incurred, such as transport, storage, and fees. The literature on income clearly establishes that it is very difficult to capture distinctions between turnover, gross earnings, and net earnings reliably. As with similar studies, these data should not be taken out of context and should be interpreted with caution.

Data on turnover from all cities included in the IEMS study showed very high standard deviations and means that far exceeded medians. Means (rather than medians) for turnover are presented in the IEMS city reports.

Men had higher turnover than women. Women fixed workers had higher turnover than other types of women workers.⁶ Women itinerant buyers, however, earned a better hourly rate. Itinerant waste buyers worked a full work day and clocked the longest working hours; their overall turnovers were commensurately the highest. The official urban poverty line for Pune is Rs. 2955⁷ per month for a family of five, which amounts to an hourly rate (based on gross turnover) of Rs. 15. It stands to reason that the use of capital would fetch better returns. This was borne out by data which shows the hourly gross turnover of itinerant waste buyers was about 20 per cent higher than that of the other categories.

Table 14 shows that the mean turnover of fixed collectors and itinerant waste pickers were similar to one another while those of itinerant waste buyers were about 30 per cent higher.

	Lowest monthly turnover	Highest monthly turnover	Mean monthly turnover
Fixed collector	1200	9000	4136
Itinerant Waste Buyer	1000	15000	6444
Itinerant Waste Picker	1200	12000	4028
N	140		

Source: Pune IEMS survey data (2012)

Monthly earnings were examined in relation to hours of work. Only 45 survey respondents responded to this question, and 84 per cent of them worked full time.

⁵ Please see Box 1: Earnings vs. Turnover.

⁶ Comparisons between categories of workers may reflect, in part, the different sources of income and their position on the value chain. Fixed collectors who go door to door receive payment both from households and from recyclables sold. Itinerant waste pickers earn revenue only from the recyclables sold. Itinerant buyers purchase from the collectors and waste pickers and earn income from re-selling the recyclables up the chain.

⁷ Per capita per month Rs. 591 (Source Pune Municipal Corporation)

The relationship between the length of MBO membership and earnings was examined to see if it made any difference (table 15). The data offer some possibility that survey respondents who had been involved with their MBO for longer had higher earnings. For example, among the lowest earners, the majority (69 per cent) have been members for five years or less and very few (only 4 per cent) have been members for 15 years or more. If this is compared with the highest earners, a lower percentage (51 per cent) have been MBO members for a shorter period of time (5 years or less) and a much greater percentage (11 per cent) have been with their MBO for more than 15 years. This suggests that higher earnings are associated with longer MBO membership.

Table 15 - Length of MBO Membership and Earnings (Thirds) (%)			
	Lowest third	Middle third	Richest third
5 years or less	69.39	41.67	51.43
>5 to 10 years	12.24	14.58	22.86
>10 to 15 years	14.29	31.25	14.29
>15 years	4.08	12.50	11.43
Total	100.00	100.00	100.00
N	49	48	35

Source: Pune IEMS survey data (2012)

1.8 Earnings and Work Stability

Table 16 - Earnings and Work Stability by Type of Worker (%)						
	Fixed collector		Itinerant buyer		Itinerant picker	
	Men	Women	Men	Women	Men	Women
Revenue fallen over past 12 months	27.27	35.29	68.75	33.33	66.67	59.38
Would have liked more hours	31.82	54.90	18.75	11.11	66.67	28.13
Have a second job	4.76	21.57	12.50	0.00	33.33	15.63
N	22	51	32	9	3	32

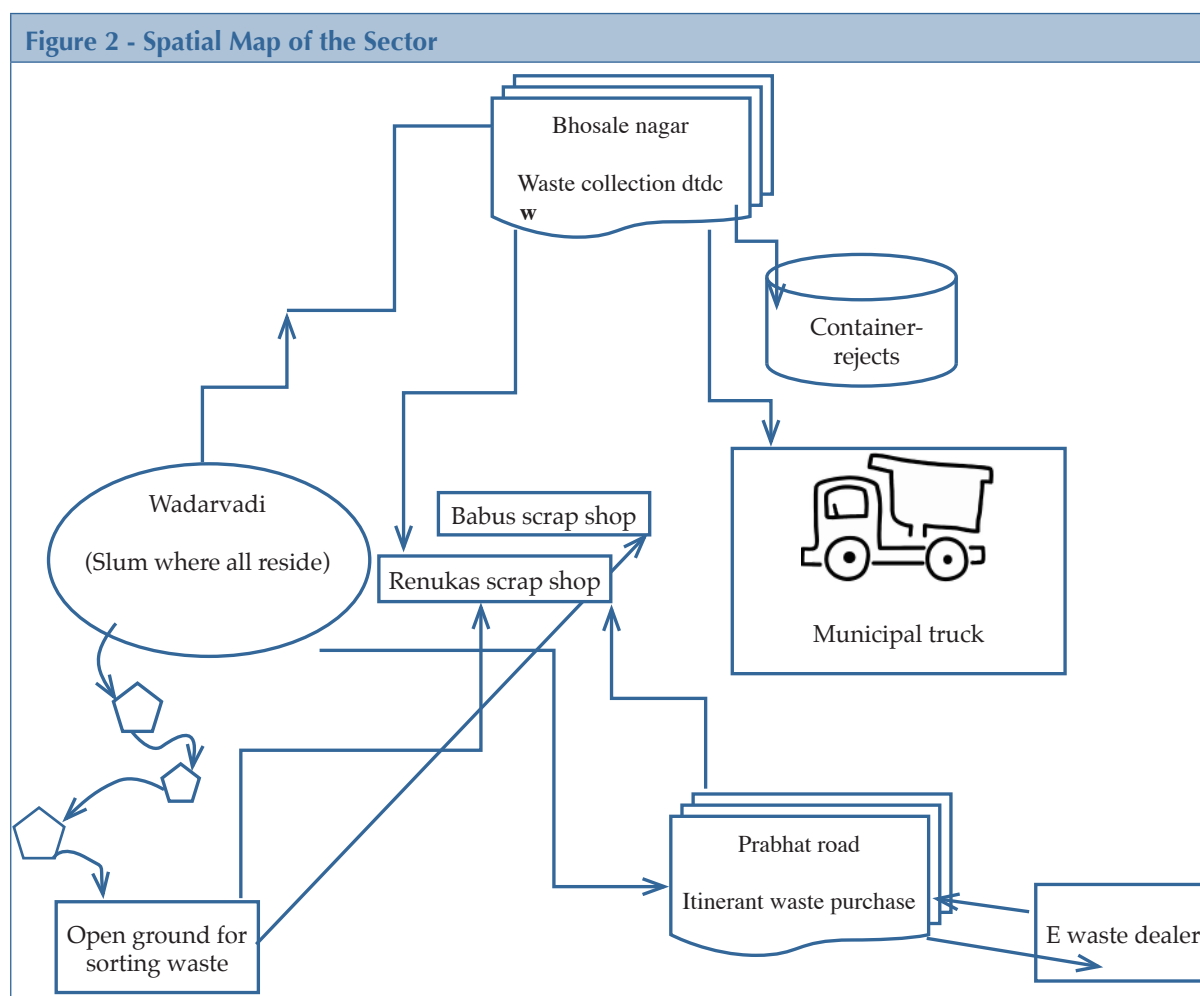
Source: Pune IEMS survey data (2012)

Overall 47 per cent of the survey respondents complained of fallen revenues over the previous year. The problem seemed to most affect men itinerant waste buyers and itinerant waste pickers of both sexes. Fixed waste pickers of both sexes reported more stable revenues. Most respondents coped with fallen revenues by cutting down personal expenses and servicing daily needs through borrowings which raises issues for further exploration when juxtaposed with other findings. Most respondents were the main income earners, working fewer than eight hours a day, and indicated that they would have liked to work longer hours but actually did not lengthen their workday. They chose to reduce consumption or to borrow to cope with revenue deficits.

Among survey respondents, 15 per cent had taken up additional jobs. This was particularly the case with men who were itinerant waste pickers and women in fixed employment. According to a key informant interviewed during the research, door to door waste collection brought workers into direct contact with householders who also hired them for domestic work and other odd jobs (68 per cent of the second jobs were in services).

1.9 Characteristics of Sector and Value Chain

Figure 2 is a spatial map of the sector and shows the journey of waste from the point of generation to the point of disposal, as well as the processes and the people involved in handling it en route.



Source: Focus Group 14 comprising men and women and all types of collectors including itinerant waste pickers, itinerant waste buyers and door to door collectors

The constituents of the sector and value chain as described by focus group participants included:

Waste Generators

Some waste generators sometimes sold what they could get a price for. The rest they discarded as waste.

Informal Waste Pickers

Itinerant waste buyers bought the recyclables that generators put out to sell. Fixed collectors and itinerant waste buyers collected the recyclables that generators had discarded. All three groups undertook value-adding activities such as recovery, sorting, dismantling, grading, packing and transporting, and sold the recyclables in the market.

Municipal Solid Waste Collection System

The municipality carries out waste collection within the city. The waste is deposited into the municipal skips or municipal trucks by the fixed collectors or by the generators themselves or their agents. Itinerant waste pickers were connected to the municipal skips because they recovered the recyclables from them. The placement of municipal skips was important to their work. The more spatially dispersed the skips, the longer they had to walk to reach them. The other two groups had no real connection with the skips other than using them to discard non-recyclables and junk.

The fixed collectors work closely with the municipal system, feeding the waste they collect into the trucks and skips. They also ensure that the desired level of waste segregation had been achieved prior

to municipal collection, in order to make waste processing easier. The integration of fixed collectors into the municipal waste collection system has meant that municipal oversight is more stringent.

Although no worker has been fined, participants in two groups mentioned that they had been admonished. “We get fined rupees 500 if we don’t sort the waste properly or if we dump in the municipal skips without waiting for the municipal truck. The housing society has to pay. My cart was confiscated by the municipal supervisor but the residents apologized so he released it without a fine” (Fixed collector, FG 7). One fixed collector complained about having to pay the driver of the municipal vehicle. “He takes rupees 200 from us per month to take our organic waste. Otherwise he does not take it at all. The height of the vehicle is too much. I cannot lift the heavy bucket so high. He takes money from me to climb down and take the waste” (FG 3).

Recyclable Waste Transporters

Informal waste pickers hire motorized transport vehicles to carry their collected materials to the scrap dealer. Itinerant waste buyers usually transport their waste on hand carts that are often provided by the scrap dealers. Itinerant and fixed waste pickers rely on hired vehicles or vehicles provided by their scrap dealers. A majority (71 per cent) of the survey respondents said that availability of private transport for transport of materials was not a problem.

Scrap Dealers

Scrap dealers, usually located in slums, buy recyclables from the informal waste pickers. Other dealers in specialized items like e-waste are peripatetic. A significant proportion of the waste pickers found the distance between waste collection points and buy-back centres to be a major problem (a smaller amount thought it was a moderate problem). Focus group participants also referred to specialized itinerant traders who deal in specific high value items like e-waste.

Organic Waste Processing Units

Some of the focus group members reported that they also worked at composting and bio-methanation plants where they had to:

“...take out the stones and glass and put the wet waste in the machine for making biogas. It makes gas for the light supply.” Another participant wanted to know what the gas was for and who it went to and why it didn’t come to the waste pickers’ homes. The first participant clarified that it wasn’t cooking gas, but for electricity: “The electricity goes to everyone but not to us.”

Focus Group Report 8

1.10 Analysis and Commentary on Part I

The data in this section reveals the vulnerability of waste pickers as workers, and of their households. Illiteracy, caste and gender combine to define this occupational group in a segmented labour market. Although the households are larger than the Maharashtra state average, they house, on average, three to four adults of employable age. Informal employment was the main form of employment. Income from waste collection was the main source of household income and even where that was not the case, it remained income from informal work. Not a single respondent reported income from government grants, unemployment payout, worker’s compensation, rental income, retrenchment package, child maintenance or remittances.

Work wise, waste pickers were own account workers, usually working alone without any paid or unpaid help. Work was carried out through the year and there was no evidence of seasonality. It was difficult to compare wages and hours of work as the data on hours of work was unreliable. Households cope with uncertainty by reducing consumption and through borrowing.

Fixed waste pickers have a much better deal in terms of conditions of work. They enjoy more stable incomes, fewer hours of work, easier access to recyclables, higher returns on labour and a direct link with the municipal waste collection system. They also rely on paid labour as well as unpaid family labour. They did, however, report that they are obliged to follow certain rules and have to arrange for substitutes when unable to work.

Waste pickers and their households exhibit similarities with what is referred to as the *precariat*, characterized by unrecognized occupational identity or occupational community, insecure jobs,

housing and other social entitlements. This is an area that bears further exploration (Standing 2011; Teltumbde 2012).

The value chain incorporated both formal and informal elements. Waste generators, waste pickers and scrap traders intersect with the formal municipal waste collection system and processing units at several points. What emerges is a comprehensive picture of the management of different waste streams with the informal and the formal systems complementing one another.

Part 2: Changes in the Sector

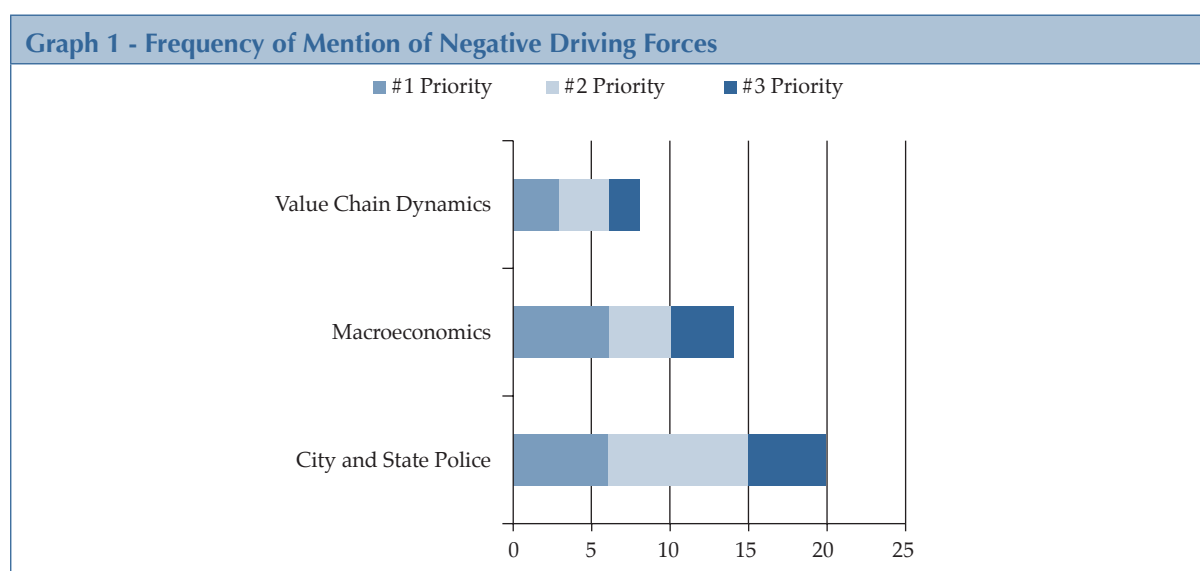
2.1 Driving Forces in the Sector

Changes in the sector, as perceived by focus group participants, were mapped through a series of exercises. The participants of the focus groups were asked to list and rank the factors that affected their work in order to identify the negative and positive driving forces. The responses were classified into the three main driving forces, depending upon whether they fell within macroeconomic factors, value chain dynamics or government policy issues as outlined in the conceptual framework (see Introduction).

Each focus group was asked to identify obstacles and difficulties that they faced in their work. These 43 items were classified into the categories presented in table 17.

Difficulty	Priority # 1	Priority # 2	Priority # 3	Frequency
City and State Policy	6	9	5	20
Macroeconomics	6	4	4	14
Value Chain Dynamics	3	3	2	8

Source: Focus groups, N=15



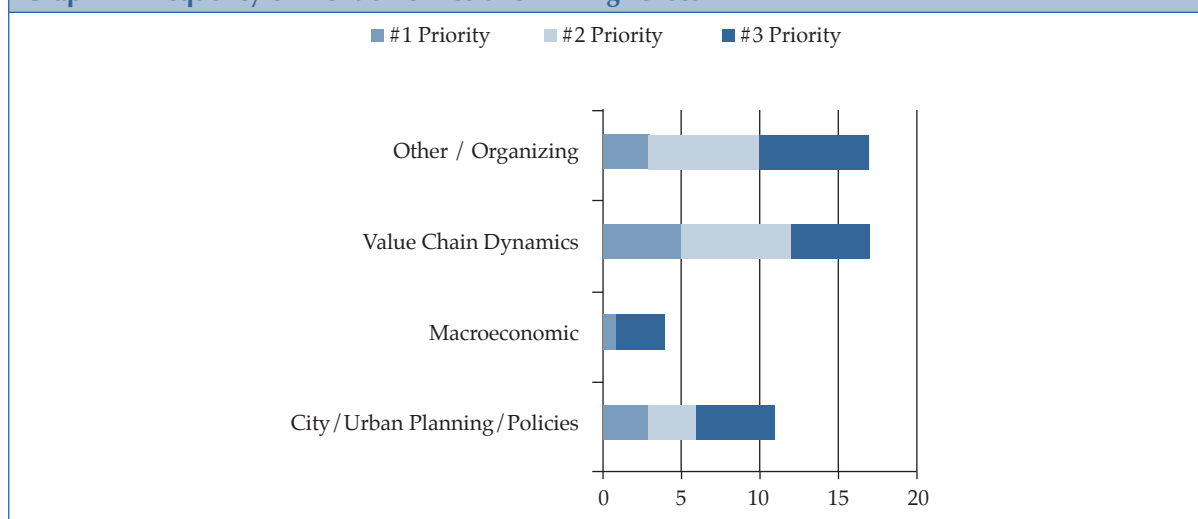
Issues relating to government policies at the city level and macroeconomic issues were identified most often as problem areas. Value chain dynamics came a distant third. Some of the specific problems mentioned were the municipal skip-free (or “container-free”) city policy, privatization of waste collection through contractors and companies, reduced access to recyclables and occupational accidents and injuries. Issues relating to government policies at the city level and macroeconomic issues are further elaborated in the next section.

Likewise focus groups were asked to list and rank the factors that had affected their work positively. Value chain dynamics and organizing were neck to neck in importance for the focus groups and featured at the top.

Positive Driving Force	Priority # 1	Priority # 2	Priority # 3	Frequency
City /Urban Planning /Policies	3	3	5	11
Macroeconomic	1	0	3	4
Value Chain Dynamics	5	7	5	17
Other /Organizing	3	7	7	17

Source: All 15 focus groups

Graph 2 - Frequency of Mention of Positive Driving Forces



It is interesting that value chain dynamics did not feature very strongly among the negative factors but were the top positive forces, perhaps indicating the waste pickers' outlook towards the market. An analysis follows.

2.2 Negative Forces

Macroeconomic Negative Factors

In the survey, waste pickers identified a range of negative macroeconomic forces (table 19), particularly large variations in income and too many competitors.

Table 19 - Problems Related to Markets and Competition, by Type of Worker (%)

	Fixed	Itinerant buyer	Itinerant picker	Total
Too few customers of materials or goods	1.39	46.34	0.00	13.70
Large variations in sales/income	51.39	65.85	54.55	56.16
Low profits	4.17	26.83	9.09	11.64
Customers reject products	1.39	0.00	0.00	0.68
Distance from markets	27.78	53.66	38.24	37.41
Too many competitors	34.72	87.80	55.88	54.42
N	72	41	34	147

Source: Pune IEMS survey data (2012) data

Distance from markets was a problem reported by a third of the survey respondents. The competition seemed to be most intense in the itinerant buying segment as reported by itinerant waste buyers. They perceived the highest risk to themselves in every area and also reported lower profits. Two thirds of the itinerant buyers had also reported a fall in revenue during the past 12 months. While variation in sales/income seemed to affect the other two groups as well, the fixed collectors experience relatively less competition although privatization of waste collection was brought out as a major threat.

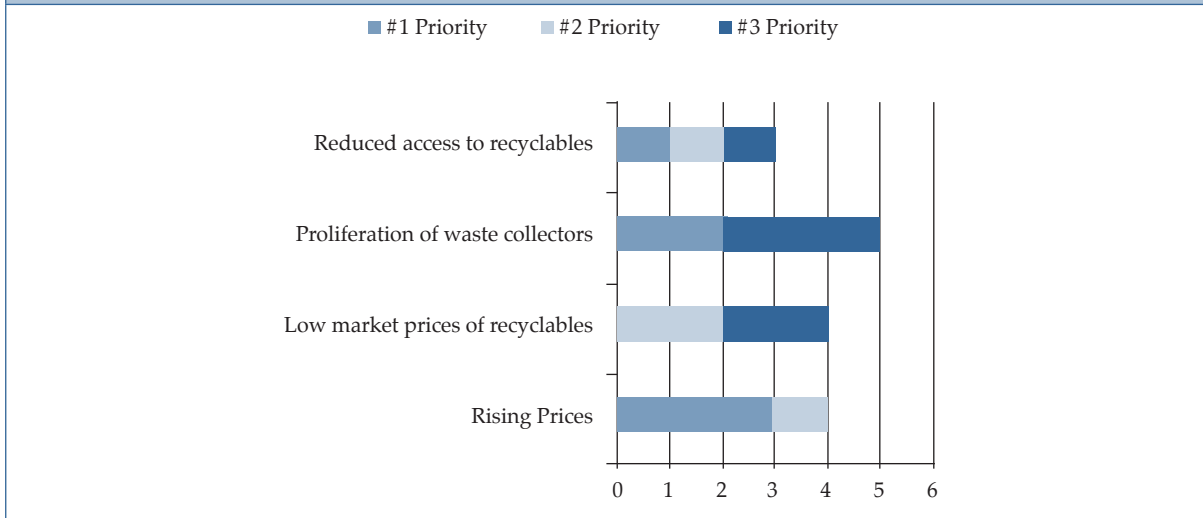
The macroeconomic difficulties were elaborated on in the focus groups.

Table 20 - Difficulties Related to Macroeconomic Driving Forces

Difficulty	Priority # 1	Priority # 2	Priority # 3	Frequency
Rising Prices	3	1	0	4
Low market prices of recyclables	0	2	2	4
Proliferation of waste collectors	2	0	3	5
Reduced access to recyclables	1	1	1	3
Macroeconomics	6	4	6	16

Source: Focus groups, N=10

Graph 3 - Difficulties Related to Macroeconomic Driving Forces



Proliferation of Waste Pickers

The second most important negative macroeconomic factor listed by the focus groups was increasing competition from more waste pickers (table 19). The perception of proliferation was not confined to the focus group participants. Seventy three per cent of the survey participants also thought the number of waste pickers had increased over the previous year; 10 per cent said there were the same number and 9 per cent saw a decline. Two thirds of the survey participants predicted that the numbers would rise further during the next year. This being so, not all waste pickers saw the proliferation as a problem. Only about a half did (47 per cent), and in fact 36 per cent did not think it was a problem at all.

From the focus group data, it appears that itinerant waste buyers experience the proliferation of waste pickers as a greater problem than fixed or itinerant waste pickers. Four of the five groups that mentioned this problem consisted exclusively of itinerant waste buyers. Three of the five focus groups reported the entry of new intra and inter-state migrants into the occupation. Two distinct types of migration were reported. There was intra-state led migration of socially excluded and marginalized scheduled and de-notified tribes from the rural hinterland into itinerant waste picking. Socially, the intra-state migrants were referred to as *Pardhis* (a so-called “criminal/thief” tribe – so classified by the British, and unfortunately retained as a classification) and *nandi-walas* (a community that takes around a sacred bull and seeks alms). These migrants include entire families. According to the focus group participants, neither of these social groupings had reportedly been involved in this occupation prior to this.

Three groups reported inter-state migration from the north Indian states of Bihar and Uttar Pradesh into itinerant waste buying and scrap trading. The pattern of migration that they described, however, was different from that of intra-state migrants. As one itinerant waste buyer from Focus Group 9 explained: “They are all single, not family men. They are related to the shopkeeper. He brings in whole groups of his community members, feeds them, houses them in crowded rooms, tells them where to go for buying and they give any old rate and buy up everything.”

The overriding attitude in the focus groups was one of tolerance. They recognized that they had entered the occupation for similar reasons and had learned on the job. Waste picking had no entry barriers. The animus against newcomers, except in a few isolated cases, did not usually translate into any action against the newcomers. Rather the irritation was with the trade practices of the newcomers, which affected the market, and with the fact they were unauthorized (did not have municipal endorsed identity cards).

An itinerant waste picker who saw herself as an “original” waste picker and representative of castes that had been historically involved in this work, had this to say,

“Now you just shouldn’t wonder about a waste picker’s caste.... Farmers have abandoned their land and are selling waste and buying booze, so what can you say? They have no work – what can they do? Pardhis have nothing to steal. Nandi-walas get no alms. Gawandis [masons] work for one day and sit at home for four... So come, earn from waste. Everyone’s doing it.”

Itinerant waste picker, Focus Group Report 13

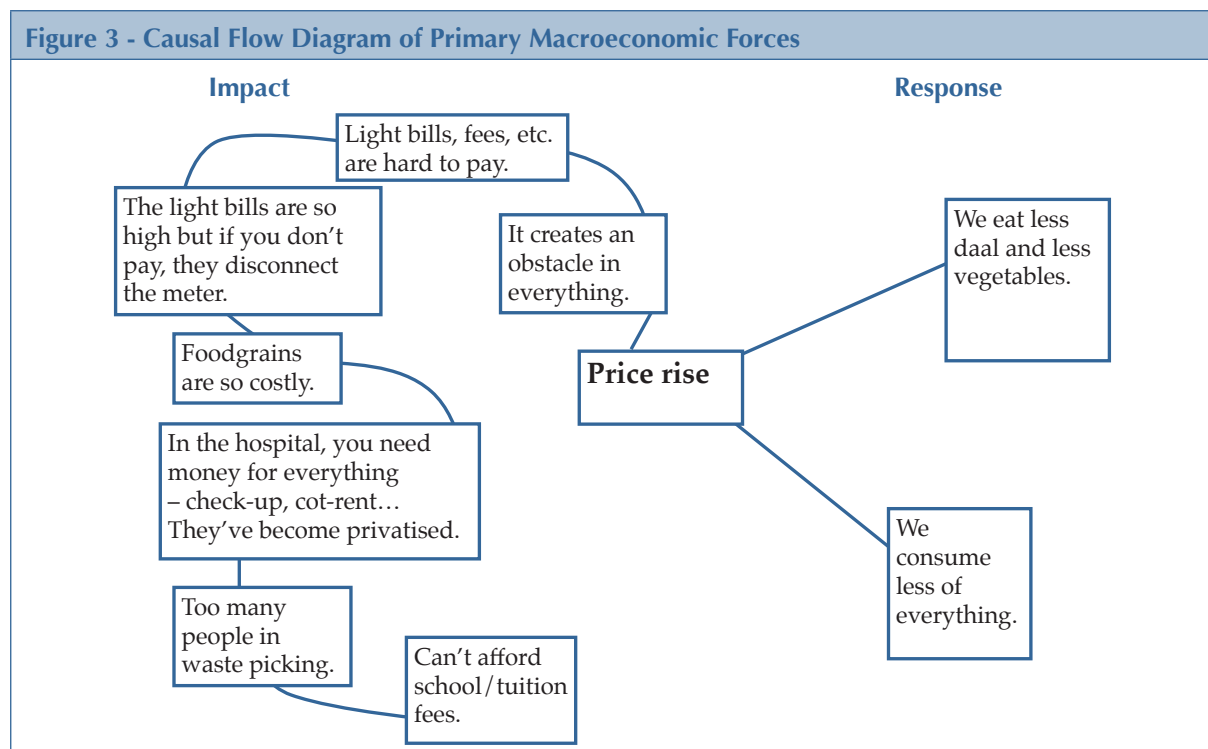
Another articulated a spirit of understanding and tolerance:

“We can’t call it a problem – people are doing this out of destitution. If everything is going well for a person, why should he do this work? It’s those whose hearth is cold because there’s nothing to cook, who are joining. Two or three rupees earned here or there makes a difference to everyone.”

Itinerant waste picker, Focus Group Report 13

Rising Prices

The focus groups identified proliferation of waste collectors as the most important macroeconomic issue affecting waste pickers (table 20). Although three groups ranked rising prices as the main concern, more number of groups found the proliferation of waste collectors to be a problem.



Source: Focus Group Report 13, mixed focus group of six men and women representing all three worker categories

Figure 3 shows how the focus group participants perceived the impact of rising prices on the lives of waste collectors and how they coped with the situation. One woman participant eloquently spoke not only about rising prices of food and essential services but also about the Central Government’s plans

to introduce cash subsidies in lieu of direct supply of subsidized food grains and cooking fuel through the public distribution system. The connections between prices outpacing earnings, unemployment, the levy of user fees, reductions in entitlements and an absence of social protection come through clearly in the conversation among the participants of Focus Group 13.

“This price rise is terrible. The prices of everything that we buy increase and the price of recyclables come down! It’s difficult to even buy a rupees 50 sari or school supplies. The electricity company gives a bill based on average reading and it’s always so high. The monthly bill is rupees 800 or 900 for just one fan, one TV and one light. And food is so expensive now compared to what it was.....We don’t eat daal any longer. I don’t remember the taste ...What you want, you can’t afford, and what you can afford is not edible. ... All tests are supposed to be cheap in the government run Sassoon hospital. But now you have to pay rent for the bed even though it’s a government hospital! They refuse to do the tests if you are one rupee short. Pay or die, that’s how it is these days. How do we cope with the price rise? If you just give us that advice, we would do something – take a *morcha*, throw stones to ask for cheaper food, break some things!”

Her suggestion of throwing stones was only half in jest. She seemed genuinely angry and frustrated by the fact that hard-working people were not able to make ends meet while the others egged her on, saying “Yes, throw stones and go to jail. At least you’ll get your bellyful of food there!”

She retorted: “Yes! You have to go to jail to get anything free. It hurts the government, pinches them to give us anything free... So, we just buy less.... The prices are killing the poor. Okay, so the prices have to go up – let them rise but at least help us to face this by giving our educated young ones jobs! Give the ones who’ve reached Standard 12, gardeners, watchman jobs... Give the ones who’ve been to college office jobs... make provisions for the disabled and old... Then we can face this price rise.”

The waste pickers’ MBO, KKP, has been part of a campaign for universal old age pensions. Only those living below the much contested official poverty line are entitled to pensions under the National Social Assistance Programme, thus large numbers of the working poor are excluded. Those not on the Below Poverty Line (BPL) lists have to prove that their income is less than the prescribed limit in order to be eligible, a laborious and difficult process. One of the main demands of the campaign has been that the scheme should be universalized to cover all the poor, irrespective of BPL status, and should exclude the well-to-do who are relatively easier to identify. Three elderly participants, present in Focus Group 3, were vocal about their age-related vulnerabilities. A conversation between one elderly participant and a younger participant made clear that the conditions of the BPL quota are not considered reasonable, but that the older members are concerned that demanding changes could threaten the programme’s existence. An elderly woman said:

“The main problem of the elderly is hunger and ill health. These have made our lives miserable. I have sons who can barely manage their own families, how can they look after me? I am a widow. I have been asking for a BPL ration card so that I can get a pension. My name has just been added onto the BPL list. Now you are saying remove BPL. Our organization is also saying remove BPL. How are we to live?”

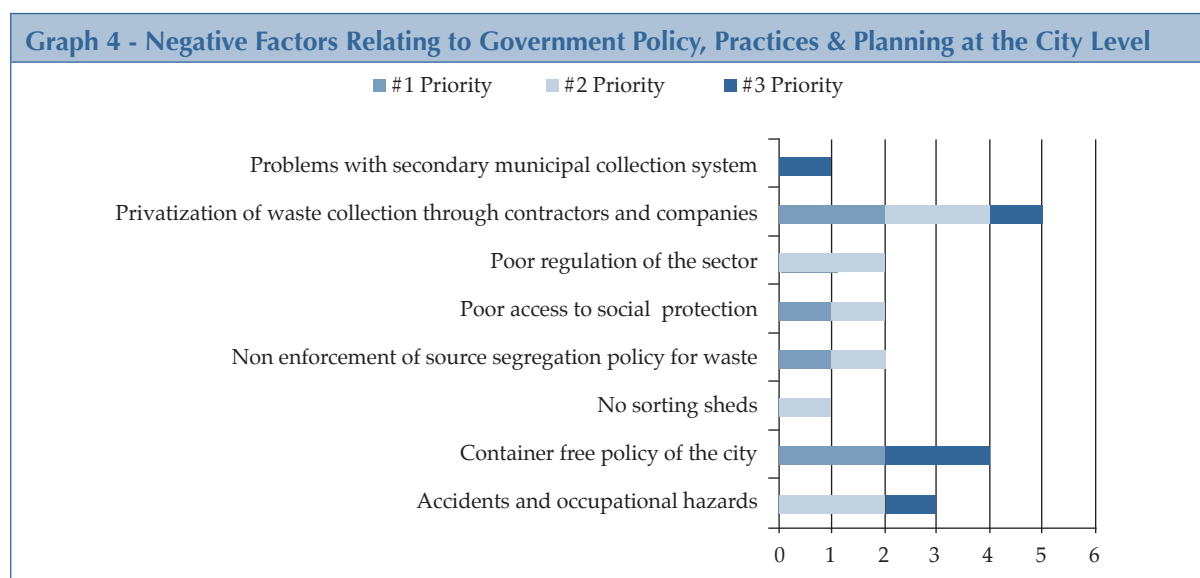
A younger woman argued that the government’s conditions for BPL are unreasonable. The elderly woman, while defending the need for the programme, agreed.

“The Government says if you have a TV you are not BPL (below poverty line). If you have cooking gas you are not BPL. Then what do they expect, that we will live naked and in the open? My name is now on the PMC BPL list. I had to join a savings group of the PMC to get my name on that list. Here I have no money to eat and I have to pay rupees 100 for the savings group.”

Government Policy and Planning-Related Negative Factors

Difficulty	Priority # 1	Priority # 2	Priority # 3	Frequency
Accidents and occupational hazards	0	2	1	3
Container free policy of the city	2	0	2	4
No sorting sheds	0	1	0	1
Non-enforcement of source segregation policy for waste	1	1	0	2
Poor access to social protection	1	1	0	2
Poor regulation of the sector	0	2	0	2
Privatization of waste collection through contractors and companies	2	2	1	5
Problems with secondary municipal collection system	0	0	1	1
City and State Policy	6	9	5	19

Source: Focus groups, N=8



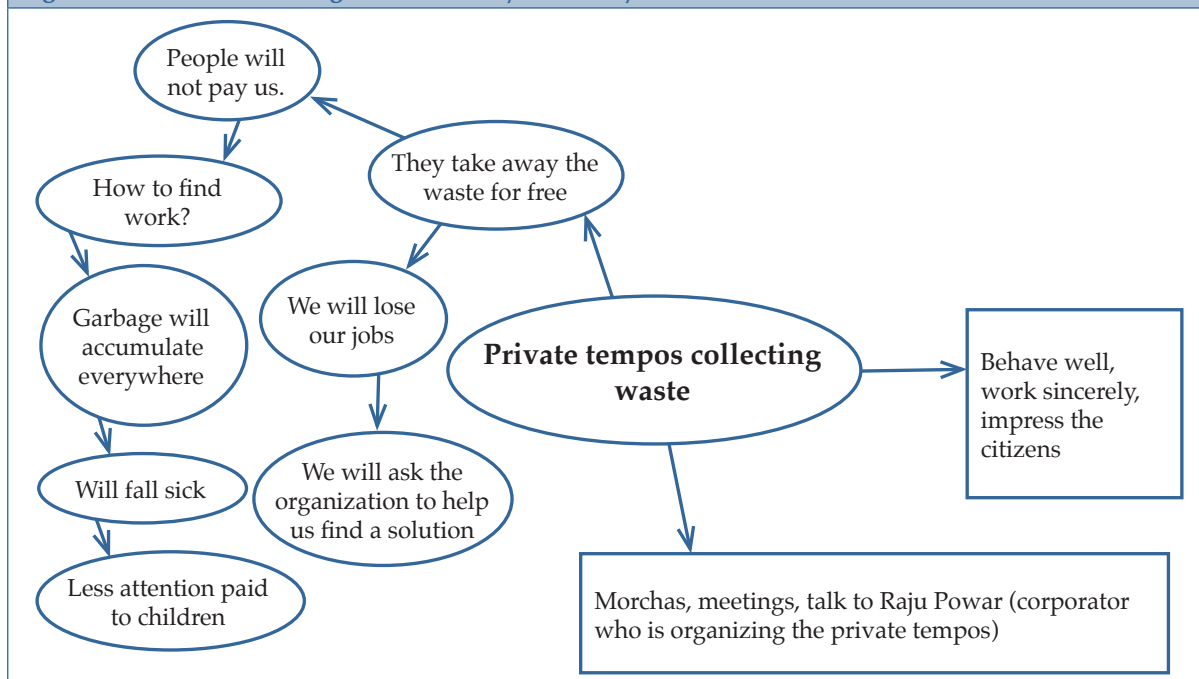
Privatization of Waste Collection Through Contractors and Companies

Contracts that gave private companies the right to collect waste and recyclables were considered to be a major problem by 26 per cent, a moderate problem by 13 per cent and not a problem at all by 56 per cent of the survey respondents (N=150). When this is seen in conjunction with the fact that about half the respondents were fixed collectors and that groups 4 and 9 were exclusively those of fixed collectors, it is evident that privatization was perceived as the greatest threat by fixed collectors. Itinerant waste buyers were unlikely to be affected by it because their transaction with waste generators was one of sale and purchase of goods rather than the sale of services. Among all survey respondents 35 per cent were of the opinion that waste services had become more privatized during the past two years and 41 per cent thought such privatization would escalate during the next two years. The waste pickers saw it as the most significant negative factor pertaining to the city and urban policies (table 21).

Pune Municipal Corporation itself had not contracted out waste collection (other than in a small peri-urban area) but had assigned the task of doorstep waste collection to a cooperative of waste pickers.

The neighbouring municipal corporation of Pimpri Chinchwad had privately contracted, and the waste pickers there were waging a struggle for integration into the contractor-based system.

Figure 4 - Causal Flow Diagram of Primary Difficulty Related to Government Policies



Source: Focus Group Report 9: door to door collectors, all men

Box 2 - Excerpt from an Interview with a Key Informant

At the study’s inception, key informants were interviewed. One key informant, a large scrap dealer and wholesaler of paper, cartons, iron and tin said scrap dealers were confident about their future and indicated that the city would not be able to survive without them:

“Today the police department survives because of the scrap trade and the liquor trade. Eighty per cent of their incomes are because of us. No matter what, we have to pay them a fixed sum of money every month. If we don’t then they harass us. They will ask us to show receipts for all the scrap that we have got. How is that possible? Is the waste picker who collects scrap from municipal skips to sell it to us going to get a receipt for the scrap from the skip or from the municipality? Similarly, women who collect scrap from dumps are not going to get a receipt for their scrap. The police use this to harass us and we pay them bribes to save ourselves from that harassment. It is the same for each and every scrap dealer across the city.”

He continued, mentioning that nearly all scrap shops are found within the slums.

“All scrap shops are in slums because the women who collect scrap live in slums. It’s easier for them to sell the scrap near their homes. Scrap dealers are confronted with the future of their shops in the city. Slum after slum is being demolished to rehabilitate slum dwellers in vertical buildings through the Jawaharlal Nehru Urban Renewal Mission. What is going to happen to the scrap shops in a new scenario is a big question on the scrap dealers’ minds. The city has allocated no space for us in the Slum Rehabilitation Schemes. The municipal corporation has on several occasions tried to remove scrap shops from residential areas saying that they are fire hazards.”

Just as fixed waste collectors feared their displacement by those offering free waste collection services, itinerant waste pickers saw their access to recyclables shrink in the event of privatization. Focus group participants' experiences of privatization and its impact upon their livelihoods are presented below.

- Contracting of waste collection by companies

"We used to find things in the large quantities of waste disposed by big companies. Now they hire contractors to collect their waste or give it to a single woman and we get nothing" (two itinerant waste pickers operating in an industrial belt on the city outskirts, Focus Group Report 8).

- Free waste collection services offered by municipal councillors

"I dread that we'll have to go back to doing manual labour. I have a big problem with these new contractors who take away the waste without charging citizens, for free. I asked them why they are doing it. The fellow told me he's doing 'social work'! I say to him you want to do community service? Then go and work in the slums... I fear those bad days full of uncertainty will come back... Once it's being taken for free, what's there? Take rags, take wood, take sand, take garden waste, take any old thing! Our organization tells us take segregated waste, don't take thermocol and coconut fronds but when it's free the residents say – take it, take it..." (Fixed waste collector from Focus Group Report 4 working in a geographical area where an aspiring municipal councillor started free waste collection services; other aspiring candidates followed suit).

- Reduced access to waste and competition from municipal contract workers

"The male contract PMC workers in Wadgaon – they outnumber the SWaCH workers. They want us to give them the unsorted waste – they refuse to take it if we remove the recyclables, the things that can be sold. If they don't take away the organic and non-recyclable waste we get into trouble and we get a bad name" (Fixed collector, Focus Group Report 8).

Focus Group Member on the Issue of Contract Labour

The Pune Municipal Corporation contracted out street sweeping and a whole lot of services, beyond waste collection. The contract workers were drawn from the same residential areas where waste pickers lived. Some waste pickers had also enrolled as contract workers. We saw in Part I that all waste collectors were own account workers. Focus group participants were acutely conscious of their autonomy and the vulnerability of contract workers. It was not clear whether it was because of their understanding of themselves as self-employed workers and contract workers as being wage workers because some of the focus group participants also thought the municipality should be paying them a salary.

"The municipality should not have the contract system. Contractors do not pay their workers for 3-4 months. What are the workers to do? Starve? Look at the inequality! Permanent municipal workers get as much as 25000 rupees per month. And the contract workers get barely 4000 rupees. The contractors should be banned. So many people from our slum work with contractors, sweeping the roads and picking up garbage from the roads. They have complained to the municipal workers union but no one pays any attention. These contract workers start work at 6 a.m. Then they have a breakfast break at 10 a.m. and then they work till 2 p.m. That is their official time. But so often the municipal mukadams (foremen) and sanitary inspectors make them work till 4 and 6 p.m. without any extra payment. If the workers refuse, they say go home, leave the job. The mukadam told a group to clean the hillside full of faeces, where the slum dwellers go to offload in the mornings. They refused and the mukadam sacked them."

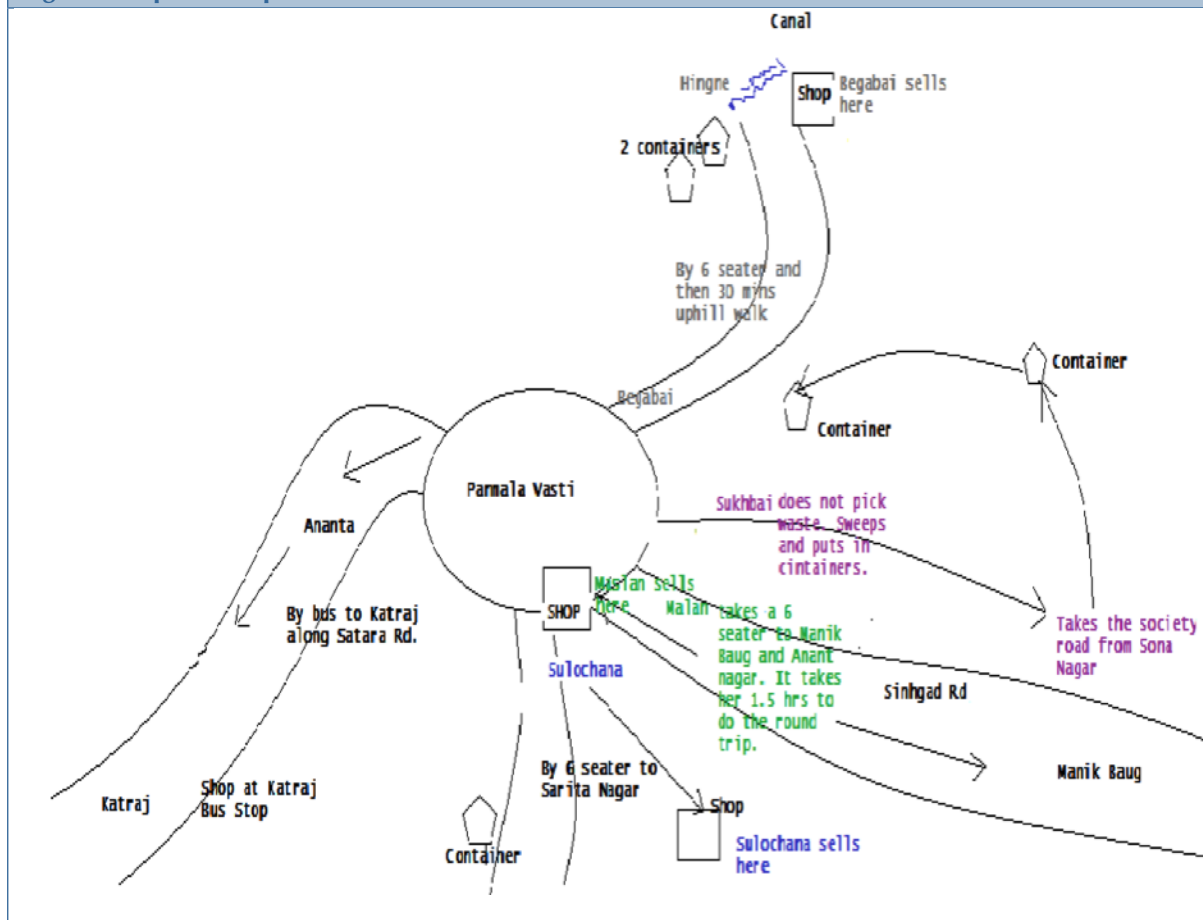
Elderly itinerant waste picker, Focus Group 3

Municipal Skip Free City Policy

The skip free policy of the city was also a significant negative factor related to city and urban planning. It is interesting that the reduction of skips was perceived as advantageous by fixed waste collectors and disadvantageous by itinerant waste pickers. Skip removal represented greater

opportunity for fixed collectors because waste generators had no option but to hire the services of fixed collectors or to do the work themselves.

Figure 5 - Spatial Map



Source: Focus Group 12, mixed group of men and women, all types of collectors

Itinerant waste pickers, on the other hand, resented the removal of municipal skips. In a mixed focus group (male/female, door to door collector/itinerant buyer), the participants gave a particularly clear spatial picture. In this focus group, all participants used some form of public transport to reach their places of work. The women used private six-seater shared vehicles, while the men used the bus. After getting to their workplaces they spent a substantial amount of time and effort, walking around to collect recyclables. Within the spatial map, they had identified five waste skips within a city space of approximately 15 square kilometres.

As one itinerant waste picker in Focus Group 12 said, “The municipal corporation! They’ve picked up all the skips. It serves their purpose, makes the city look clean they say, but it kicks us in the stomach! It benefits them, sure, but not us.”

For itinerant waste pickers, fewer skips meant:

- **Having to walk longer distances** – Itinerant waste pickers had to walk longer distances and to expend more effort to access recyclables. Elderly waste collectors had to struggle even more.
- **Having to spend more on transport** – Respondents sometimes had to use transport to reach the skips, which added to their costs of personal travel as well as having to transport their collections across longer distances. A participant of Focus Group Report 10 said she spent Rs. 25 just travelling to work and back and wondered, “You tell me,” she said “Is it worth it?” (FG 10)
- **Reduced access to recyclables** – “I go from the bin here to the bin there and back. I cannot see.... My wife died some time ago. My son’s earnings are barely enough for his drink so I pick waste for the household expenses. The municipality has started lifting skips. There is just no waste to pick” (Elderly itinerant picker with failing eyesight, FG 3).

- **Greater competition for recyclables** – “See it’s like this – you put together this small bundle of material that’s not even rupees 50 or 60 worth, and then another one comes inside to collect. She collects, then a third one comes. In the skips there are so many fights, so many quarrels. That’s what this waste picking is like” (FG 12). Another waste picker in Focus Group 3 said, “We fight amongst ourselves for the little that is around.” The participants came back to the issue of skip removal and the resulting increased competition for waste several times during the course of the focus group discussion.
- **Decreased choice of scrap dealers** – “Who’s going to carry that whole load back all the way here? As it is the tempo-wallahs ask for so much money. So you just sell where you can sell easily” (FG 12).
- **Loss of income** – “All the skips are gone, what are we to survive on? We’re going straight to the corporation and saying ‘Give us jobs. You’ve taken away the skips, fine. So now employ us’” (Itinerant waste picker, FG 12).

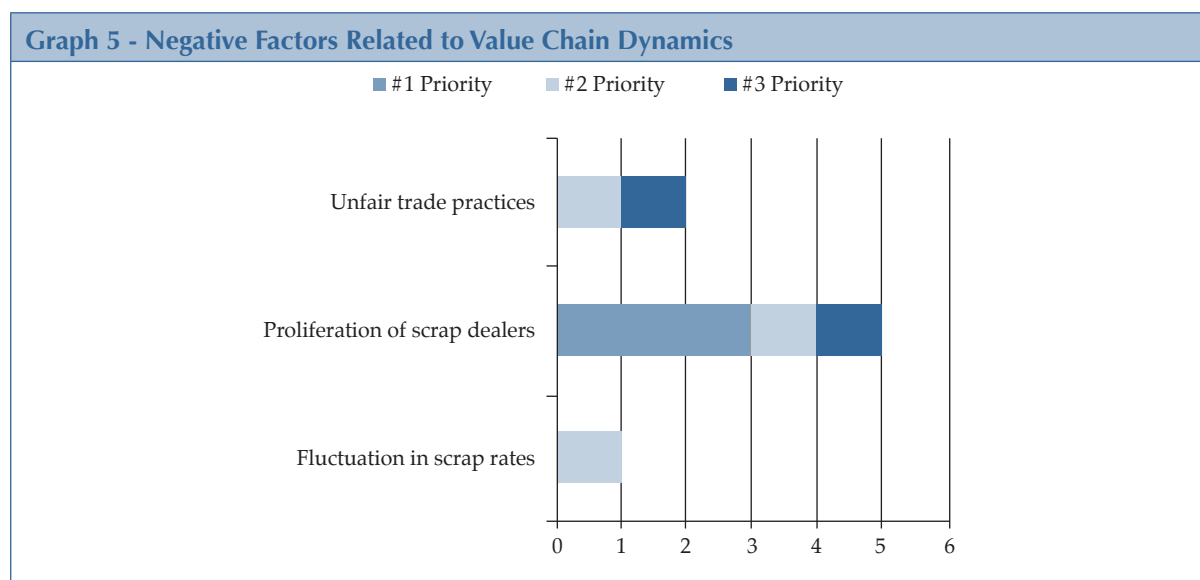
Harassment by Local Authorities and Others

It is worthwhile to note that an overwhelming majority (97 per cent) of waste pickers said there was no harassment from local authorities or from the public, and 91 per cent said there was no abuse or violence towards waste pickers. Further, 97 per cent said they experienced no exclusion or discrimination against waste pickers because of their lower education or earnings or because they were stigmatized as waste handlers.

Negative Factors Related to Value Chain Dynamics

Difficulty	Priority # 1	Priority # 2	Priority # 3	Frequency
Fluctuation in scrap rates	0	1	0	1
Proliferation of scrap shops	3	1	1	5
Unfair trade practices	0	1	1	2
Value chain dynamics	3	3	2	8

Source: Focus groups, N=9



Waste pickers sell recyclables in the market and one could have assumed that acute competition among the buyers presented sellers with the best possible scenario. Contrary to expectations, a proliferation of buyers was actually perceived to be a problem by sellers. Unfair trade practices were considered a significant problem according to survey results, but only two groups mentioned it. The survey data also revealed that 87 per cent of the respondents did not think corruption or unethical behaviour by the buy-back centres or middlemen was a problem at all.

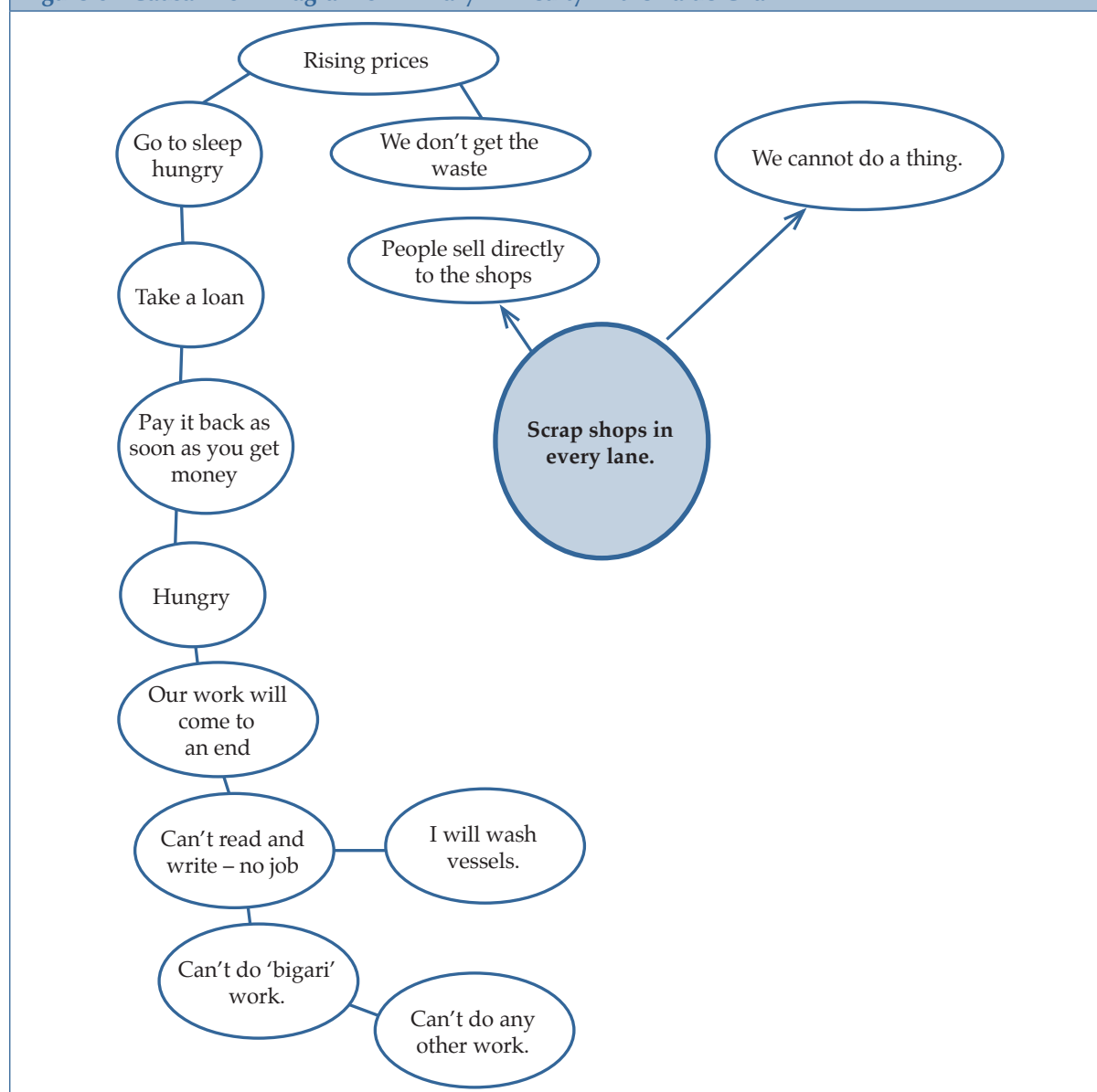
Proliferation of Scrap Dealers

Table 23 - Status of Buy-back Centres by Type of Worker

	Fixed	Itinerant buyer	Itinerant picker	Total
Buy-back centres, or shops where you sell your recyclables, have closed in the last 12 months	5.48	7.32	2.86	5.37
Heard about the closing of other buy-back centres where recyclables are sold	5.48	4.88	0.00	4.03
Heard about the opening of other buy-back centres where recyclables are sold	27.40	41.46	34.29	32.89
N	73	41	35	149

About a third of the respondents reported the opening of new buy-back centres during the previous year. Reported closure of such centres was negligible. Three fourths of the survey respondents anticipated that there would be more buy-back centres in the city at the same time next year.

Figure 6 - Causal Flow Diagram of Primary Difficulty in the Value Chain



Source: Focus Group Report 2, all men itinerant waste buyers

Focus group participants perceived the proliferation of scrap dealers to be most detrimental to the economic interests of waste pickers (figure 6). However, it was the itinerant waste buyers who were most vociferous about this issue. Some of the issues related to migrant scrap dealers and migrant workers were specific to location and brought up by itinerant buyers in the newly developing areas of the city. What the proliferation of scrap dealers meant to the livelihoods of itinerant waste buyers is described below.

- **Direct sale by generator to scrap dealer bypassing the itinerant waste buyer**

“These small shops, the fellows who sit on the pavement with a weighing scale to buy waste, the ones springing up everywhere, they should be shut down. They are affecting the rates, bringing down our business. The citizens don’t realize they are being cheated on weight – they just see the higher rates offered and sell to those fellows. We lose out.” He continues, “First people used to say ‘take this away, take it free if you want, but just take it away.’ Now everyone wants to earn from selling waste. Everyone wants a piece of the pie. But the trade has to grow, so let the bigger shops, the main ones with licences remain, just take out all these small unregulated ones.”

Itinerant waste buyer, Focus Group Report 9

- **Concentration in the hands of few buyers** – The itinerant waste buyers described what could be called multi-shop oligopsony in the scrap market. This means that the market has many sellers but few large buyers who control the market through many purchase points operated by smaller traders.

“The big *sheths* [dealers], they have five or six shops. They put a relative or an employee in each one, and sit back. They earn. We cannot even afford cycles and they are driving around in big cars. They should regulate how many shops one owner can have... All the cards are in their hands. They have meetings in big hotels, decide on a way of fixing all the prices – so no matter which shop we go to, they all offer the same low rates. Where do we go? What do we do? There must be fixed rates for recyclables. ... All we want are fair prices. The shop owner, when we go there, he looks through his receipt book to see what he paid us last time – so obviously he’s giving different rates to different people. And for each one, he takes them aside, whispers ‘This rate is for you only, okay? Don’t tell anyone.’ It’s all cheating.”

Itinerant waste buyer, Focus Group Report 6

- **The role of working capital provided by the scrap dealers** – “Why does he advance us money? Not out of the goodness of his heart! He sits on his backside and earns money from our walking miles.” Another one adds, “He earns on the backs of 10 scrap collectors who roam the city. He grows fat, we stay the same. All our money goes in surviving – we never have excess. But he does.” The first one pipes up again, “The scrap shop owner, he’s like a boss in a private limited company. He decides if we work or don’t. It’s all up to him.” An itinerant buyer added “And he makes profits since he buys it from us at a lower rate and sells it at a higher rate!” (FG 4)

- **Rates of recyclables controlled by scrap dealers** – “They don’t tell us why or when the rates go up or down. So sometimes, we take the advance and go off for work, and when we come to sell, we are told the rates of this or that item have gone down, so we make a loss. We lose even the advance we had taken. We have days like that too. I think the rate depends on wholesale prices...” Another itinerant waste buyer felt that the people who supplied to the wholesalers determined the price. Yet another said, “I think when there is too much in the market, the rates go down.” (FG 9)

- **Migrant scrap dealers with “captive” migrant labour** – Itinerant waste buyers described migrant scrap dealers bringing bands of migrant workers sourced from their native villages and regions. As mentioned earlier, the dealer provided the predominantly single workers basic living accommodation and capital for itinerant waste buying during their stay in the city.

Gaonwallas [villagers in peri urban Pune] rent space to *bhaiyyas* [Hindi-speaking migrants from the state of Uttar Pradesh] to set up shops to buy waste. “They undercut us. They pay more for the waste, so people sell to them, but actually they cheat on weights. They use false weights....” About competing with the newcomers the group

unanimously said, they could not manage to do what they saw the “newcomers” doing. “We can’t do these sly things. We can’t fool people. We want our customers to trust us and remain loyal to us because we live here.”

Focus Group Report 9, Group with many itinerant waste buyers

Other Negative Driving Forces

Focus group 3 had several elderly itinerant waste pickers for whom old age pensions and medical ailments and issues related to social security were the main concerns.

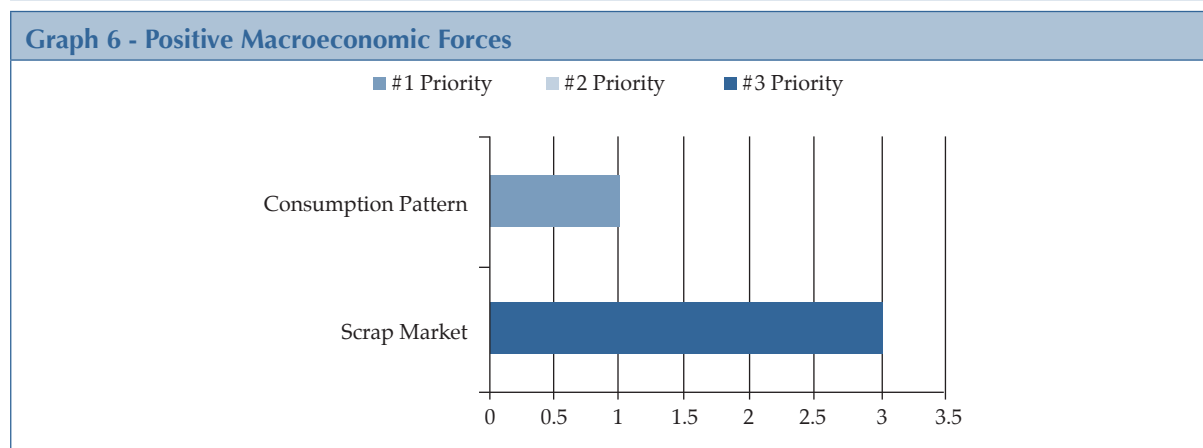
Driving force	Focus group number	Difficulty/Obstacle	Frequency of mention
Government policies and practices	3,3	Poor access to social protection	2
Other	1, 5, 15	Accidents and occupational hazards	3

The data presented in table 24 show that only three focus groups (20 per cent) mentioned that accidents and occupational hazards were problems. Strangely, not a single group that had itinerant waste picker participants mentioned these problems. However, 71 per cent of all survey respondents reported that occupational hazards affected the safety of workers and among itinerant waste pickers, 91 per cent listed this concern.

2.3 Positive Forces

Positive Factors Related to the Macroeconomy

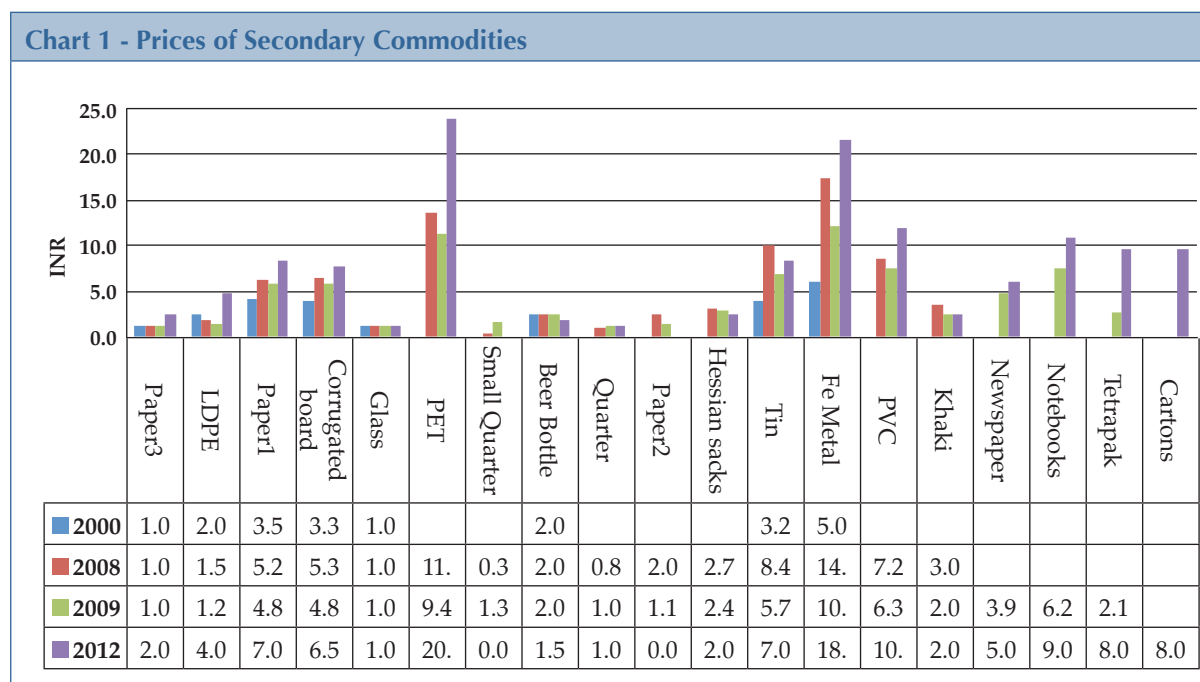
Positive Macroeconomic Forces	Priority # 1	Priority # 2	Priority # 3	Frequency
Scrap market	0	0	3	3
Consumption pattern	1	0	0	1



Waste pickers and waste buyers did not identify many positive macroeconomic factors affecting their livelihoods. However, some comments were made about the importance of the scrap market, particularly the positive effects of prices rising. One male itinerant waste buyer participant noted that it was positive that there were “fluctuations of prices in the market,” since this allows for possibility for prices to rise as well as fall (FG 2). Generally, when prices of waste were high, the effect of the market was seen to be positive.

While prices for some materials have bottomed out, others have risen. Prices of paper, low-density polyethylene (LDPE), corrugated board and tin doubled during the past decade while ferrous metals appreciated four times. PET (the plastic often used in drink containers) and tetrapak (common food and beverage cartons) were materials that got a new market. The highest gainers between 2009 and 2012 were ferrous metal among metals, LDPE and PET among plastics, and white paper and tetrapak.

Chart 1 provides the rates at which informal waste pickers sold their collected products.



Source: Kashtachi Kamai Cooperative buy-back centre, KKPKP 2000-2012. The data for the year 2000 are from a previous study that has been cited in this report. The data for the other years are drawn from the records of a collective scrap trading enterprise run by the organization of informal waste pickers.

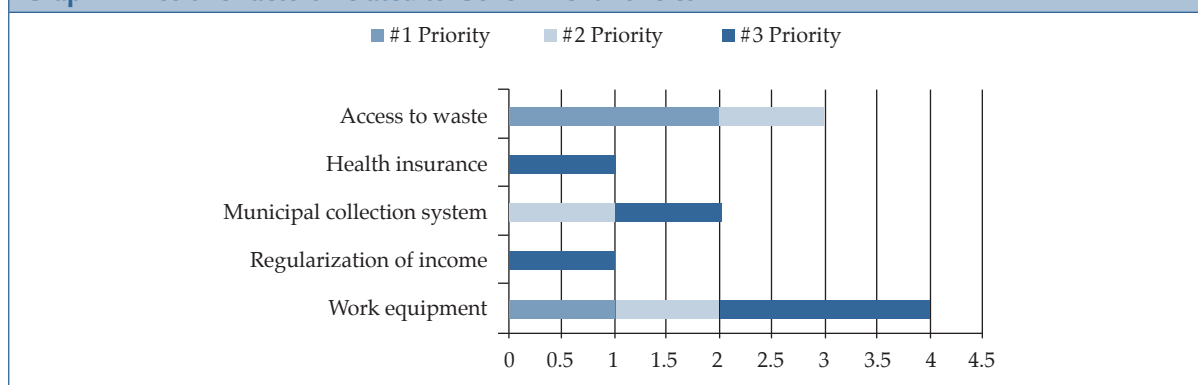
In a group of all male itinerant waste buyers, one man noted: “The scrap market runs because of us” (FG 2). The facilitator in this group brought up an initial point someone had made about “never having been to school” saying although no one in the group had been to school, they were the ones with the knowledge about this sector. “Practical knowledge is a lot more useful than just having bookish knowledge,” the men agreed (FG 2).

Changing consumption patterns were also highlighted by waste pickers, particularly women door to door collectors who were very aware of changes in the types of employment in the city and housing societies, which affects the type of waste discarded. Two women noted that “it [is] good to service the smaller flats rented by ‘outsiders’ – young professionals, college students – because they ate a lot of takeaways and drank a lot, and had no interest in keeping the bottles and takeaway skips” (FG 4). The flats rented to young professionals refer to people in newer IT jobs, and the women commented about pizza boxes left by these young men.

Positive Factors Related to City and Urban Policies and Planning

Positive City/Urban Planning Forces	Priority # 1	Priority # 2	Priority # 3	Frequency
Work equipment	1	1	2	4
Regularization of income	0	0	1	1
Municipal collection system	0	1	1	2
Health insurance	0	0	1	1
Access to waste	2	1	0	3

Graph 7 - Positive Factors Related to Government Policies



The municipality supplied the fixed collectors with work equipment (hand carts, gloves, buckets, soap, etc.) through their cooperative. This arrangement was contracted between the municipality and the cooperative; waste pickers alternatively ascribed the provision of these materials to the municipal corporation or to their cooperative. For this report, the provision of equipment has been placed here under government policies as most focus group participants referred to the provision of equipment in this context. When calling for additional equipment, for example, waste pickers were clear this should come from the city. The provision of such equipment was the highest ranked positive force within this category. It is important to note that the provision of work equipment is seen by the waste pickers as having an impact on their working conditions and health.

Premiums for health insurance were also paid by the municipality. One woman door to door fixed collector said: “Many people have got medical benefits. People have to submit proof of hospitalization then we get money” (FG 3). A second woman confirmed that she had received “Rs.5000 twice from the organization for medical costs” (FG 3).

This group of fixed collectors was one of the earlier groups, all of whom were also members of the trade union. They had been involved in the integration efforts within the cooperative and the transition to doorstep collection from itinerant waste collection, and they respected the benefits they got from it. As older fixed collector members of the cooperative, they had been quite successful in determining the amount of user fees they collected from city residents as well as ensuring better conditions of work as citizens segregated the waste themselves. Their confidence in dealing with various stakeholders was evident in their relationship with police, scrap traders and citizens. One woman noted: “We tell them that we won’t pick up the dirty waste unless they keep it wrapped separately” (FG 14).

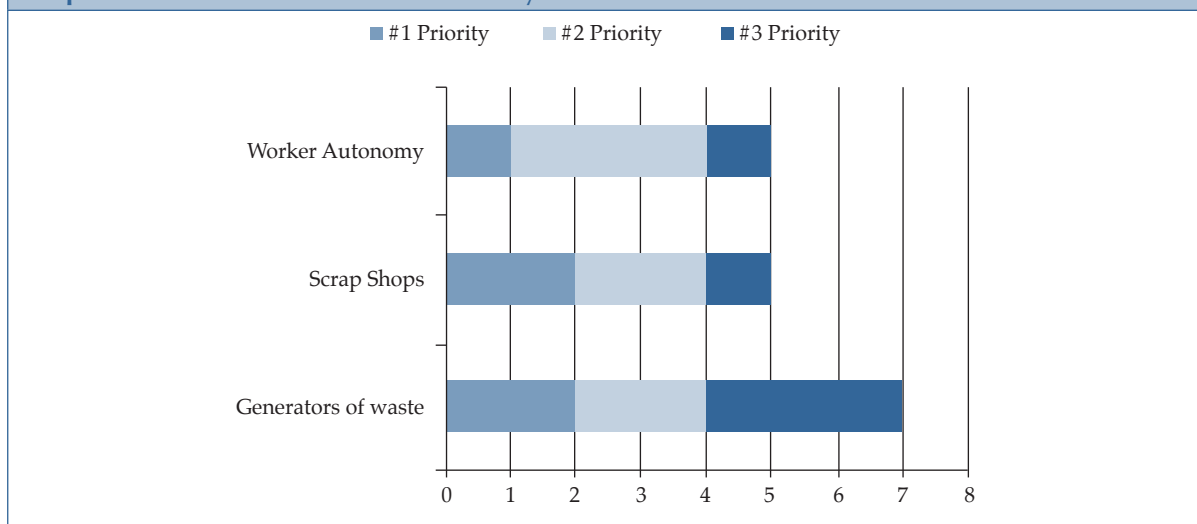
However, discussion in other groups with a mixed composition (men/women and itinerant waste picker/itinerant waste buyer) revealed that the itinerant waste pickers had a different, far less beneficial deal than the fixed waste collectors and itinerant buyers.

Positive Factors Related to Value Chain Dynamics

Table 27 - Positive Factors in Value Chain Dynamics

Positive Value Chain Dynamics	Priority # 1	Priority # 2	Priority # 3	Frequency
Generators of waste	2	2	3	7
Scrap shops	2	2	1	5
Worker autonomy	1	3	1	5

Graph 8 - Positive Factors in Value Chain Dynamics



From the focus group responses, it was clear that all respondents thought that generators of waste were the most important positive force to their livelihoods, as the waste would not be available if it weren't for the citizens, housing societies and corporations who discarded their unwanted materials. Companies and housing societies were specifically mentioned as sources of high-value waste and therefore contributing positively to waste picker/waste buyer earnings. The scrap dealers who paid cash for the waste were second in importance.

Itinerant waste buyers participating in the focus groups (as distinct from waste pickers) were particularly aware of the value chain and their place in it.

- **Importance of relationship with waste generators** – “Cultivating good relations and regular contacts is important in our trade. Honest interactions are important. If we are honest even the birds on the trees treat us well; else they would gossip and ruin our reputation” (Itinerant waste buyer Focus Group Report 5). There was general agreement in the group on this point.
- **Relationships with scrap dealers** – In a fully mixed group (men/women; door to door collectors/itinerant buyers) one individual said: “The scrap dealer is good with us – he offers us what we need. If prices go up he immediately raises our prices as well. We really have a good deal.” There was agreement in the group on this position and another man echoed a sense of solidarity between waste pickers and scrap dealers: “Scrap dealers increase the prices and give us bonus but it is finally the recycling enterprises who need to offer a better price so the overall scrap economy increases” (FG 14).

Itinerant waste buyers described the four monsoon months as months of “just sitting around, begging for money” (FG 9), but added that the scrap dealers parked sums of money with them during this lean period so that they could support their families.

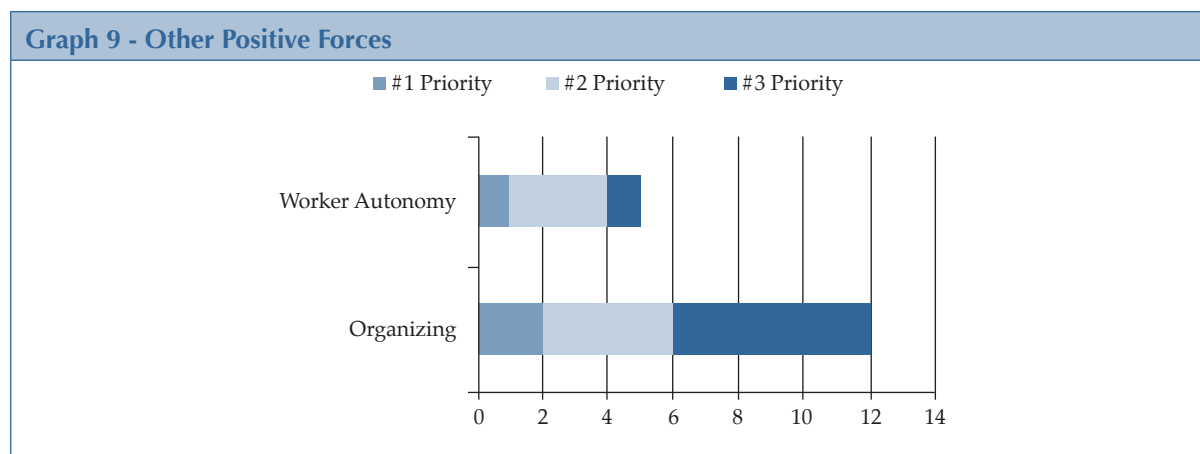
- **Determinants of Choice of Scrap Dealer** – One woman noted that they made personal choices of whom to sell their waste based on those relationships: “Prices are not the highest at uncle’s shop but he buys everything. That’s why we go to him. In the monsoons he buys plastic that is practically dripping, without a murmur. What would we have done if he had not been willing? No other trader in the area does that” (FG 7).

Positive Factors Related to Other Driving Forces

Organizing

Organizing was the primary sub-category under “Other,” receiving 15 separate listings of positive factors. These are broken down further:

Other Positive Forces	Priority # 1	Priority # 2	Priority # 3	Frequency
Organizing	2	4	6	12
Worker autonomy	1	3	1	5



Waste pickers who were members of either the trade union or the cooperative spoke about the benefits available to members and listed such things as insurance and that “Children [of members] get notebooks and scholarships” (FG 3).

In Focus Group 4, door to door collectors (all women) spoke about the positive changes related to more regular collection, now that they were organized through the cooperative:

“We still have to pick up heavy loads, carry dirt, listen to the things people say about us and to us. But, now the garbage is not as nauseating as it used to be when we first started this work – it used to be full of maggots in those days and stinking. Now, since the collection is more regular, it’s not so bad” (FG 3). In another group, a woman said, “The biggest positive factor for me is all these outsiders living on rent – they eat and drink plenty from hotels and they are not interested in keeping the skips.”

One woman in an all-women focus group (FG 10) of door to door collectors noted:

“Before the trade union, we just had to set out on the road and the police would come after us calling us thieves. Once we emptied our whole sack and showed them that we had nothing. Just plastic, paper, some glass... Still they used to trouble us, say we must have hidden our stolen goods somewhere else... We paid Rs.5 and got our photo passes [identity cards]. Thereafter the activists started accompanying us to the police stations. They spoke with the police and argued our cases and the situation improved. No one else in the city helped us. Only the union argues, ‘See how much waste and filth waste pickers clean for you every month, so you have to give them this card.’ And that’s how they got these [municipal identity] cards for us.”

Other than Organizing, comments in the “Other” category referred primarily to worker autonomy – the ability of the waste pickers to work on their own time and, in the case of itinerant pickers and buyers, without supervision. This facet of the work, referred to as “independence” by waste pickers, was highly prized by some individuals. In an all-men focus group of waste pickers working in door to door collection, organized by the fixed collectors cooperative SWaCH, participants raised the issue of independence or worker autonomy. One man (FG 9) stated:

“We have the backing of the organization, so citizens respect us. We feel like we have ‘permit’ (permanent) jobs. We are not beholden to anyone. It feels good to do the work now. No one sits on your head – why didn’t you come, why did you do this or that... Also, there is some stability so there is also stability and some peace at home.”

2.4 Responses to Negative Driving Forces

The focus group participants were asked how they responded to the difficulties that they had articulated. Their responses were classified on the basis of whether the response was primarily an individual response, a household response or collective in nature (table 29).

Negative Driving Forces	Total Responses	Individual Responses	Household Responses	Collective Responses
Government policies	51	26	7	18
Macroeconomic forces	36	21	11	4
Value chain dynamics	4	4	0	0
Total	91	51	18	22

Source: Focus groups, N=15

The focus group participants came up with 91 different responses to the difficulties identified and listed. The majority of the negative driving forces (51 of 91) were related to the government policies, followed by macroeconomic issues and value chain dynamics. Individual responses were the most common, identified 56 per cent of the time. Individual and household responses combined comprise 76 per cent of all articulated responses. Collective action was most often cited in response to negative forces brought about by the government policies.

What is interesting, however, is in the nature of the responses relative to the nature of the negative driving forces. Both government policies and macroeconomic categories encompass forces which are systemic in nature, yet workers’ responses are primarily at the individual and household level.

Table 30 - Individual, Household and Collective Responses to Negative Driving Forces Disaggregated by Difficulty

Issues/Difficulties	Individual Responses	Household Responses	Collective Responses	Total Responses
Access to waste	10	3	1	14
Inflation	6	9	2	17
Low income	0	0	1	1
Non-segregation	2	0	5	7
Occupational health and safety	3	0	2	5
Private contractors	5	0	5	10
Proliferation of scrap dealers	14 ⁸	2	1	17
Scrap rate fluctuation	5	0	0	5
Social protection	3	4	1	8
Sorting space	3	0	4	7
Total	51	18	22	91

Source: Focus groups, N=15

When analyzed by frequency of actual responses (excluding the stated inability to respond), the three most significant issues or difficulties raised by focus group participants were:

1. Inflation
2. Access to waste
3. Proliferation of scrap dealers
4. Private contractors

Table 31 - Perceived Inability to Respond

Issue/Difficulty	Count of Unable to Respond
Access to waste	1
Low income	1
Occupational health and safety	1
Private contractors	2
Proliferation of scrap dealers	6
Scrap rate fluctuation	2
Social protection	1
Grand Total	14

Source: Focus groups, N=15

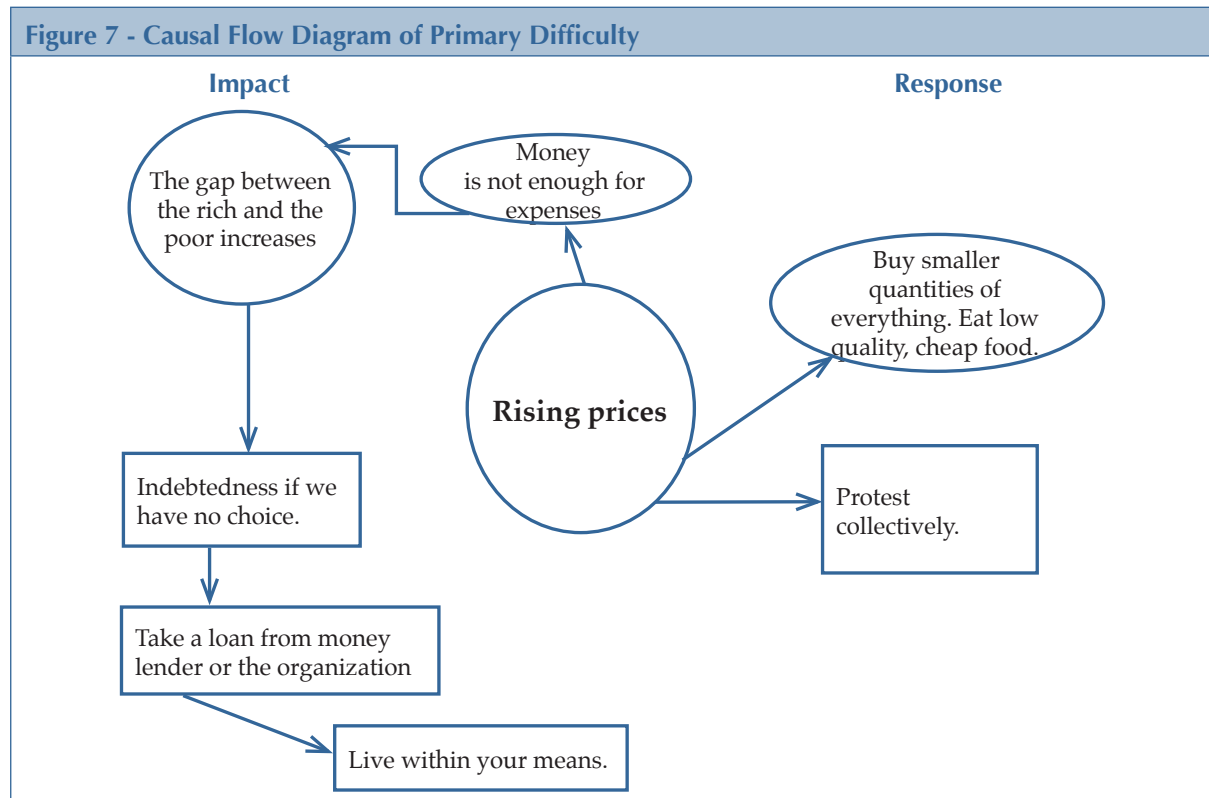
Fourteen of the 91 responses (15 per cent) were indicative of a perceived inability to respond to a particular issue or difficulty (table 31). Among itinerant waste buyers and itinerant waste pickers in particular, the issue of proliferation of scrap shops was seen as an issue which affected their incomes but about which they felt powerless to do anything.

⁸ Six out of 14 responses stated an inability to do anything.

Response to Primary Macroeconomic Difficulty

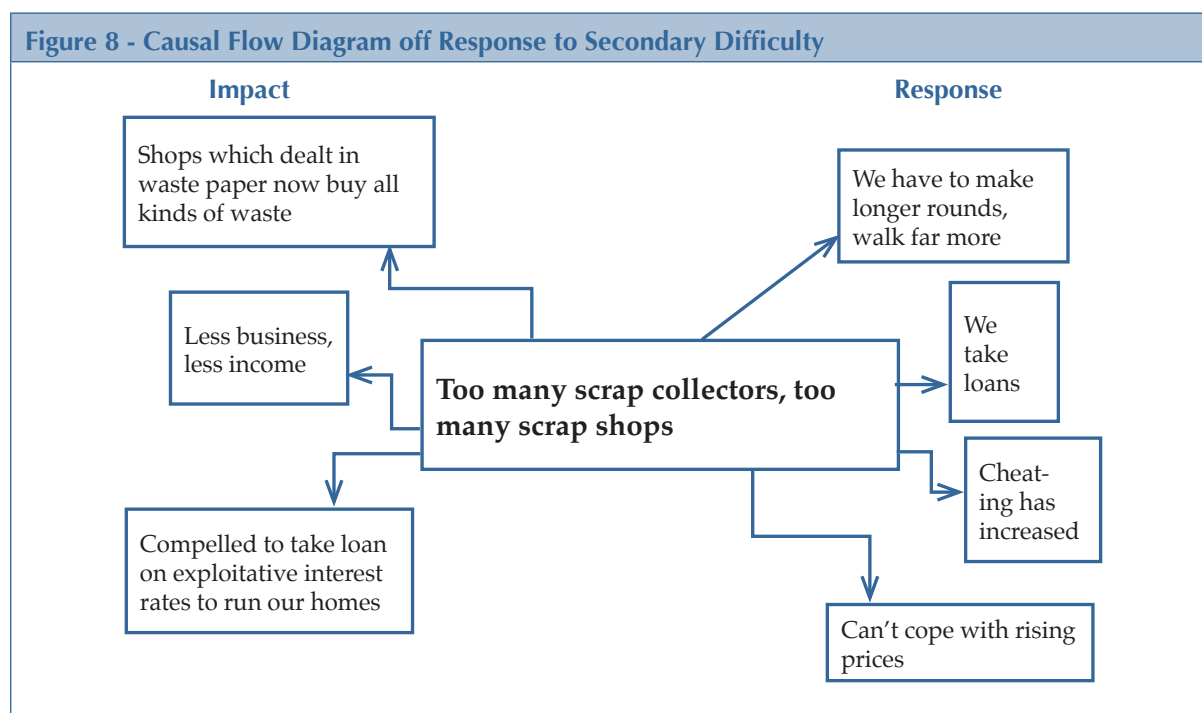
As Figure 7 illustrates, when inflation or “rising prices” occurred, people turned to private loans as a coping mechanism to survive in the face of increased financial pressures on the household. One man also emphasized the solution many focus group participants suggested, the strategy of cutting back on consumption if prices kept increasing and scrap rates did not: “We will have to make do with less nutritious food” (FG 14).

Participants routinely spoke of consuming less in general, eating less food and eating lower quality foodstuffs as a coping strategy for inflation. One male participant connected his concern about rising prices and the escalating cost of food grains with changes in climate: “The lack of rainfall will further push up prices. So we’ll just have to keep working as long as we can keep walking!” (FG 5).



Source: Mixed focus group number 14 comprising men and women and all categories of collectors including itinerant waste pickers, itinerant waste buyers and door to door collectors

Besides devising individual solutions to cope with the problem at hand, the group also referred to collective action as a means to change their situation.



Source: Focus Group 5 comprising men itinerant waste buyers

Travelling longer distances and working longer hours to collect waste was a frequent response by participants in focus groups. The focus group responses were disaggregated by gender. The data revealed that gender had no significance as regards the nature of responses to issues or difficulties faced in the line of work. Both women and men were as likely to resort to individual, household or collective responses.

Table 32 - Types of Responses Disaggregated by Category of Collector

Type of Collector	Individual Responses	Household Responses	Collective Responses
Waste pickers and door to door collectors	17	8	13
Itinerant waste buyers	17	4	2
Mixed groups	16	6	7

Source: Focus groups, N=15

The type of response to difficulties was significantly different between different types of collectors. Waste pickers and door to door collectors were much more likely to identify collective responses to the issues or difficulties they faced in their work. The fact that they were unionized and worked as members of a cooperative may have had something to do with that. Although unionized, itinerant waste buyers operate as independent business people and the data suggest that they sought individual solutions to problems they encountered at work. The same was seen with the mixed groups.

The preponderance of men among itinerant waste buyers determined the selection of "Proliferation of scrap shops" as the issue that was most important to men. For women, issues related to access to waste and the implications that the entry of private contractors could have were more important.

In the discussion surrounding the proliferation of scrap dealers and the trend toward a concentration in the hands of an oligopsony, some waste pickers offered suggestions for a collective response. One itinerant waste picker said: "this is why the sanstha [union] must set up its own scrap shop here" (FG 6). Another fixed collector from the same group added, "There should be a system like a school bus, fixed route, fixed times, with pick-up points, where a KKP operated transport vehicle will buy recyclables at better rates – a mobile scrap store."

2.5 Intermediary Factors (Institutional Environment)

The survey data presented in table 33 clearly show that waste pickers did not see much relevance of the national government in their work. The pegs for waste pickers were clearly the municipal government and the MBO. The question about organizations that were not helpful did not really yield much information.

	Fixed		Itinerant buyer		Itinerant picker	
	Men	Women	Men	Women	Men	Women
National government	0.00	1.96	3.13	11.11	0.00	3.13
Municipal government	50.00	27.45	3.13	0.00	33.33	0.00
NGOs	0.00	0.00	3.13	0.00	0.00	0.00
MBO	90.91	80.39	75.00	66.67	0.00	53.13
Police	0.00	1.96	3.13	11.11	0.00	9.38
Other workers	13.64	23.53	9.38	0.00	0.00	6.25
Trade union	0.00	7.84	9.38	0.00	0.00	0.00
Worker’s cooperative	4.55	7.84	3.13	0.00	0.00	6.25
Supermarkets or large retailers	0.00	1.96	0.00	0.00	0.00	0.00
N	22	51	32	9	3	32

Source: Pune IEMS survey data (2012)

Institutional Actors

Table 34 provides the list of institutions that participants of the focus groups thought had relevance to their work. They qualified their responses by indicating whether the impact of each institution was positive or negative and the relative importance of each institution in their work (large, medium, small).

Institution	Frequency	Importance			Positive or Negative		
		L	M	S	Both	P	N
Waste generators	13	4	9	0	8	5	0
Finance companies and moneylenders	2	0	1	1	1	1	0
Police	5	1	1	3	1	0	4
Scrap trader	14	1	10	3	3	10	1
Waste pickers’ union	13	11	2	0	0	13	0
RTO	1	1	0	0	1	0	0
Waste pickers’ cooperative	4	1	3	0	0	4	0
Watchmen	1	0	1	0	1	0	0
Municipality	12	4	7	1	6	5	1
Contractors	2	0	1	1	0	0	2
Municipal councillors	2	1	1	0	0	2	0
Itinerant waste buyers	1	0	1	0	0	0	1
Total	70	24	37	9	21	40	9

Source: Institutional maps by 15 focus groups

Participants listed a total of 12 institutions and actors, the most significant in their perception being the waste pickers organization, scrap traders, waste generators and the municipality, in that order. That covers the entire range from the generator of waste, the regulator of waste, the buyer of waste and the workers organization. Scrap traders and the waste pickers' organizations were viewed in a positive light while there was more ambivalence in the case of the other two actors.

Institutions that Support or Obstruct

Table 35 presents focus group participants' perception of the ways in which institutions helped or hindered their work along with their expectations from those actors.

Table 35 - Institutions that Support or Obstruct		
Institution	How do they help or hinder	What should be done
Citizens/ Customers/ Societies/Waste generators	<ul style="list-style-type: none"> • Give us waste • Abusive • Complain about our work to the corporator and SWaCH • Don't pay on time • Don't segregate their waste • Deduct pay 	<ul style="list-style-type: none"> • Timely payment of service fee • Should be more sensitive towards us • Allow for a weekly day off • They should segregate their waste
Scrap trader	<ul style="list-style-type: none"> • Easy credit • Capital to buy scrap • Provides transport for waste • Bonus • Buys our waste • Cheats 	<ul style="list-style-type: none"> • Should give us higher rates • Should buy all types of scrap • Follow fair trade practices
Waste pickers' union	<ul style="list-style-type: none"> • Provide a voice for collective action • Help with children's education • Health Insurance • Provides credit 	<ul style="list-style-type: none"> • Need to continue to demand for Social Security • Need to demand for better scrap rates • Need to negotiate with the Corporator about securing our livelihoods • Increase our insurance cover • Cashless health care scheme • Stop contractors • Regulate entry of workers into the sector • Secure access to waste • Should run more fair trade shops • Should resolve issues with authorities • Space for stocking scrap
Cooperative staff	<ul style="list-style-type: none"> • Facilitate relationship with the Municipal Corporation • Mediate with the concerned authorities for equipment for work • Encourage citizens to segregate waste • Ensure we have a livelihood and access to waste • Worker autonomy 	<ul style="list-style-type: none"> • Should help secure livelihoods by making us permanent • Should help with better housing • Should provide for equipment in time • Be more sensitive

PMC/PMC drivers/ Municipal staff/ Collection truck	<ul style="list-style-type: none"> • Give legitimacy • Provide safety equipment for work • Runs the secondary waste collection system • Supports us as workers • Permanent workers take away the better waste 	<ul style="list-style-type: none"> • Also introduce social security and other benefits for us as they do for their permanent conservancy staff • Wages from the Municipal Corporation • Stop contractors • They should retain the skips • Regulate unauthorized scrap shops • Provide employment to our educated children
Corporators		<ul style="list-style-type: none"> • Should acknowledge our work as contributing to the city • Greater respect

Source: Focus groups, N=13

Municipality and Waste Generators

The participants' ambivalence towards both the municipality and waste generators is reflected in the table as well as the verbal comments of participants. The most comments about generators came from door to door collectors and itinerant waste buyers who interacted with waste generators (itinerant waste pickers rarely had face to face interaction with waste generators). Itinerant waste buyers also confessed to having little to do with the municipality. At most they saw the role of the municipality as regulating the number of collectors and allowing only those with identity cards to operate (FG 2). Fixed collectors had daily interaction with municipal field staff, as well as understanding of the evolving municipal waste collection system because secondary waste collection was carried out by the municipality. Itinerant waste pickers did not have too much interaction with the municipality, however, they did experience the fall out of the waste management policy of skip-free cities and being fined for littering around the municipal skip (FG 5).

Some waste pickers felt the municipality blamed them for problems, but took credit for their work:

"The corporation should understand us and not blame us for every little thing that is wrong. If there is a mess near the skip, they say SWaCH people have thrown it – but it's not us! You see these citizens ... and they just reach out and throw a plastic bag of waste in the direction of the skip. It lands on the road, not in the skip, making a mess, and we get blamed. We clean your neighbourhood, why blame us all the time? Appreciate what we do. It's not physically possible to clean every area perfectly, every day. In any case, we do the work and the corporation gets the good name for the good work, not us."

Others noted that inadequate service by the municipality confounded the waste pickers' work:

"We have to take the other waste back into the Society if the truck doesn't come. That's very laborious. If the truck doesn't come for one day, the whole routine goes off – it takes about eight days for things to get back to normal because there's a backlog every day and the truck loaders refuse to take the extra load, so there's always some left over. This causes a lot of tension."

Fixed waste collectors in Focus Group 4 also had some harsh words about the treatment they received from waste generators:

"Those house-owners, they're the worst! They are supposed to lift their dustbins and empty the waste into our hand carts, but they just refuse. They say, 'What are we paying you for, that we should do this dirty work?'"

"They say anything, treat us so badly. When I asked one woman for my money, Rs 50, at the end of the month, she said 'Come, sleep with my husband, he'll give you Rs 50.' I was so angry and so hurt and sad that I have to listen to words like these." Another said: "When my son died, I didn't go to work. She complained so much. Aren't we also human?"

Table 36 - Perceptions about Support from Local Authorities	
	% Agree
City officials, the police or other local authorities provide support to you in your work as a waste picker	13.33
Government, in the next two years, will be able to improve the working conditions of waste pickers such as yourself	22.00
Local laws or regulations that affect your work as a waste picker benefit you in some way	7.33
These local laws or regulations limit your work as a waste picker in some way	10.00
General public recognizes and appreciates the work you do as a waste picker	64.00
Waste services have become more privatized in the last two years	34.67
Waste services will become more privatized in the next two years?	40.67
N	150

Source: Pune IEMS survey data (2012) data

Table 36 presents the waste collectors' perception of support received from the local authorities. It appears that waste collectors actually feel they are appreciated more by the general public than the municipality. It is not surprising then that a sizeable proportion believe that waste privatization has increased during the past couple of years and is likely to increase even more.

Scrap Dealers

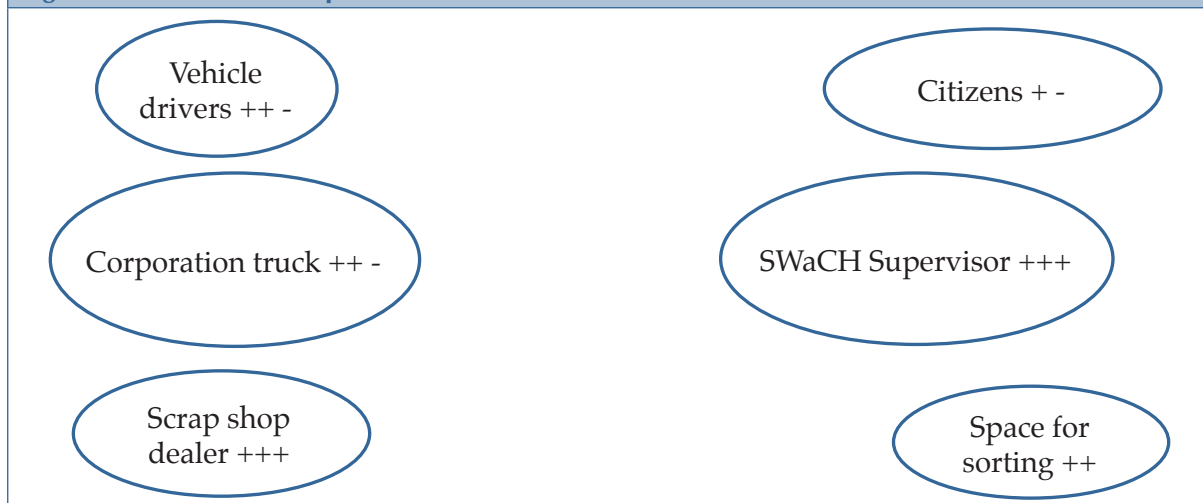
Waste pickers recognize and acknowledge that the scrap dealer is their main intermediary to the product market. They are by no means naive about the fact that the dealer profits from their labour. Waste pickers are aware of their own important role in enabling aggregation of recyclables by scrap traders. One smart young itinerant waste buyer remarked, "The scrap dealer treats us well because we walk for two hours and fetch him material which he gets by sitting in one place. And he makes profits since he buys it from us at a lower rate and sells it at a higher rate!" (FG 4). At the same time, waste pickers did not cast the dealer in the image of the exploiter and did look upon him as someone who was in their corner and looked out for them. The scrap dealers are often a source of credit and dealers occasionally also share some of the profits with the waste pickers. Given the symbiotic relationship, it is perhaps not surprising that two thirds of the focus group members said scrap traders played a positive role in their work. Their verbal comments elaborate upon the nuanced nature of the relationship.

"The shop keeper who buys our recyclables is very important. Why will we collect if he is not there and there is no market for our materials? Yes they cheat and don't always give us the correct prices and don't buy certain materials. At least they buy our materials through the year and we get some money" (FG 1). An itinerant waste picker said, "If we don't have anything to sell on some day, we can ask him for a few rupees and he will always give it to us. Our homes run on his money, on the loans we take from him, how can we say he is bad?" (FG 8).

In Focus Group 14, an annual bonus was discussed:

"We negotiated with the scrap dealer to first give us an annual bonus; he gave us clothes for Diwali – after a few years we said our cupboards are full of clothes, citizens too give us their old clothes, give us vessels instead. Then when we had enough steel and then brass vessels we started demanding our annual bonus in the form of cash." An itinerant waste buyer mentioned that the annual bonus amounts to 2 per cent of the total sales, which led another to remark: "...we do need to ensure all of us get paid a bonus on percentage terms... If we all ask for it, the scrap dealer will surely oblige."

Figure 9 - Institutional Map



Workers Organizations

The workers' organization was accorded relatively greater importance than the scrap traders and all the mentions were positive. Among door to door collectors, men (80 per cent) and women (79 per cent) found the workers' organization to be most helpful as compared with other categories of waste pickers. A participant (FG 14) who was a member of the SWaCH said:

"What does PMC do for us? Everything is done by the workers' cooperative.... The coop staff or we ourselves speak to citizens and get what we need. The coop is the most important institution in our lives. It ensures that our work-related issues are resolved and that citizens and the municipality accept our work and our demands...."

Participants of Focus Group 3 also spoke about the benefits that they get by being members of the organization. "We get life insurance benefits. When we die our heirs get 30,000 rupees. Many people have got medical benefits. People have to submit proof of hospitalization then we get money. We have to give a death certificate then we get money. Children get notebooks and scholarships."

The role of the workers' organization in facilitating consultative processes for resolving issues was brought up in a focus group discussion that concerned the entry of private waste management companies:

"See, in spite of everything, you can still talk, argue with people. They don't like to pay, but in the end they usually do. How can you dialogue with a company? And not just us, all people involved in the waste sector will suffer – waste pickers, rag pickers, scrap shops, everyone. We will have to ask the workers coop to help us think this through and come up with some answers."

Some groups also referred to the agitational initiatives of the workers' organizations on larger issues such as old age pension and food security.

2.6 Further Analysis and Commentary on Part 2

Negative Driving Forces

The perceived threat to informal livelihoods, in this case access to recyclables, as a consequence of macroeconomic factors, factors related to the city and its policies and the factors related to the value chain repeatedly surfaced in the focus groups as well as in survey data. Each type of waste picker was affected differently. Factors related to city, specifically, decisions of privatization of municipal solid waste collection affected fixed collectors, while removal of municipal skips affected itinerant waste pickers. Value chain related factors of proliferation of scrap dealers were more threatening to itinerant waste buyers. Overarching macroeconomic factors of rising costs of living and proliferation of waste pickers affected all types of pickers. The absence of social protection in the context of rising costs of living also came through.

Clearly, the experience of rising costs of living of informal waste pickers had its basis in external macroeconomic reality, as did their recognition that they had been rendered vulnerable by the absence of cushions to tide them over during such times. The period between 2006 and 2012 was marked by spiralling inflation – particularly in essential commodities – which hit double digits in 2010 and 2012.

India pursued economic reforms during the past two decades. One reform was the progressive reduction of subsidies on goods and full cost recovery for all services. The focus groups referred to rising electricity costs, many the result of electricity sector reforms begun in the 1990s in Maharashtra and resulting tariffs that have progressively increased. Private sector participation in health, education and other social sectors was another reform. The proliferation of private hospitals was encouraged, and user fees were introduced in government hospitals in India since 1991. The focus groups referred to health costs. Free medical care is based on means testing and available only to those registered as living below the poverty line.

Decontrol of pricing is also currently being more aggressively pursued, leading to increases in diesel, petrol and cooking gas. The Public Distribution Scheme (PDS) under which food grains, sugar, cooking oil and cooking fuel were supplied at controlled prices has been considerably trimmed. The scheme has been targeted at families below the poverty line and economically weaker sections based on means testing. Direct Benefit Transfer is the most recent change that has been announced. Under DBT, the subsidy component for food grains, cooking fuel and fertilizer will be transferred in cash to the beneficiaries. It has been rolled out in eight districts of Maharashtra amidst controversy. Pune is scheduled to be included in the next phase.

Proliferation of waste pickers was identified as the second most important negative driving force by the respondents. Two thirds of the survey respondents thought there would be more people collecting waste in the city next year. This perception is examined in the light of evidence from secondary sources. While Maharashtra's economy has become highly metropolitan, about two thirds of the State's population directly depends upon the agriculture for its livelihood. However, this primary sector accounts for less than 13 per cent of the total income in the State. Therefore, the marginalization of the primary sector impacts two thirds of the State's population (Shaban 2006). Skewed development of the State and the impoverishment of socially excluded groups such as the *nandiwales* and *pardhis* could account for their migration to Pune into the itinerant waste collection segment.

The new inter-state migrants into the itinerant waste buying segment were reported to be from the under developed states of Bihar and Uttar Pradesh. In comparison with Maharashtra, Uttar Pradesh has a lower growth rate and per capita income and higher Scheduled Caste and BPL population (Government of India 2011a), which could account for the push towards work in Maharashtra. Bihar, on the other hand, has a higher Scheduled Caste and BPL population as well as higher unemployment rates (Government of India 2012). That could account for the migration from Bihar.

Waste picking is an open occupation with no regulations or entry barriers. Itinerant waste picking, especially, requires no education, no capital and no skills that cannot be learned on the job. It is therefore the first refuge of new urban migrants and socially excluded and marginalized populations. So it was for the waste pickers and itinerant waste buyers who migrated to Pune back in 1972 during a severe drought. Caste was a significant factor then as most were Dalits and from among the Scheduled Castes. Entire families and villages migrated and were assimilated into the city and wove themselves into its fabric (Chikarmane et al. 2001).

The findings of government policy-related issues brought out the changes that had affected the waste picker segments differently. Simply put, the specific ways in which types of waste pickers carry out their work renders them vulnerable to particular changes. Fixed collectors are paid by service users and have access to recyclables put out by waste generators; they therefore saw privatization of waste collection through contracts with private companies or multinationals as a major threat. Fifteen per cent of the survey respondents said competition from municipal workers for recyclable materials was a major problem. Some also reported that contract workers on municipal vehicles refused to accept segregated waste because they supplemented their wages from the sale of recyclable scrap. In this context the doubling of municipal bell vehicles for carrying out door to door collection over the past seven years does pose a threat. Itinerant waste collectors, on the other hand, were more affected by the city's beautification efforts that had led to the sharp decrease in the number of municipal skips. Itinerant waste buyers were not really affected by these changes because they purchased recyclable materials from generators.

The proliferation of scrap dealers in the value chain plagued itinerant waste buyers more than the other types of collectors. Not surprising, considering that the earnings of itinerant pickers and buyers were dependent only upon the earnings from the sale of recyclables while fixed collectors also derived their earnings from user fees. The *value* of the itinerant waste buyers own “trade knowledge” was perceived as eroding, as the increasing presence of scrap dealers encouraged waste generators to by-pass the itinerant waste buyer and sell directly to the dealer.

A third of the survey respondents were aware of newly opened scrap dealers, 41 per cent of whom were itinerant buyers.

A study carried out in 2000 (Chikarmane et al. 2001) had found 368 scrap traders, 50 per cent of which had been established in the decade between 1986 and 1995. Figures available from the Pune Municipal Corporation (2012) put the number of scrap dealers at 566, which means a 54 per cent increase during little over a decade as compared to a 23 per cent increase in the general population during the same period. This could be caused by changes in consumption that led to an increase in the quantity of recyclables, or a greater fragmentation at the cutting edge of the recyclable scrap market.

Part 3: Linkages and Contributions to the City

3.1. Linkages to Formal Economy

Pune boasts a robust recyclable materials market where materials trading and processing operations are carried out. The markets consist of sub-markets that operate at different levels of trading activity. The lowest end is the retail segment, of which the base of the pyramid is waste pickers and itinerant waste buyers. Thus these players are integrally linked to both informal and formal markets.

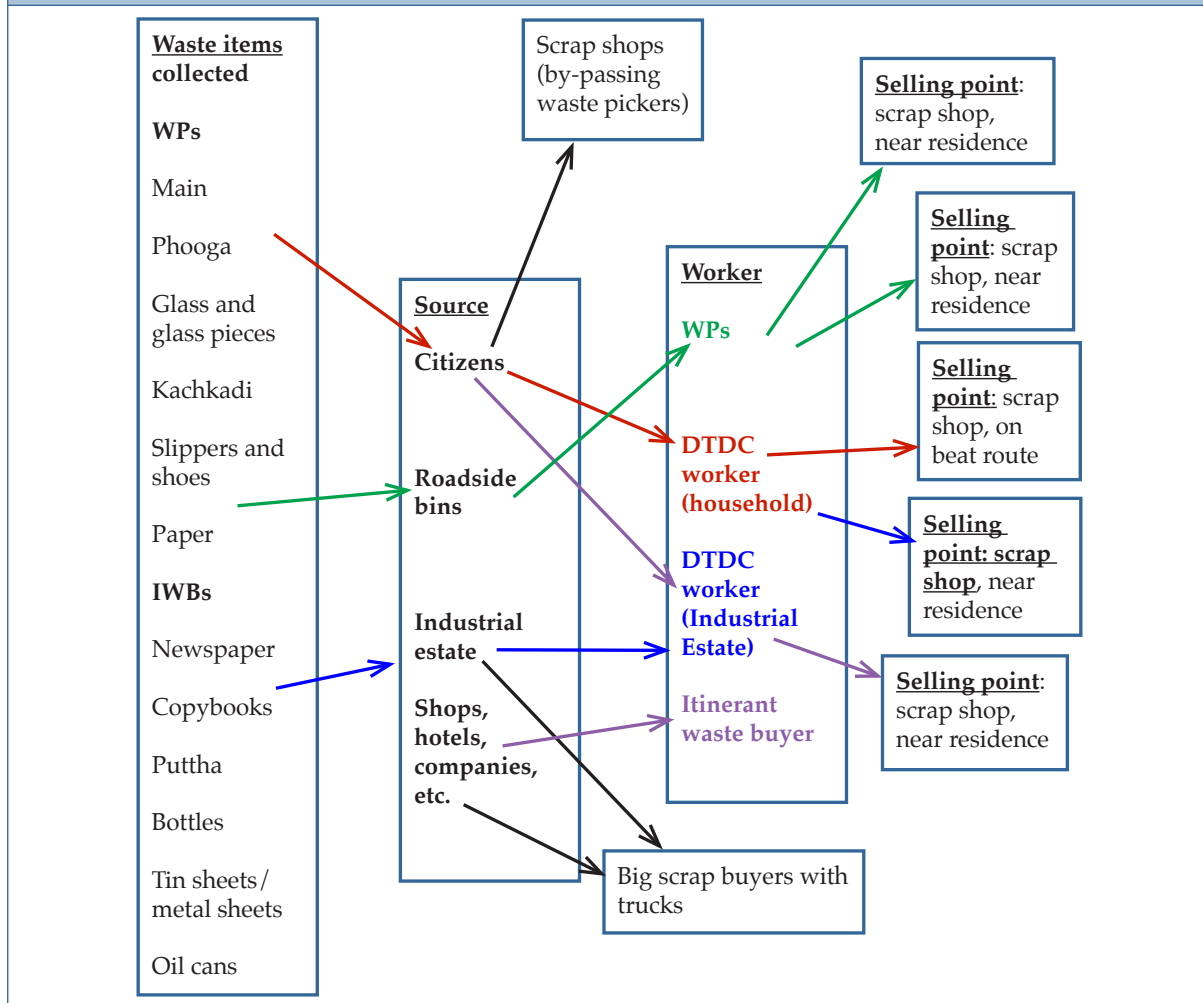
Informal recovery and trading in recyclable materials is entirely market driven and flourishes without any subsidies (Chikarmane et al. 2001).

	Fixed	Itinerant buyer	Itinerant picker	Total
Formal businesses	90.74	97.50	92.00	93.28
Informal businesses	32.39	30.00	30.30	31.25
Other informal workers	5.66	3.23	0.00	3.70
Personal family/friends	5.66	3.23	0.00	3.70
General public	97.14	86.84	67.74	87.77
Private individuals	97.18	77.50	50.00	82.01
Other	6.00	3.45	4.00	4.81
N	73	41	35	149

Source: Pune IEMS survey data (2012) data

Table 37 presents the sale of goods and services by informal waste workers. Almost all workers sold the collected materials to formal businesses (93 per cent). A third also reported selling to informal businesses. Itinerant waste buyers and fixed collectors dealt directly with waste generators and most said they were providing waste collection services. Fixed collectors were actually authorized by the municipal government to sell their collection services to waste generators for a fee. The number of itinerant waste pickers who also thought they were providing services to the general public and to individuals was significant.

Figure 10 - Diagram of Economic Linkages



Source: Focus Group Report 6: Mixed group of types of collectors, women and men

Figure 10 shows the journey of waste from the generators through the various intermediaries that handle it until it transits to the processors, drawing out the economic linkages between the actors at every stage.

Relationship Between the Waste Generator and the Type of Collector

Fixed collectors negotiated fees with the service user for the core daily domestic waste collection. Of the 15 focus groups, 12 had fixed collectors. A fixed collector reported collecting 40 rupees from each household and earning 2000 rupees from user fees (FG 8). The relationship with the service users was variable, and the experiences were both positive and negative. Some had been able to negotiate better user fees for themselves at 50 rupees instead of the usual 20 rupees (FG 7).

Itinerant waste buyers and fixed waste collectors had a buyer-seller relationship with waste generators. They mentioned the inability to transact with big/bulk generators because they were unable to handle the procedure of giving quotations and bidding for the recyclables. Itinerant waste buyers bought goods from, while fixed collectors sold their services to, waste generators.

- **Competition amongst informal workers for the recyclables**

“Many of us collect the waste from the gate. So we get the waste from which the housekeeping have already removed the valuable items” (FG 6).

- **Competition among scrap dealers and informal workers**

“These days our customers have become very smart. With so many shops around they put their empty beer bottles and newspapers in their cars and sell directly to the shop” (FG 1).

- **Direct sale by industrial generators to waste management companies and large traders**

“We used to pick stuff from a place where this company used to burn their waste. We would still find things – tins, metal etc. in the burned waste. Then they got fined – rupees 15,000 or 16,000. So now they don’t burn it – they call a truck and it all gets taken away. Some truck with a yellow band comes and takes it all away. What’s left for us?” She described the way in which she had tried to bargain with the companies: “But they won’t take us seriously – they say bring someone to speak for you... We told them we will clear the waste for you, we will pick it up and you let us take what we want from it, but they didn’t agree... Finally one company has agreed, but only once a month. I told the boss there, in our union we believe that these recyclables should not go to waste, we fill our stomachs on this waste. Since then he agreed. He helped us with our ration cards and BPL cards also” (Itinerant waste pickers FG 13).

Value Addition, Aggregation and Transport

- i. Waste segregation was carried out by fixed collectors and itinerant waste pickers. The former had to additionally separate out the recyclable from the non-recyclable materials. Itinerant waste pickers and buyers did not have to do too much of that because most of what they retrieved or purchased had marketable value. They did however, sort, dismantle and clean the materials that they wish to sell to the scrap dealers. Irreparable equipment and other goods for example electrical switches, bicycles, computers had to be dismantled into plastic components and metal components prior to the sale of materials.

Five groups said that all categories of collectors had to sort through the recyclables to categorize the materials into marketable groups. Prior to sale they retained materials that they intended to repair or reuse.

- ii. Aggregation and storage of materials was reported at both individual and sometimes group level. All categories of collectors reported aggregating certain materials such as aluminium, copper, brass, and e-waste to fetch better rates and as a form of “insurance” during crisis. Many collectors reported that space for aggregation was a major constraint. Some fixed waste collectors who had access to sorting sheds said they were able to reduce the frequency of sale and spend less on transportation costs. The opportunity for aggregation was determined by the availability of sorting sheds or storage space. Collectors also shared transport vehicles and costs but that in itself was not used to leverage for more remunerative prices. Collectors also collected and sold in groups (a practice referred to as *bhagi*).
- iii. Transport of materials saw a significant shift from head loading to the use of vehicles for transporting collected materials. In 2000, 50 per cent of the waste pickers had reported that they had carried their collections on their heads to the market (Chikarmane et al. 2001). Among IEMS respondents, half said that they incurred average monthly business expenditure of Rs. 1328 for transportation. Itinerant waste pickers reported spending the least at Rs. 920 per month, followed by fixed collectors at Rs.1247 and itinerant waste buyers at Rs. 1722. Itinerant buyers also continued to use their push carts.

Sale of Recyclable Materials

Participants of all 15 focus groups said that they sold their recyclables to scrap dealers. Each participant was clearly able to name her/his regular dealer and some even stored the material in the dealer’s premises because they had no storage space. Focus group participants listed 45 scrap dealers to whom they sold their materials. Scrap dealers also reportedly provided itinerant waste buyers with working capital if required and advances for consumption expenditure during lean periods such as the monsoons, and some even gave an annual bonus or incentive. A decade-earlier study had found that although the relationships between the buyers and the sellers were long term, sometimes across generations of buyers and sellers, there was no formal record of the transactions in the form of receipts (Chikarmane et al. 2001).

In the case of itinerant waste buyers, the credit market was tied to the product market wherein buyers advanced working capital to itinerant waste buyers. However others reported using their own capital or that sourced from family and friends. Buyers also provided cash advances to sellers in order to retain their customer base.

Frequency of sale was daily, weekly or bi-weekly depending upon the availability of storage space. Typically, high volume, high weight, bulky materials were sold more frequently while high value, easily storable materials such as copper, brass and aluminium were sold periodically.

Purchase Prices of Recyclable Materials

This study did not manage to capture data related to pricing of materials on account of which the researchers had to rely on secondary data, the analysis of which is presented at the end of Part 3.

In terms of perception about prices, 57 per cent of the survey respondents said instability of prices of recyclable materials was a major problem, 13 per cent said it was a moderate problem and 27 per cent did not consider it to be a problem.

3.2 Linkages to Local Government

Municipal Solid Waste Collection

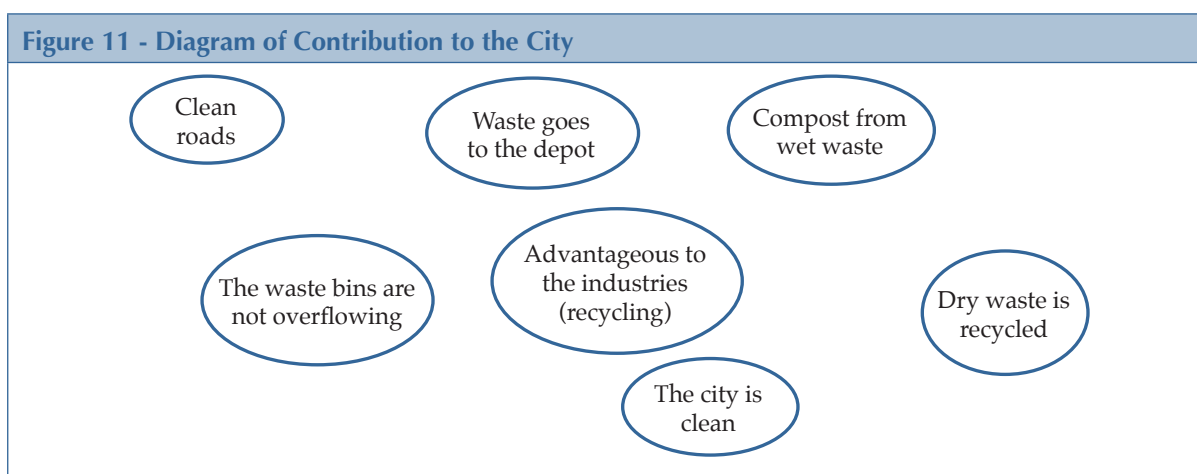
- i. **Service provision:** The city government is legally charged with collecting the garbage generated in the city. Primary waste collection (from generators) is carried out by fixed waste collectors as part of a Memorandum of Understanding between their cooperative and the city government. The MOU spells out the terms and conditions of the arrangement.
- ii. **Purchase:** Itinerant waste buyers purchased better quality recyclables and other junk from waste generators. This prevented junk and better quality recyclables from entering the municipal waste stream. The municipal government endorsed their identity cards and authorized them to carry out this activity.
- iii. **Recovery:** It is the responsibility of the service providers to maintain different waste streams. Collectors are permitted to recover and collect recyclable waste and to retain the revenue from its sale. The recovery of recyclables from municipal skips, transfer stations and the streets by itinerant waste pickers reduces the quantity of waste handled by the municipal secondary waste collection system.
- iv. **Collection equipment:** Fixed waste collectors in 10 groups mentioned that they used push carts provided by the municipal government for the collection activity. They also mentioned that the municipal government provided or was required to provide them with uniforms, raincoats, footwear and safety gear.
- v. **Sorting and storage sheds:** Three groups mentioned that fixed collectors used sorting/storage sheds provided by the municipal government or erected with the permission of the municipal government for categorizing and storing the recovered recyclables.
- vi. **Connect to municipal secondary waste collection system:** Post recovery of recyclables, the waste pickers handed over the balance to the municipal secondary waste collection system, either the municipal skips or the municipal trucks. Eleven out of 15 focus groups said they did this.
- vii. **Connect to municipal or municipal government authorized waste processing systems:** Eight groups said they supplied the organic waste to composting plants operated by or with the permission of the municipal government. Likewise, three groups reported that they supplied waste to municipal or municipal government contracted bio-methanation waste to energy plants via the secondary municipal collection system.
- viii. **Medical insurance:** Three focus groups mentioned that they were receiving benefits of medical insurance, the premium for which was paid for by the municipal government.

Table 38 - Destination of Collected Materials	
Destination of Materials	# Focus Groups Responding Yes
Municipality	11
Composting facility	8
Biogas facility	3
Scrap traders	15
Company	4
Municipal skips	10
N	150

Source: Focus groups, N=15

3.3 Contributions

As part of the final exercise to the focus groups, all participants were asked to identify a range of contributions they make. The diagram below illustrates the multifaceted contribution that waste pickers make.



Source: Focus Group Report 4

Figure 11 shows the different ways that waste pickers contribute – to the recycling industry, to keeping the city clean, and to recycling organic waste. Some groups also talked about their work contributing to the environment. Similar themes were seen across the diagrams from other groups. The information in the diagrams was classified into four categories. These have been elaborated below:

1. Contributions to the City

- i. **Cleanliness of the city:** Waste pickers clearly see themselves as contributing to the cleanliness of the city by picking up litter and discarded material from the streets and other public spaces, thus adding to the beauty of the city. This came up in 14 of the 15 groups. In a lighter moment, a female door to door collector said, “We made the roads so clean, that’s why these car people drive so fast and have accidents, even injure us!...You don’t see as many people dumping plastic bags of garbage everywhere like you used to. They still do, but it’s much less – because they see us cleaning” (FG 4). In another focus group, a female itinerant waste picker added, “So much difference we make! They get a clean city without paying us a paisa. The gutters would be blocked with their damn plastic bottles without us. Then everyone would come running to the corporation to shout and complain” (FG 13).
- ii. **Illness prevention:** To add to the point of cleaning the city, three groups also saw their work as contributing to the public health of the city. They mentioned that their work prevents the spread of illness and diseases. Many focus groups highlighted occupational health and safety issues as

a key negative driving force in their work. It is ironical however, that while contributing to the public health of the city, they risk their health every day and are denied access to basic health care. One female participant said, "The city gets healthier, but we get sicker. Big needles, glass, rose thorns, all those things injure us. We fall sick" (FG 12).

- iii. **Channeling of waste:** Two groups of door to door collectors identified their work as the first step in the formal municipal waste handling system. This is one of the linkages that the participants saw with the formal waste management system.
- iv. **Reduction in waste handling:** Participants in three groups also saw how their work reduced the burden of the solid waste management department of the city. In the absence of waste pickers, there would be greater pressure on the administration of the city to collect and recycle waste.
- v. **Reduction in costs of waste handling:** The same groups went a step further to say that besides reducing the burden of waste management, they were also saving the city money in managing waste. By recovering recyclables at the source of generation, they were saving costs on transportation, labour required for the process and the administration costs to manage the additional work. A male itinerant waste collector said, "We do the work and save the PMC from putting to work 50 vehicles and two persons manning each of these...." (FG 5).
- vi. **Goodwill toward the Municipal Corporation:** One group of fixed waste collectors also saw themselves as people who brought praise to the city administration. They saw themselves as unrecognized cleaners or the city. A female itinerant waste collector said "The (municipal) corporation gets the city clean for free. And we, people like us, die working. Corporation gets the name. The work is done by some poor person like us. Who gets the profit of all our work? The corporation. All the value of our work should come to hard working labourers like us not go to the corporation. They've profited on our work...." (FG 8).
- vii. **Service to the citizens:** Three focus groups talked about the service they were providing to citizens of the city by collecting waste from their homes. A male door to door collector said "We offer a doorstep collection service for citizens and we ensure recyclables get recycled" (FG 14). Waste pickers, however, recognize that they share a symbiotic relationship with the generators of waste and were quick to state that their role as service providers required them to maintain good relations with the homes that they serviced. A male itinerant waste buyer said, "Cultivating good relations and regular contacts is important in our trade. Honest interactions are important. If we are honest even the birds on the trees treat us well; else they would gossip and ruin our reputation" (FG 5).

Highlighting from his own experiences, another participant from this group spoke of a time when he returned a box of gold that was given to him along with other waste. "I returned it. I needed to think in the long run – how long would I 'eat' from that box? I would earn one time and lose a life-long customer. Eventually we earn on good will. Such people then take our cell numbers and call us when there are wares to be disposed."

2. Contributions to the Value Chain

- viii. **Raw material to the recycling industry:** Waste pickers and itinerant waste buyers are the first two layers in the recycling pyramid. Many itinerant waste buyers recognized their contribution in feeding the recycling sector with the raw material that it required. A male itinerant waste buyer said, "The scrap market runs because of us...." (FG 2). A total of 11 groups raised this in the introductory exercise displaying an understanding of the recycling sector and their importance in it.
- ix. **Profit for scrap shops:** In the waste value chain, waste pickers and itinerant waste buyers collect waste, sort it into different categories like paper, cardboard, plastic, metals and sell to the scrap shops. The scrap shops usually stock, bale and at times further sort materials before selling to wholesalers or recyclers. A female itinerant waste buyer said,

"That trader buys from us at low rates and sells at high rates."(FG 1). A female door to door collector added "They make new things with what we sell to Uncle [Scrap shop keeper]. They buy cheap and sell expensive. Unless it was profitable, they wouldn't buy it. Then they sell it to companies to make new materials."

- x. **Profit for recycling companies:** Four groups pointed out that the recycling companies in the formal sector profited from their work. A male itinerant waste buyer highlighted the ironic injustice in the sector when he said, “The entire recycling industry depends on us. However they are not ensuring their profits reach us in equal measure” (FG 14).

3. Macroeconomic Contributions

- xi. **Employment creation:** In one focus group, the participants also identified the importance of the work they did in creating employment for other people in the informal and formal recycling industry. The fact that waste pickers recover recyclable materials creates work for drivers who transport waste, sorters who work with scrap shops to further segregate recyclables, workers at formal recycling companies, workers at bio gas plants and other organic waste recycling plants. Besides creating jobs in the recycling sector, waste pickers also see their role in reducing the burden on the government which would have had to create jobs for people if they weren't employed in their existing work. A male itinerant waste buyer asked, “...how would the government employ 15,000 people?” (FG 2).

4. Contributions to the Environment

- xii. **Recycling of organic waste:** Eleven focus groups also recognized their contribution in recycling organic waste, which has traditionally not had value in the scrap trade. From the year 2005, itinerant waste pickers in Pune were integrated into a system of waste collection. This brought about a change in the nature of materials they started to handle. As itinerant waste pickers, they picked recyclable scrap only. As door to door collectors, they started to collect organic waste as well. This opened up the scope for working on recycling organic waste. Prior to operating compost units and bio methanization plants, organic waste used to be transported to landfills and left to rot with other waste. Instead, the organics are now converted to compost that is used in public and private gardens as nutrition for plants. However, this system does not work universally across the city but mostly with residents of apartments. A male door to door collector of waste said: “We don't compost all the waste. Where there are housing societies, there are vermicompost pits. Where there are bungalows, there is no vermicomposting. And from these houses, we get mixed waste. They don't segregate, so we have to throw all this mixed waste in the skip...” (FG 9)
- xiii. **Protection for the environment:** One focus group also identified their work as contributing to the environment. Besides actually cleaning up the streets by picking up litter, waste pickers recover recyclable waste at the point of generation, thus eliminating the environmental damage caused by transportation of waste to landfills mostly located outside the city. A female door to door collector added, “Earlier, truck upon truck would be dumping there” (FG 2).

In some instances as stated above, waste pickers are involved in composting organic waste or operating biogas plants, thus ensuring that they don't land up in the landfills. A male door to door collector said, “From the wet waste, compost is made, gas is generated, biogas is made, compost is made, we take out the plastic, the glass, the paper – it's all benefits...” (FG 15). The groups also spoke about biogas being used to light street lamps. Although a small initiative, this reduces the burden on the grid.

A recent study estimated that every ton per day of recyclables collected informally saves the urban local body Rs. 24,500 (\$500) per year and avoids the emission of 721 kg of carbon dioxide per year (Annepu 2012).

Part 4: Key Findings and Policy Implications

Introduction

Informal waste pickers were the participants of this study and this is what makes the findings significant. In focus group discussions, they described in their own words the nature and the scope of the work that they carried out, their major concerns, difficulties and challenges, and how they deal with them. They also outlined their expectations of the institutions, the government at the local and national levels, and the rest of society. Their voices have spoken in the body of this report and have given it life. Apart from the voices of the participants, the study also relies on the findings of a formal quantitative survey administered to waste pickers, including the focus group participants.

In this section, we look at the findings in relation to the hypotheses which guided the study. Many of the findings are not new, others substantiate what was already known or surmised. Most importantly they provide a workers' view of the sector in which they work. This incorporates a cross-sectional view of the situation at the bottom of the economic pyramid, and the workers' perspective on the changes that have occurred as well as the changes they seek in the sector. These are then examined in the context of policies and practices relating to the urban setting and to macroeconomic issues.

4.1 Summary of Key Findings

Myth #1: The informal economy is not linked to the formal economy.

Hypothesis #1: Informal workers are closely linked to the formal economy.

The study finds that:

1. **Informal waste pickers are an integral part of the materials supply chain to manufacturing industry.**

The value chain, as described by participants of the focus groups, started with the waste generators from whom fixed waste collectors and itinerant waste buyers sourced discarded or junked post-consumer recyclable materials. Thirty per cent of all survey respondents collected from the streets, 76 per cent directly from people's homes, 18 per cent from municipal skips and 24 per cent from businesses. Many collected from multiple sources. The most commonly collected materials, as reported in the focus groups, were corrugated board (15), broken glass (14), PET (13), bottles (13), newspaper and white paper (11), tin and ferrous metal (8) and e-waste and plastic (6).

The collected materials were sold to buyers of the recyclable materials. Fifty seven per cent and 13 per cent of the survey respondents reported instability of prices of recyclables to be major and moderate problems, respectively. Only 15 per cent reported poor ability to negotiate prices. The vast majority of the survey respondents (87 per cent) said corruption or unethical behaviour by the scrap dealers or middlemen was not a problem. Most collectors believed the scrap dealers did not have anything to do with price instability and that if "he gets a better rate he will increase the purchase rate".

In fact the scrap market was ranked the highest as a positive macroeconomic factor by the focus groups and one itinerant buyer noted that "it runs because of us". This came up in 11 focus groups. The waste pickers also placed scrap dealers in second place after waste generators when ranking positive factors in the value chain. In the institutional analysis, 14 out of 15 groups mentioned the relevance of scrap dealers and 10 groups listed them as being positive and of moderate importance. Focus group participants reported that scrap dealers provided them with a market for their materials, easy credit, working capital, annual bonus, and transport for the materials.

Four focus groups referred to the sorting and baling prior to further sale secondary commodities by the scrap dealer. Four focus groups also pointed out that their own work contributed to the recycling companies in the formal sector which profited from their work. Collectively, then, informal waste workers are integral constituents of the materials supply chain to manufacturing enterprises. Clearly, informal waste pickers collectively save resources from burial in the landfills. They invest their labour in recovery and collection, segregation, sorting, categorization and transport of materials to the subsequent retail trading points. Various types and levels of aggregators/traders and intermediate processors enable the transit of recovered materials to manufacturing industry. Informal waste pickers bring secondary commodities back into the production circuit. They are a vital link in the post-consumer secondary materials chain. The secondary materials are used in the manufacture of

new products. Therefore informal waste pickers and indeed all the other constituents of the informal recycling sector are inextricably linked to manufacturing enterprises in the formal economy.

2. The informal waste sector offers employment opportunities to illiterate, socially excluded jobless workers.

Informal waste pickers were own account workers (98 per cent) engaged in recovery, collection and trading of recyclable materials/secondary commodities. They mostly worked alone and did not rely on either family or hired labour. Survey respondents were almost exclusively from among the Scheduled Castes, irrespective of type of collection. Among survey respondents, 51 per cent of the men and 74 per cent of the women were illiterate. None of the respondents were municipal employees or employees of the scrap dealers. They had seen the opportunity to make a livelihood out of reclaiming junk and municipal solid waste and grabbed it. The highest segment among the waste pickers was itinerant waste buyers who used capital to purchase good quality recyclable materials from domestic, commercial and institutional waste generators. The men used push carts and weighing scales and their earnings were the highest among all the waste pickers. The next segment comprised those referred to as fixed collectors in this study. They were waste pickers who were integrated into the municipal solid waste collection system as service providers through their cooperative, SWaCH, which had a formal memorandum of understanding as well as a framework of engagement with the municipal government. The data show that in their own perception they scored higher on security and stability of livelihood as well as in entitlements from the state than itinerant waste buyers whose revenues were higher.

Whether in fixed collection or in itinerant waste buying, men earned more than women in the same segment, indicating that sex was a significant variable in addition to type of collection. However, itinerant buyers were far more conversant with and sensitive to market dynamics than the other waste picker groups. They perceived more risks to their business as well. Increased competition from migrant scrap dealers and workers was perceived as a risk by this segment. In terms of the quality of waste handled, the conditions of work as well as the earnings, itinerant waste pickers occupied the lowest segment of the secondary commodities market.

Focus group participants also identified the importance of the work they did in creating employment for other people in the informal and formal recycling industry. Waste pickers also see their role in reducing the burden on the government, which would have had to employ more people to deal with waste.

The informal waste sector provides livelihoods and employment to those engaged in recovery, primary collection and micro-trading and creates further jobs downstream. Informal waste collection is an open entry, no barrier occupation that offers illiterate, formally unskilled, socially excluded, and capital-less workers a livelihood with relatively more autonomy and sometimes better returns than wage labour.

Since waste is the product of human activity and waste generation is directly proportional to economic growth, the informal waste sector is almost equivalent to a market driven urban employment programme.

3. Secondary materials collected by informal waste pickers are traded in local, national and global commodities markets.

Paper, one of the recyclable materials collected by informal waste pickers, is used here as an example to illustrate this point. Wood pulp, agro residues and waste paper are used as raw materials in the manufacture of paper. Further, use of recycled fibre in the process leads to lower air emissions and energy use, which again lowers the carbon footprint of the paper industry and reduces costs, allowing for additional income generation. According to some estimates, one tonne of recycled paper saves approximately 17 trees, 2.5 barrels of oil, 4,100 Kilowatt hours of electricity, 4 cubic meters of landfill and 31,780 litres of water (Government of India 2011b).

The share of waste paper as raw material in India climbed from 7 per cent in 1970 to 47 per cent in 2011. Post-consumer paper is an important renewable resource. The present status of recovery is in the region of 27 per cent of the total paper consumed in India. The deficit is made up by imports of paper scrap and pulp. Due to a raw material shortage, Indian paper mills are using waste paper as the raw material for manufacture of newsprint, as well as that for kraft paper, used by the packaging industry. Paper and paperboard demand in India is growing at 7.8 per cent per annum (Government of India

2011b). Of India's 500 paper mills, 241 use waste paper in the production process. The western region where Pune is located supplies 40 per cent of the waste paper to manufacturing plants (CIPPI 2002). Thus the efforts of waste pickers are vital to this industry.

Myth #2: The informal economy is not a part of the modern economy.

Hypothesis #2: Informal workers are part of modern chains of production, distribution and services that download risks and costs to informal workers.

The study finds that:

1. **The informal waste economy is both the outcome of and a part of the modern economy.**

The informal waste economy handles the detritus of the modern production systems and consumption. It represents a shift from the dumping of waste to its recycling. What informal waste pickers (who are part of the informal waste economy) do is not scavenging but recovery of and value addition to discarded materials to transform them into secondary raw materials for the production process. They facilitate the reproduction of goods. Itinerant waste buyers are petty traders and already part of the modern economy. The fixed waste collectors in the study have moved away from recovery of materials from skips and dumps and have been integrated into service provisioning. They are part of the modern economy as well. Their services are authorized by the municipal government and the service users who pay for the service. Evidence from this study points to greater work and income security and improved conditions of work.

2. **Informal waste pickers bear the risks and costs of being part of the materials supply chain to industry**

Costs of Managing/Transporting Recyclables

Informal waste pickers are own account workers. They are not paid by the municipal government for managing the recyclables waste stream. They are also not employees of the scrap dealers to whom they sell the collected materials. All the focus group participants reported that they transported the materials to scrap dealers at their own cost. Over 50 per cent of the survey respondents mentioned transport costs as part of their business expenses.

Market Risks

Four focus groups mentioned that they assume the risks of seasonal variations in prices of recyclable materials, as well as market fluctuations of prices of recyclable materials. Half of the survey respondents reported large variation in sales as a problem related to product markets and competition. Itinerant waste buyers were more sensitive to this (66 per cent) compared to the other types of collectors. Over half the respondents reported lower revenues than the previous year. Itinerant waste buyers (71 per cent) were the most affected, followed by itinerant pickers (60 per cent). Fixed collectors were not as vulnerable to market fluctuations because they had twin sources of revenue, from user fees as well as the sale of recyclables. However, an inability to negotiate the prices of recyclables was not perceived as a major problem by the survey respondents although 24 per cent of the itinerant waste buyers did look upon it as a problem.

The threat of complete loss of livelihoods was brought out variously by different types of waste pickers. Fixed waste collectors were threatened by privatization of waste collection, itinerant waste collectors by the removal of containers, and itinerant waste buyers by the proliferation of collectors and scrap dealers. Itinerant waste buyers in the focus groups also brought out the issue of competition from inter-migrants who they claimed offered overpriced rates for recyclables and manipulated weights to remain in business. Being own account workers, none of the waste pickers were entitled to retrenchment benefits or unemployment benefits.

Vulnerability, Occupational Risks and Social Protection

Itinerant waste pickers and fixed collectors manually segregate co-mingled waste to recover recyclables. All types of waste pickers also sort and dismantle recyclables as required. Almost three quarters of the survey respondents stated that occupational hazards affect their own safety as well as that of their co-workers. Understandably, 91 per cent of itinerant waste pickers saw this as a problem as compared with 67 per cent of the fixed collectors and 63 per cent of the itinerant waste buyers. The issue was also mentioned in three focus groups as a problem. A quarter (27 per cent) of the 44 survey respondents cited illness and accidents as the reasons for missing work during the week before the

survey. There was also mention of losses due to rotting or degradation of picked waste during the monsoons due to lack of sheltered storage space, and of the health issues of having to use the vicinity of their habitat for dumping and sorting work.

Provision of collection and safety equipment to fixed collectors by the city was considered an important positive factor. The focus groups also highly valued provision of medical insurance. The data available from the MBO revealed that 14 per cent of the survey respondents had benefitted from the medical insurance scheme. The efforts of the municipal government notwithstanding, employees of the municipal government in waste-related work get full medical cover for all ailments, unlike informal waste workers.

Focus groups participants said rising prices were a main negative macroeconomic factor and recorded the types of vulnerabilities that they experienced as own account workers on the margins. Primary among those were related to food security, old age, illness and inadequate basic services such as electricity and cooking fuel. The vulnerability related to insecurity of work and livelihoods came up repeatedly in the focus groups. Issues such as failing eyesight and a loss of load bearing capacities as age advanced were also raised. Many talked about how they'd have to keep working till their hand and legs were not functional or risk starvation. Focus group participants were very vocal in their resentment about the targeted Public Distribution System and means-tested pension schemes and about the cash subsidy scheme in lieu of food rations and cooking fuel subsidies that were being rolled out by the government.

Their vulnerability was exacerbated given the absence of social protection.

Myth #3: Informal workers intentionally "hide" from regulations and avoid the costs of formalization.

Hypothesis #3: Informal workers are not hiding from regulations; rather, regulations are unknown, inappropriate, or hostile to informal workers.

The study finds that:

1. Informal waste pickers are enjoying the benefits of an unregulated private market.

India pursued the path of liberalization of the economy decades ago, reposing faith in the free market in the belief that it would herald an era of economic growth and prosperity. In this process, the government did away with the complex licensing and permit system that it believed had stunted growth. During the decades of control, informal waste pickers and waste markets flourished, providing raw materials to industry at competitive rates and employment to informal waste workers. The Indian government has progressively opted out of service provision, arguing for greater private sector participation. Public private partnership is the favoured form of privatization that is being pursued as official policy. The study finds that the post-consumer materials industry is private and is entirely market driven. It also establishes that the complementarities of the public and private, municipal solid waste management and recovery and recycling, already exist. This fact is often overlooked in plans and project reports of waste collection and processing contracts. Informal waste workers are not hiding from regulations, far from it. Like other businesses, they are merely enjoying the benefits of the deregulatory environment and seek to operate within it, without hindrance.

2. Waste pickers have no problem being compliant with existing laws and regulations.

Not a single survey respondent reported problems in obtaining a business license because informal waste collection is not a licensed or regulated activity. Fixed collectors were bound by the terms of the agreement between their waste collection cooperative and the municipal government. Two thirds of the survey respondents agreed with the statement that "In general, the municipal rules and regulations which determine where and when I can sort or collect waste / recyclables are clear and easy to understand." In the opinion of 56 per cent of the survey respondents, "These municipal rules and regulations are enforced fairly and equally for all waste pickers or sorters." Only 23 per cent were unaware of them. Regulations or by-laws that limited access to waste were also not reported as a problem by 84 per cent of all types of collectors. Only 12 per cent said that not having formal permission from the city to collect waste from households, landfills, streets or dumpsters was a problem. Only 7 per cent reported that treatment by the local authority was a problem. So as a matter of fact, lack of licensing and open entry work to the advantage of informal waste pickers.

3. **Organization and cooperativization work to the advantage of informal waste pickers.**

The data regarding organizing were examined in the light of unregulated, unlicensed open entry. It revealed that waste collectors found their organizations (trade union and workers' cooperative) helpful (62 per cent) and very helpful (11 per cent). Fixed collectors and itinerant buyers found the organization more helpful than did itinerant pickers. The focus groups ranked organizing and worker autonomy highly among other driving forces. In particular, the importance of autonomy for waste collectors featured repeatedly in the focus groups. The study found that while about 47 per cent of the itinerant waste pickers complained of fallen revenues over the previous year, fixed waste pickers reported more stable revenues. Fixed waste pickers also reported access to equipment from the city and improved access to waste among the positive factors.

4. **Informal waste pickers sought regulation of the external environment rather than regulation of the sector itself.**

Ten of the 15 focus groups mentioned the desirability of some kind of regulation. The aspects that they wanted regulated are presented below.

Regulation of the sector

Only one focus group mentioned that there was poor regulation of the sector. More survey respondents (10 per cent) saw local laws and regulations as limiting their work than the 7 per cent who thought they were beneficial.

No regulation of entry and no ring fencing of the occupation

Five focus groups referred to proliferation of waste pickers as a problem and two groups reported on the entry of new intra and inter-state migrants into the occupation. Among survey respondents, 47 thought an increase in the number of waste pickers competing for waste in their areas was a problem. As well, 73 per cent of the survey respondents thought the number of waste collectors had increased during the previous year and 66 per cent thought there would be more increases during the following year. It is extremely important that not a single participant spoke of regulating *out* new entrants or *erecting regulatory barriers to entry*. In fact in some focus groups, there was sensitivity expressed that these migrants also need employment and are forced to migrate due to conditions in their home states. The study clearly brings out the focus group participants' understanding that dispossession of livelihoods and joblessness – and consequent impoverishment – drives entry into the sector.

Regulation of prices of recyclables

Four groups wanted the trade to be regulated. Fifty seven per cent of the survey respondents thought instability in the prices of recyclables was a major problem.

Regulation of privatization

Five groups made a mention of regulation of workers in the collection segment. There was mention of regulating the trade in four groups, while five wanted privatization to be regulated and one group mentioned the need to regulate child labour in this sector.

Regulation of prices of essential commodities and services

This was mentioned in some focus groups as a way to help ensure livelihoods remain viable.

Hypothesis #4: Economic policies and urban reforms/policies are not supportive of urban informal livelihoods.

The study finds that:

1. **Corporate public private partnerships in solid waste management are inimical to the interests of informal waste pickers.**

Informal waste pickers are an integral part of the formal municipal waste handling chain. They are therefore impacted by and susceptible to changes in municipal waste handling practices. Whether it is the itinerant waste pickers who complained bitterly about the reduction in municipal skips or fixed collectors who feared that waste collection will be contracted out to companies, it is the access to control over secondary commodities that is at the core. Apart from the immense profits to be made from service contracts outsourced by government agencies, it is the revenue from the sale or processing of accumulated recyclable materials that really spikes corporate and investor interest.

2. Governments favour corporate interests over those of informal waste workers.

The position paper on public-private partnerships in solid waste management (Government of India 2009) brought out by the Ministry of Finance states that the funding deficit in solid waste management can be met from central government funds (JNNURM); state sector funds in the five year plans; financial institutions such as HUDCO, LIC, IL&FS; and external funding agencies such as JICA, World Bank, ADB and other bilateral agencies; and FDI and private sector funds, opening space to funding for large organizations. It extols the virtues of private sector participation, global experience of waste-to-energy in managing waste, and tipping fees as a sustainable model. It also questions the capability of municipalities to deliver and manage services. Tax free municipal bonds have been permitted by GOI. The policy paper reports that Ramky Enviro Engineers Limited has estimated the business potential of the waste management sector in India to be Rs. 320,000 million. It also calls for the Central government to establish a Mission for solid waste management and for States to develop solid waste management policy.

Some income tax concessions have been given to solid waste management enterprises that would make it more attractive to big businesses that want to carry out solid waste management. For example, Section 10 (23G) of the income tax act permitted a 100 per cent deduction of profits and gains for 10 years to any enterprise carrying on the business of developing, maintaining and operating infrastructure facilities viz., roads, highways, bridges, airports, ports, rail systems, industrial towns, inland waterways, water supply projects, water treatment systems, irrigation projects, sanitation and sewage projects, solid waste management systems has been further relaxed. According to the earlier provision, companies that can take benefit under Section 10 (23G) have been broadened from those operating, developing, maintaining (that is all activities were to be under one company) to allow those companies to do any of the following: developing, operating, maintaining and providing long term funds and project development support (Da Zhu 2007).

In 2011, the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India put out a discussion paper on Collection and Recycling of Waste Paper in India with the intention of inviting suggestions for developing a policy on the collection and recycling of waste paper. The paper cursorily refers to the informal sector and mentions that it handles 2.75 million tonnes of waste paper annually. It goes on to present a business model prepared by ITC (a conglomerate with a turnover of US \$7 billion) on the basis of its Wealth Out of Waste (WOW) project, which between 2007 and 2012 managed to reach collection levels of a mere 60,000 tonnes per annum (as reported on the company website). The paper details what it refers to as the Hyderabad and Bangalore models where the company tied up with waste management companies contracted for door to door waste collection. The paper ends with recommendations about municipalities setting aside land for dry waste collection centres and warehouses that will be allocated through the public-private partnerships route by competitive bidding, effectively putting informal waste workers out of business under the guise of formalization. The Bruhat Bangalore Mahanagar Palike has already implemented the model, in which the dry waste collection centres are being handed over to contractors.

Models that rely on tendering, auctioning, or public private partnerships with private corporate entities exclude and dispossess informal own account workers, reduce their autonomy and control over their own labour, and leave them with no choice other than to work as underpaid contract workers in vertically integrated firms. This is what has happened in the municipality of Pimpri Chinchwad, near Pune.

Myth #4: The informal economy does not contribute to the city (e.g. informal workers do not pay taxes).

Hypothesis #5: Informal workers do pay taxes and other types of fees, but do not get the benefits thereof.

The study finds that:

As far as the city is concerned, collectors do not have to pay any work-related fees to the city, other than fines for littering which were mentioned by only two waste pickers in the sample. Not a single waste collector paid income tax because their earnings were way below the tax threshold of rupees 180,000 for men and 190,000 for women in 2012-13. They do, however, pay indirect taxes that are applicable on goods and services.

To put this in context, it is important to underscore the tax breaks and concessions given to solid waste management companies by the Government of India. The labour of informal workers subsidizes the municipal solid waste management system, most particularly at the collection end, which is known to be the most expensive part of the entire system. Increasing capital, fuel and labour costs have reduced the frequency of waste collection even in the developed countries. India simply cannot afford to go down that road.

Hypothesis #6: Informal workers contribute to the city in a variety of ways.

Focus group participants identified several areas by which the city benefitted by their work. Providing waste collection services, keeping the city clean, generating compost for gardens to beautify the city, reducing waste handling costs and preventing of illness were some of them.

The study finds that:

1. Informal waste workers contribute to the city.
2. Informal waste pickers contribute to the value chain by supplying raw material to recycling industry.
3. Informal waste pickers contribute to employment generation.
4. Informal waste pickers recover recyclables which renders waste more amenable to processing and reduces the land requirement for landfills.

4.2 Conclusion

In the conclusion we reflect upon the major driving forces that anchor this study in order to tease out the policy implications and recommendations. The impacts of larger economic policies on informal waste pickers are seen primarily in three areas. The first is the contribution of the economic paradigm in exacerbating the vulnerability of informal waste workers. The associated problems are the rising costs of living, targeted public food distribution schemes, reduced cooking fuel subsidies, means tested social protection, user fees and rising costs of essential services. The second is the push towards privatization and corporatization in all sectors, including solid waste management, health care and education that is threatening the livelihoods of informal waste pickers at one end and affecting their access to basic services at the other. The third is that uneven regional growth is increasing impoverishment of populations; the consequent steady growth of workers entering the sector increases competition in the lower collection segment.

City level planning in solid waste management is increasingly driven by corporate business interests and expediency rather than arising out of sound ground level analysis, participatory processes and sustainability imperatives. The ambivalent attitude of the city towards the informal sector is reflected in the way it covers all its bases with measures that are antithetical to each other. The Pune Municipal Corporation recognized and integrated informal waste pickers, promoting sustainable energy options such as composting and biogas. However, it has also gone in for collection through motorized vehicles and incineration-based technologies that compete for recyclables.

Informal waste pickers contribute substantially to the city as well as to the economy. Having said that, waste pickers perceive threats to their livelihoods and the factors in the external environment indicate that the threats are not just perceived but very real. The rights of informal waste pickers cannot be compromised. They must be duly compensated for their labour and other benefits and be enabled to work in safer environments.

4.3 Policy Recommendations

1. **Recommendations for National and State Social security and welfare policy**
 - a. **Universal State-funded non-contributory social security floor to address vulnerability of informal waste pickers and other workers**

The findings clearly reveal that waste pickers' households are extremely vulnerable to economic stresses against which they do not have the cushion of social security and welfare measures. The economic poverty line does not constitute a fair estimation of their vulnerability and in fact acts to exclude them from important entitlements such as subsidized food rations and cooking fuel;

subsidized primary, secondary and tertiary health care; old age, maternity benefits and educational scholarships.

Inclusion of the vulnerable in social welfare and protection programmes poses greater challenges than the exclusion of the non-vulnerable. The Government of India itself acknowledges that 93 per cent of the workforce is in the informal economy. *Universal provision of a basic social security floor* that includes subsidized food rations; free primary, secondary and tertiary medical care; disability and death insurance; maternity benefits and early childhood care; and old age pension, disability pension/allowance and destitution pension/allowance, with some obvious exclusions, seems to be a more socially just and efficient option. It would be relatively simpler to identify and exclude government employees, income tax payees, large properties and businesses.

b. Use of occupation as a criterion for rights based entitlements

In India most welfare entitlements are based on economic criteria. However, India also has entitlements for socially excluded castes and communities. Certification of caste is a stringently monitored process and often recorded during passage through formal education channels such as school and college. The data reflect that most present day waste pickers have been outside the formal education system and would therefore find it extremely difficult to secure the 50 year proof that is now required for caste certification in Maharashtra State. Occupational status, on the other hand, is easily established through a process of survey and/or registration. The occupational criterion has in fact been accommodated in the national Socio-economic Caste Census undertaken by the Government of India since 2011, the results of which are awaited. "Ragpickers" feature in the list of socially vulnerable groups in the SECC.

2. Recommendations for City and State Policy

a. Comprehensive Municipal Solid Waste Resources (Handling, Management and Recycling) Act

The regulatory framework for the management and handling of municipal solid waste handling services is drawn from the Environment Protection Act of 1986. Likewise the provision of municipal waste collection and disposal services is drawn from the Bombay Provincial Municipal Corporations Act of 1949 and similar Acts across the country. The manufacturing industry is the destination of secondary commodities and that is regulated by industrial policy. Solid waste management falls in the municipal-government/public domain while recycling falls in the industrial-private domain. Sustainable integrated solid waste management requires that the public/government domain in-source the private recycling domain so that they complement each other.

The findings of this study reveal that informal waste pickers handle and manage resources in waste and not only waste discards. The need for coordination is self-evident but the case for comprehensive municipal solid waste handling, management and resources law based upon economically, socially and environmentally sound principles of waste management bears further exploration.

b. Land allocations in city development plans and building control rules

Contestation over urban land resources is an area that land allocation policies must take into account. The study brings out informal waste pickers' need for space to carry out classification of recyclables and to process organics. Villagers living near prospective landfill sites are no longer willing to let their lands be acquired and degraded. Private property owners, apartment blocks that generate waste, and municipalities that need to arrange for collection, transport and processing need to make mandatory allocations – of private and public land respectively – for waste management operations, just as the building construction rules require the allocation of space for parking and amenities.

Likewise, municipalities also need to make appropriate decentralized land allocations for small scrap traders and scrap markets and intermediate scrap processing units; weekly junk markets and second hand goods markets; depots for collecting clothes, books and other used goods.

3. Recommendations for Labour Policy

a. Registration and decent work for all waste pickers

At present some form of protection is available only to informal workers protected by labour legislation pertaining to specific occupations such as construction workers, beedi workers, mine workers, domestic workers and contract workers.

There is no set process for registration of informal workers not covered by occupation specific legislations. The Unorganised Workers Social Security Act, enacted in 2008, was expected to do that but has been completely ineffective.

The possibility of a national policy or a national Recovery and Recycling Workers Protection of Livelihoods and Employment Act or a Solid Waste Management and Recycling Workers (Promotion, Regulation, Welfare and Conditions of Service Act) need to be explored.

b. Occupational health and safety of waste pickers

The study brings out three classes of workers engaged in working with waste. The own account waste free collectors and itinerant waste buyers and own account worker members of the cooperative. All these classes of workers handle waste on account of which the municipal government needs to create the enabling conditions that will allow better working conditions and occupational health and safety and worker benefits.

c. Upskilling, infrastructure, credit for waste and recycling enterprises

Waste pickers for the most part are illiterate and not formally skilled. The upskilling of younger waste pickers has promising potential for increasing efficiency and remuneration in existing work, as well as for moving them up the value chain and enabling them to diversify into other services and industry with the provision of infrastructure and credit. Waste pickers organizations could raise a claim for Municipal, State and specific agencies that have the mandate for providing support to disadvantaged groups.

d. Promoting organization of waste pickers

Without doubt the organization of waste pickers in Pune has brought gains to waste pickers as has been brought out by the participants in the study. Waste pickers are often overlooked by trade unions, development NGOs and politicians because they are numerically smaller than many other informal workers, women more often than men, and therefore less organized and involved in local political processes and “invisible”. Their voicelessness is also exacerbated on account of their caste. Greater efforts to organize waste pickers are required in the emerging scenario where contractor led and corporate privatization have already aggravated the vulnerability of waste pickers.

4. Recommendations for Energy, Industrial and Commerce Policy

a. Incentives for informal trade and processing of secondary commodities

Formal manufacturing industries are the destination for recovered secondary commodities. The use of secondary materials avoids extraction costs of virgin materials and lowers manufacturing costs. Much of this cost cutting comes from the labour of informal waste collectors and from the low energy – low cost – high efficiency recovery, collection, trade and intermediate processing of materials. Yet the scrap market is not recognized as a legitimate commodities market, with most levels of operators being treated as borderline illegal.

The robust, market driven informal waste collection and recycling sector is conspicuously absent in policy documents that favour corporatization of waste management and recycling. Even if there is a mention, it is more in the nature of supplanting indigenous models than actually incorporating them into newer systems. Materials recycling is not new to India and the efforts at modernizing waste management need to take that into account.

Provision of subsidized infrastructure, low interest credit, tax concessions and providing for better and safer and more remunerative options for workers would have social benefits such as increase in employment, given that waste management and recycling are labour intensive. The private public partnership policy of the government as it exists today in waste management favours large multi year, integrated, corporate contracts. Worker owned micro- small-medium enterprises would be able to get certain segments of the work done at far lesser costs and far greater returns to the municipalities than corporate entities.

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The Informal Economy Monitoring Study (IEMS) is a part of the Inclusive Cities project. Inclusive Cities is a collaboration of membership-based organizations (MBOs) of the working poor, international alliances of MBOs and support organizations working together as partners to improve the situation of the working poor. Launched in late 2008, Inclusive Cities aims to strengthen MBOs in the areas of organizing, policy analysis and advocacy in order to ensure that urban informal workers have the tools necessary to make themselves heard within urban planning processes.

The Informal Economy Monitoring Study is being led by Women in Informal Employment: Globalizing and Organizing – WIEGO (see www.wiego.org) – a global action-research-policy network that seeks to improve the status of the working poor in the informal economy, especially women. WIEGO has convened a Technical Advisory Committee (TAC) to guide the project.

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