End-term Assignment

Research Methods-II

Topic :- <u>Impact of lockdown due to COVID-19 on the livelihoods of Street Vendors and Hawkers</u>

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Chapter 1: Introduction and Research Questions

At the end of 2019, the world faced an unprecedented crisis in the form of covid-19. The national governments around the world had to respond by imposing country-wide lockdown measures to curb the spread of virus and mitigate loss of lives. But such lockdowns which stopped all sorts of activities revolving around human civilization and cultures, except important healthcare and governance functions have had far reaching implications on people's livelihoods and economy. Since, the people employed did not have access to job security or social protection during the lockdown, the worst hit economic sector came to be the informal sector. The 'unorganised' informal economy accounts for above 80 percent of India's workforce and also constitutes a significant portion of the national product. Hence, the shutdown in the informal economic sector left millions of individuals unemployed, unable to earn a livelihood, vulnerable to hunger and deprivation. Many of the vendors went out after a few days without explicit permission from the authorities while the lockdown was still in effect and immediately experienced harassment by the police. Then, later when the government eased lockdown restrictions and allowed for the essential vendors to function, the risks associated with their businesses had risen significantly. Therefore, this paper would be looking at the kind of changes brought on by the pandemic and its influence on people's livelihood. It would make an attempt to understand the impact and efficiency of government policies and the reforms required in making the informal economy more secure. The objective of the paper, firstly would be to assess the level of distress faced by street vendors with regard to food, health, education, finance and other basic needs. Secondly, highlight the challenges while accessing social benefit schemes, banking facilities during lockdown. Thirdly, to examine the legal issues that have been existing prior to lockdown and which exacerbated the vulnerability of the vendors during lockdown.

Research Questions :-

1. How did the lockdown induced due to Covid-19 impact the access to basic items and services by street vendors and their families?

2. How did the lockdown influence the amount and dependence on credit accessed by street vendors in the informal sector? What were their issues and challenges in availing formal sources of credit?

Relevance of the Topic chosen :-

According to reports by the National Hawker Federation(NHF), there are more than four Crore hawkers in the country and earn about (80-100) Rupees per day. Considering that a large chunk of the population is involved in this informal street vending activity and the vulnerabilities, challenges posed to them and their family during the lockdown due to COVID-19, the topic holds significant importance.

Why this topic is important to be studied :-

An integral portion of the economy is street vending which had faced hardships during the lockdown. The aim of the topic is to explore the challenges which the street vendors had faced prior to lockdown and which had exacerbated their condition during the lockdown. The legal challenge such as no proper IDs, no proper documents to avail social security benefits, banking facilities during lockdown which had been continuing prior to lockdown is the core issue the topic is aiming to explore. Often in such distress, street vendors resort to informal borrowing which further exacerbates their condition and this topic aims to explore those loopholes which act in furtherance of the vulnerability of street vendors.

Chapter 2: Literature Review

This section serves as the framework for any research-based investigation and helps in understanding it in proper perspective. It generally introduces the conceptual framework and relevant studies used in analysing the information collected from the field and reaching a conclusion.

The term 'informal economy' was brought into the mainstream by Keith Hart in the 1970s, which referred to the economic activities happening outside the structure of official institutions. It was first observed as an acknowledgement to the escalation of self-employment and casual labour in Third World cities. However, it was also beginning to be used to describe societies like Britain's deindustrialization through the underground and 'black' economy. East London's mid-19th century economy is a perfect instance of informal economy that is even parallel to the slum regions in contemporary times. Hart ensured in his paper 'The Informal Economy' (1985) that the intellectual history of this notion is apparent for everyone. For this, he presents various instances in his attempt to establish the contrast with formal economy. In the current context of pandemic, this notion becomes really significant because it just highlights the deficiencies in the capabilities of street vendors and hawkers compared to the more established formal institutions.

Ayres (2020) in her research report India: Fighting Coronavirus in an Informal Economy presents a brief of the conditions and scenarios under which the citizens of the country have to live. She revisits the discussion on the informal economy suffering the most in the pandemic and provides contemporary data from official sources. She also elaborates on the conditions and controversy sparked by the migrants moving back to their home states.

Shekar and Mansoor (2020) begin with discussing the ILO (International Labour Organization) report on the influence of pandemic on informal workers in India. With that, they have presented an assessment on the possible short-term and long-term consequences of lockdown for the informal sector in the country. They examine the informal employment and enterprises situation and their capacities to access formal credit. Eventually, they discuss the issues faced by rural migrants by studying different economic sectors like agriculture, mining, manufacturing and others. They relooked at the consequences of government actions like GST and demonetization on the employment sector. Finally, they ended with an argument seeking a

general employment protection for informal workers and incorporating the informal sector in government considerations and economic policies.

Azim Premji University (2020) conducted a research study in Bangalore during the first wave of Covid-19 in India to observe the impact on livelihoods of informal sector workers and vulnerable groups. They reported an astonishing decrease in livelihood opportunities in the initial months of the lockdown. This decline in livelihoods poured out to increase outbound migration, dependence on loans, mortgaging of family valuables, school dropout rate, domestic violence and overall sense of despair in various communities. While many economic sectors suffered massive losses, they highlighted the rise of some service providers like sanitization services, home delivery during pandemic as well. They showcased how multiple individuals and organizations assisted the communities in coping up with their circumstances.

Shrivastava (2020) in his blog reaffirms the importance of street vending as a livelihood for a significant portion of Indian population, despite being an unacceptable activity for the municipality and general public. However the pandemic, apart from being an adverse situation for them, also highlighted their significance as a provider of essential services. They turned out to be more reliable than online grocery stores, better situated ensuring social distancing and extremely crucial for many's livelihood and the economy. Therefore, he showcased the need for Indian state governments to properly implement the Street Vendors Act, 2014. He intended to ensure better socio-economic security for these individuals in the informal sector and also look forward to enhancing the economy and tax collection.

Kukreja and Bimal (2020) present an analysis of the scheme Pradhan Mantri Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi) that intended to assist street vendors cope with pandemic-induced financial problems. The scheme received about 30 lakh applications, of which about half were sanctioned by the central government. They questioned the effectiveness of the microcredit facility put forward by the scheme in the current situation. They expressed their worries in this facility being an opportunity as well as a challenge for the poor. Hence, they proposed Direct Benefit Transfer for complying with the conditionalities of the scheme.

Chapter 3: Methodology

Empirical field: The street vending community is at the locus of the empirical data gathered for this research paper. We would be gathering the relevant data concerning their experiences and knowledge during pre- & post-covid duration. The data collected would be from significant urban spaces used by vendors and hawkers (commercial/market areas) in respective habitats. This would further allow us to understand and integrate the spatial, social and political variations in addressing the informal livelihood concerns by the governments of different states.

Data specification: The data collected would enlighten us in the types of difficulties in the livelihood of the street vendors which includes their dependents, business, income, credit, service availability (utility, hospital, education) and awareness. This data can be compared with the pre-pandemic data provided by the subjects and would help us understand the gaps in public policies crucial for addressing these concerns.

Understanding the questionnaire sections:

Personal cum family details: This section helps in the understanding of the family and the vendor situation for whom he is working. This section is the reason for the existence of other sections. It includes the questions in two sub-sections which are there to understand the nature of the vendor and vendor's family.

Business profile: It shows us the value and objective of their business the family is involved in for their livelihood as it invites the owners to share the conditions of their business for their current and future economic health. It also yields essential information on individual business needs and opportunities–information.

Pandemic Created Situation: It gives us insights on the overall findings that suggest how the family income level plays a significant role in their lives of coping with a variety of challenges due to the pandemic. How their income level of condition has an impact on their consumption of food and compromise with their utility usage and how it affects the education of the children.

Existing Sources of Credit: It gives us information on how the family resorted to solving their financial issues to conduct and sustain their business during the especially challenging times of the pandemic by the existing nature of credit whether informally or formally.

Expenditure Profile: It helps us to understand the nature of the family's expenditure during the pandemic as it provides us with a summary and sources of the family expenditure and income respectively which includes the capital spending in their medical and educations along with the sources of their income for their daily and emergency expenses to deal with their financial issues.

Financial Profile of Business: This section helps us to determine the control that the family's business has over their financial future - and the relationship with their financial well-being by providing us with their operating cost, revenue and loss during the pandemic.

Credit Experience- History: It plays a vital role in our assessment of the families' abilities to tackle the financial disruption and maintain the financial health of their business to sustain sufficient expenses for their assets and education, etc as credit helps them to continue conducting their business.

Credit Needs- Current: Demand for credit and personal loans significantly rises as it becomes an alternative to deal with the payment obligations and cash flow problems along with financial issues due to the pandemic. Thus, this section helps us to understand the nature and reason for the essential needs of credit/loans during these challenging times.

Non Financial Vulnerabilities: The pandemic has exposed the extreme vulnerabilities of the family's business. As it shows us that the lockdown measures have brought an economic crisis especially for the street vendors and hawker's source of income who found themselves without work or shelter due to legal issues, eviction threat in the places of business or loss of customers and platform charges.

Units of Analysis: The units of analysis for the study are street vendors and hawkers (individuals) in urban and semi urban areas (which includes Vegetable seller, Fruit seller, Fast food vendor, Household items, plastic items; Footwear, clothes, garments, bedsheets). As the unit, they would be able to provide us with the relevant information regarding the size of the family they are trying to support and the flow of income, knowledge and experiences by their

household. The analysis would be on the temporal scale weighing the changes in livelihood assets before and after the Covid-19 pandemic.

Research Instrument: The research instruments employed for this research are a semi-structured questionnaire utilised in personal interviews with the subjects and in Focused Group Discussions with Vendor organizations. This would be further aided with the help of mobile recorder (consent-oriented), google form, and other secondary resources in order to triangulate the gathered data (from scholarly articles, local newspapers). This would ensure that the scope of data collection accommodates the full spectrum of issues and challenges experienced by the informal economy.

Questionnaire Type and Data Collection: The questionnaire contains a mix of close- and open-ended questions, which would allow the subjects freedom of expression. It is semi-structured to accommodate regional variations, but also to cover common aspects of the study. We went into the field with our questionnaire and interacted with the respondents, recording their responses through already prepared google forms. This primary data collection is further supplemented by secondary sources of newspaper articles, online blogs and journals.

Sampling:

Population: A wide population of hawkers and vendors present all over the indian territory are one of the significant entities upholding the country's informal economy. Hence, all types of socio-economically vulnerable hawkers and vendors are included to find out the effect of covid lockdowns on general vendors in India. However, since the informal economy includes even informal enterprises, for the scope of this research we have limited ourselves to street vendors and hawkers in multiple states of India.

Sampling strategy: The main strategy was to have an inference of samples on the population of India. Thus, the data gathered contains accounts from people in West Bengal, Assam, Delhi, Tamil Nadu and Bihar. However, since the scope of this study is limited, this quantitative research is using a non-probability sampling technique of 'Convenience sampling'. The people engaged in informal economy were interacted with on the basis of availability and willingness to

get involved in the research. This sort of sampling increases the probability of bias entering the research but we have kept it in consideration.

Sampling size: Despite the sampling strategy and the possibilities presented by a study of this kind, the sampling frame is still massive for this research. The various researcher's recommendations say that 10% of the total population is enough for an accurate result, which would still amount up in thousands of respondents. But due to the covid scenario and problem of infection, our sample survey had a severely constrained number of responses. Out of the massive sample frame, a sample size of sixty (64) respondents were chosen by convenience sampling due to time constraints, word limit of 3500 and on the faculty's recommendations. Each member of the group on average collected raw responses from at least 9 respondents.

Chapter 4: DESCRIPTIVE STATISTICS

The statistical values are presented on the basis of continuous types of data (*refer excel) And visual charts are based on the categorical format after distribution the data in the categories to understand the refinement of the vendors on their different stratas.

Personal cum family details:

Age description

Mean	38.6
Median	39
Mode	35
Standard deviation in the age	11.35

  Interpretation- As the data shows there's low variation in the mean, median and mode. Thus, the skewness is very low and the graph will be evenly distributed.

Gender description:

	Male (1)	Female (2)
frequency	58	6
percentage	90.6	9.4

Sex

64 responses

- 1
- 2
- 3
- Prefer not to say

90.6% 9.4%
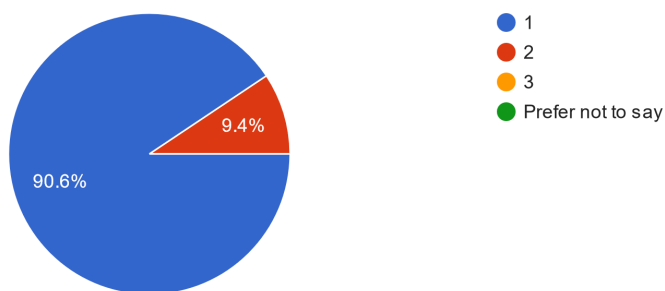
Educational qualification:

Educational Qualification

64 responses

- 0
- 1
- 2
- 3
- 4
- 5

31.3% 23.4% 12.5% 31.3%
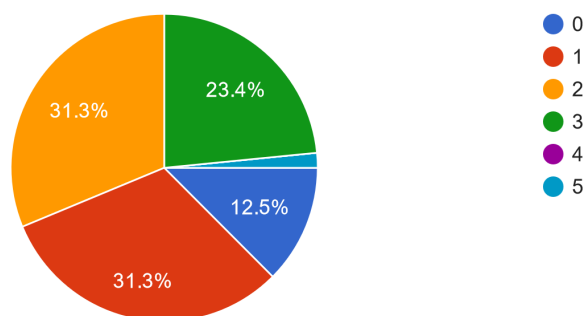
Here, [0-No Schooling, 1-School dropout, 2-Class 10 pass, 3-Class 12 pass, 4-Undergraduate, 5-Graduate]

It would not be wrong to infer from this data that the hawkers and vendors are not very highly educated. A significant proportion of the respondents either had no schooling or were school dropouts with the utmost level of education being Class 10th or 12th pass outs.

Family status:

Relationship status
64 responses

Legend:
- 1
- 2
- Divorced
- widowed

84.4%
10.9%
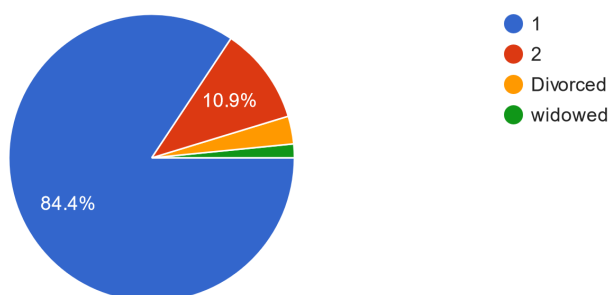
[1-married & 2-unmarried]

If married then number of children
57 responses

Legend:
- 1
- 2
- More than 2

40.4%
35.1%
24.6%
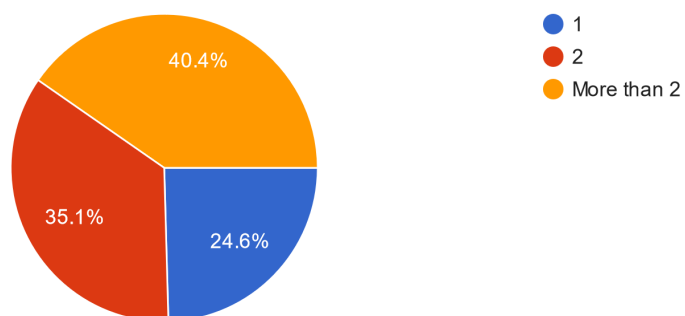
Number of dependents in family

63 responses
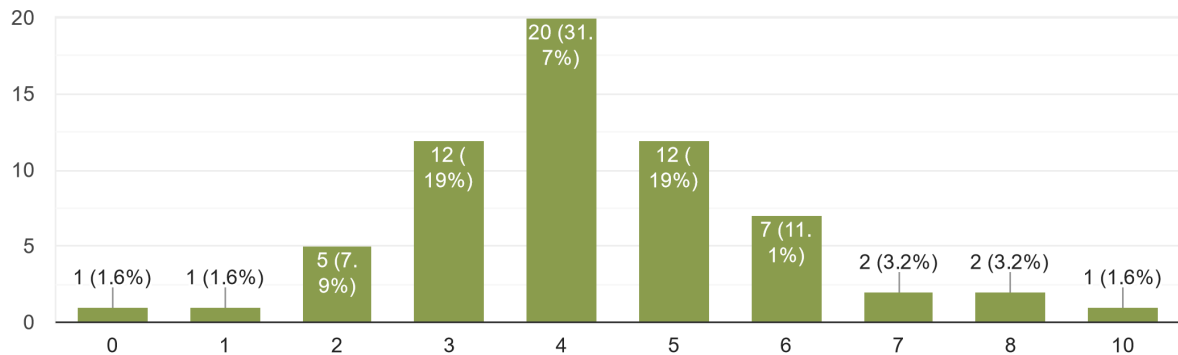
Interpretation- as we can interpret that the dependent members of a family graph are somehow symmetrical in nature. Thus the graph is normally distributed. Thus in the normal distribution; mean=median=mode. About 84% are already married and in which 40% are having more than 2 children. This finding shows negative aspects towards family planning. Further indicates the possibility of involvement of disguised employment.

Business profile:

Activity type-

Kind of street vending activity

64 responses
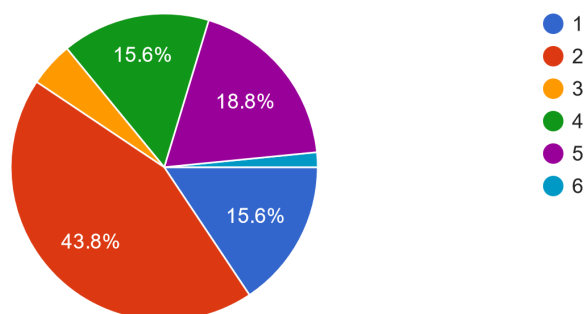
[1-Vegetable seller, 2-Fruit seller, 3-Fast food vendor, 4-Household items, plastic items; 5-Footwear, 6-clothes, garments, bedsheets]

Interpretation- Here, the data shows the distribution in the no. of jobs in the vending activity. From the respondents, a significant number of people have been engaged as fruit sellers, alongwith the sale of footwear, vegetables and household items being the other prominent ones.

Business duration-

Count of no. of years in the business

Interpretation- The data shows that there's entry of people in the vending activity due to the pandemic. Majority of the respondents have been in the informal sector for more than 3 years, but the proportion represented by '<1' is greater than the '2-3' year highlights that people are being further pushed in the vending activity, or rather informal economy for live

Monthly income-

monthly income of vendors (in Rs)
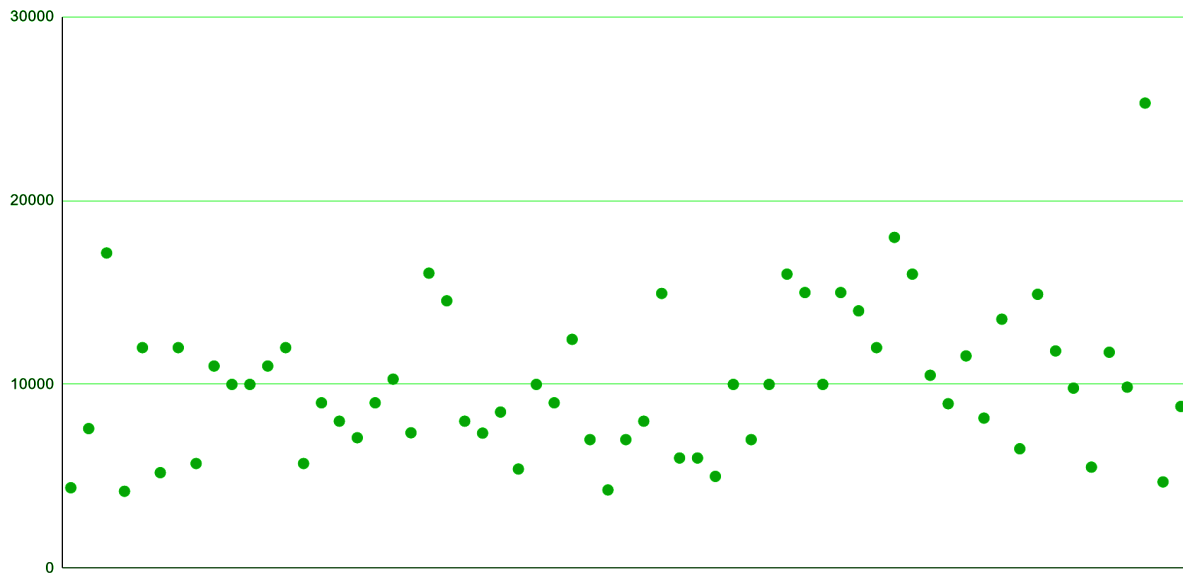
Interpretation- The scattered dot entries of income of vendors shows that more than half earn less than 10000 little less than half earn more than 2000. The fuggy inference can be drawn here that the linear line around 10000 is the avg. income. There's an outlier around 25000.

Any other source of income-
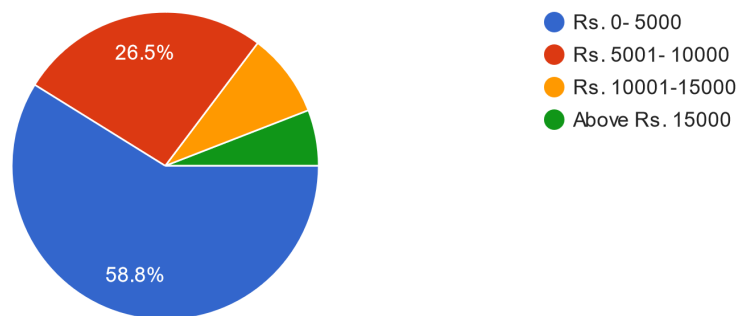
Any other activity or income source of family
62 responses
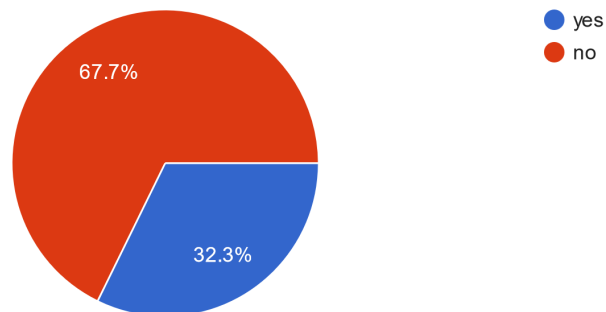
Interpretation- Around ⅓ are having other sources and ⅔ don't. This shows the vulnerability of them on the vending activity. In the ⅓ case we can also infer that they are trying to have an additional source of the income.

if yes then how much they earn income.
34 responses

| mean	3531.25
median	3000
mode	0
kurtosis	2.7
skewness	1.5

Standard deviation of sample	4297.35
Sample variance	18467261.9
minimum	0
maximum	20000
Sum	226000
count	64

Interpretation- Data is highly skewed and there's a heavy deviation from the mean. The variance of relative data is very high as the family is having a totally different scene in the vendor's income. They can be a burden or a lifeline.
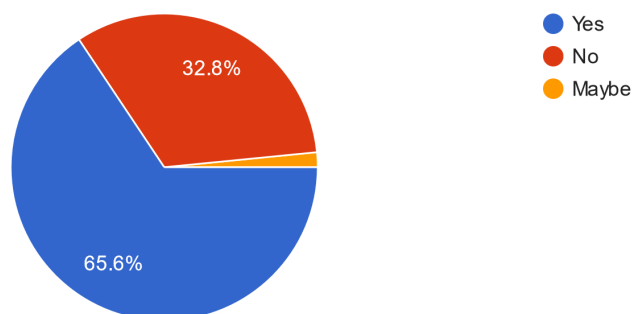
Pandemic created situation:

Change in total consumption e.g. Milk/non-veg/fruits/vegetable
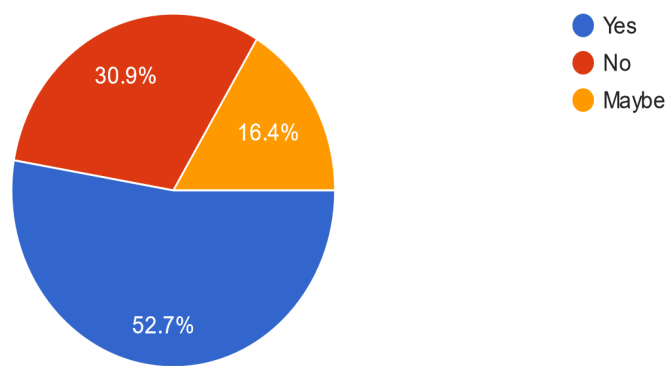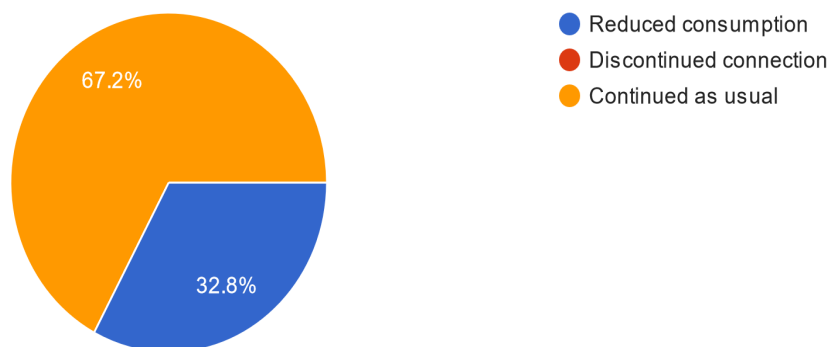64 responses
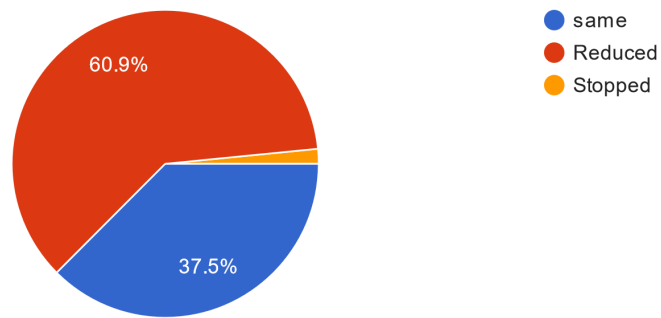
Bought medicines during pandemic?

64 responses

Legend:
- Yes
- No
- Maybe

32.8%

65.6%

Did children (if any) continue schooling during lockdown?

55 responses

Legend:
- Yes
- No
- Maybe

30.9%

16.4%

52.7%

Did you compromise with utility electricity/water usage?
64 responses

- Reduced consumption
- Discontinued connection
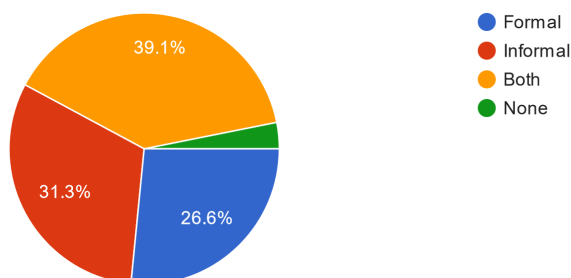- Continued as usual

67.2%

32.8%

Interpretation- the above data infer direct impact on the livelihood condition. The major areas like health, education, food and utility are hugely affected. Medicine intake due to covid shows increase about 65%; denote poor health conditions. About 31% of children have stopped schooling; adding on around 47% are affected partially and fully. The utility is having lower than 50% effects; inhere people don't have to pay as per BPL category or don't know how to stop or activate the service.
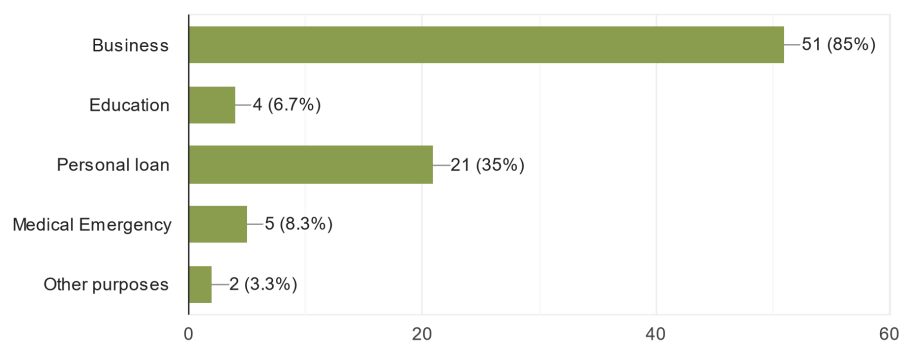
Existing sources of credit:
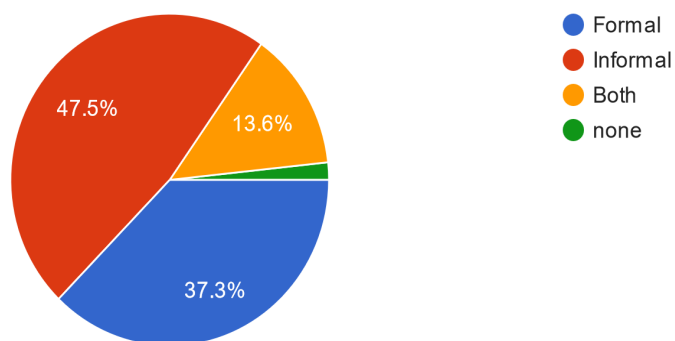
Access to Credit usually
64 responses

- Formal
- Informal
- Both
- None

39.1%

31.3%

26.6%

Purpose of Credit
60 responses

Category	Value
Business	51 (85%)
Education	4 (6.7%)
Personal loan	21 (35%)
Medical Emergency	5 (8.3%)
Other purposes	2 (3.3%)

Form in which credit taken
59 responses

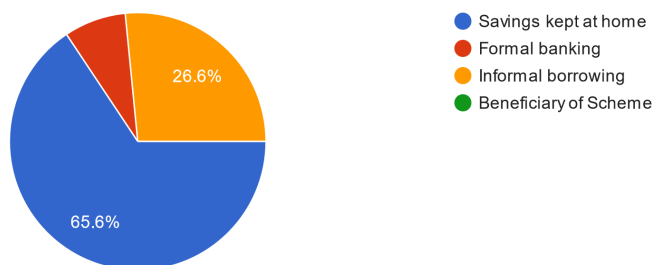- Formal — 37.3%
- Informal — 47.5%
- Both — 13.6%
- none

Interpretation- in the accessibility category; about 70 are having access to formal means they are having bank accounts. Only about 4% don't have any access. Business, personal loans & medical expenses are the consecutive priority for the credit intake in the pandemic scenario.
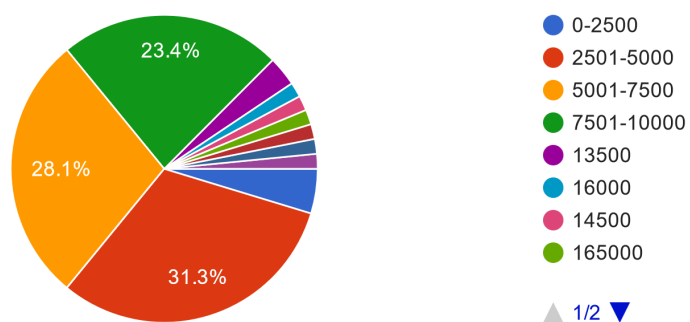
Expenditure profile:

How daily expenses met during lockdown due to COVID-19?

64 responses

- Savings kept at home
- Formal banking
- Informal borrowing
- Beneficiary of Scheme

65.6%
26.6%

total monthly expenditure of a family

64 responses

- 0-2500
- 2501-5000
- 5001-7500
- 7501-10000
- 13500
- 16000
- 14500
- 165000

△ 1/2 ▼

23.4%
28.1%
31.3%

mean	7302.3
median	6000
mode	4000
kurtosis	12.1
skewness	2.8
Standard deviation of sample	5224

minimum	2000
maximum	35000

medical & educational expenditure during emergency COVID-19
63 responses
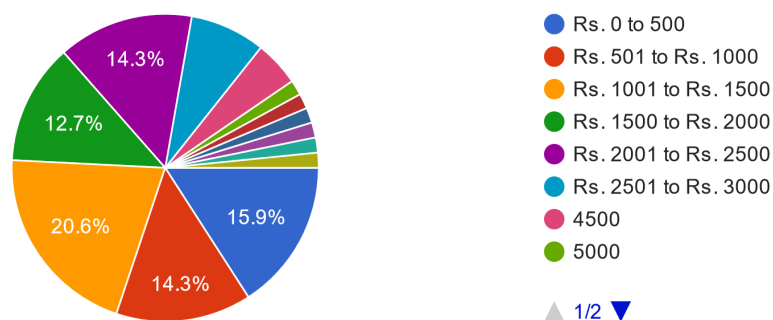
mean	2333.59
median	1400
mode	1000
kurtosis	31.31
skewness	5.06
Standard deviation of sample	3799.87
minimum	27500
maximum	0

How medical cum educational expenses met during lockdown due to COVID-19?
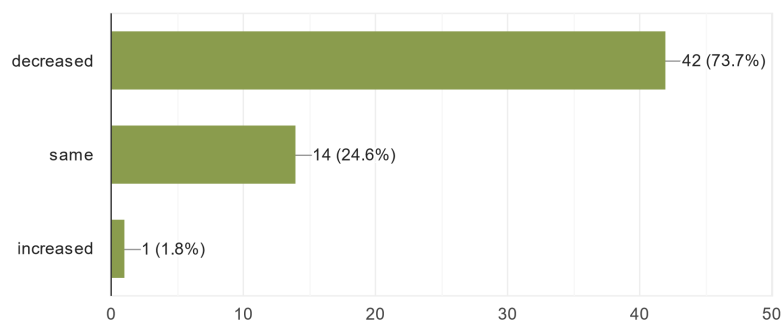
62 responses

- Savings kept at home
- Formal banking
- Informal borrowing
- Beneficiary of Scheme

67.7%

11.3%

19.4%

medical & educational expenditure during emergency COVID-19

in Rs

10000

5000

1000

500
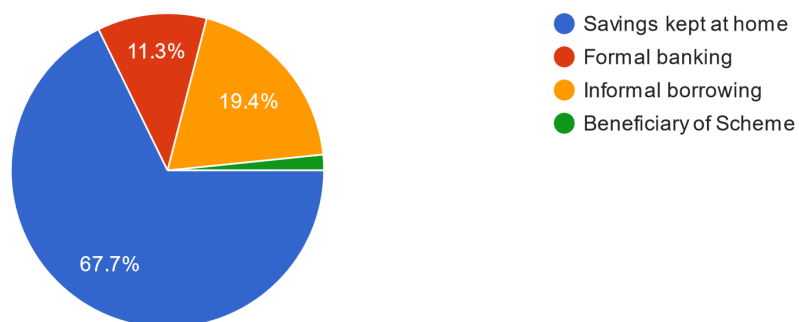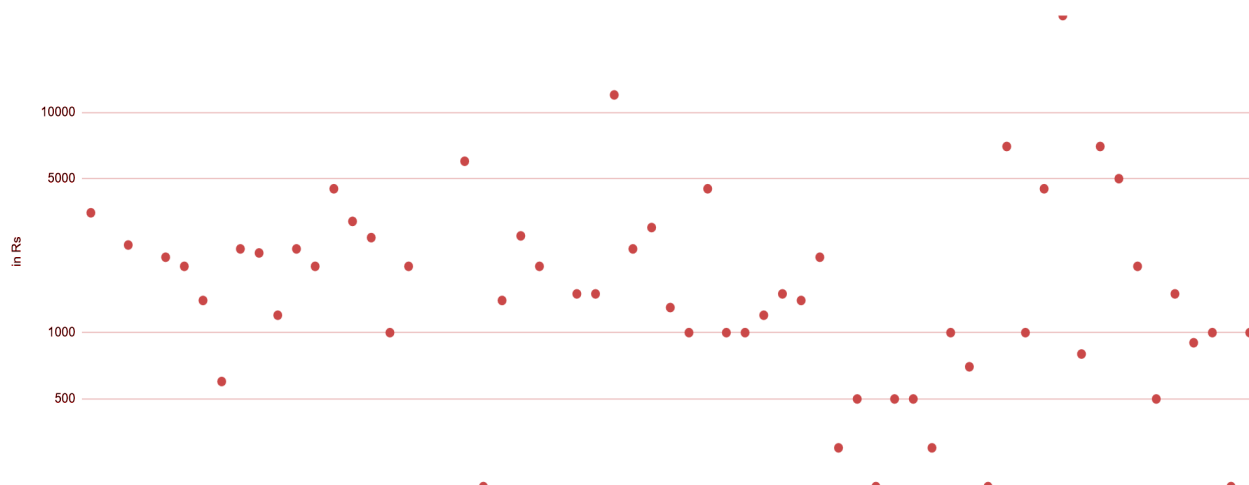
other/special expenditure e.g. house/marriage during emergency COVID-19
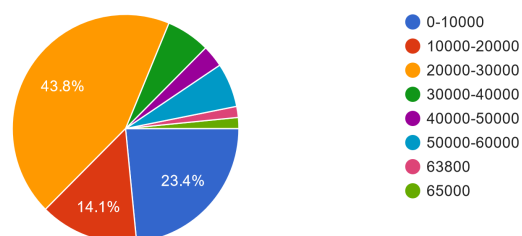57 responses

Interpretation- The average monthly expenditure of the respondents' households excluding their medical and educational expenditure is about Rs. 7300. When combined with medical and educational expenditure, it shoots up to round off at Rs. 10000. However, in the situation of lockdown induced by the pandemic, these families have to majorly rely on their savings for their sustenance. Any other deficiencies in crucial monetary requirements have to be met with informal borrowing, and only a few of the respondents were able to access formal sources of credit.

Medical and educational expenditure is tried here to capture in the logarithmic table where it shows high increase from first to second log categories value i.e. 1000-5000. Only 4 respondents are not having expanses and 2 are having higher than 10000. Thus this section will be a reason for having negative savings.

Financial profile of business:

cost of business (monthly)
64 responses

mean	21064.06
median	18850
mode	8000
kurtosis	1.68
skewness	1.38
Standard deviation	15496.5
Sample variance	240141386.4
minimum	2000
maximum	65650

revenue from sales (price per unit*quantity) monthly
64 responses
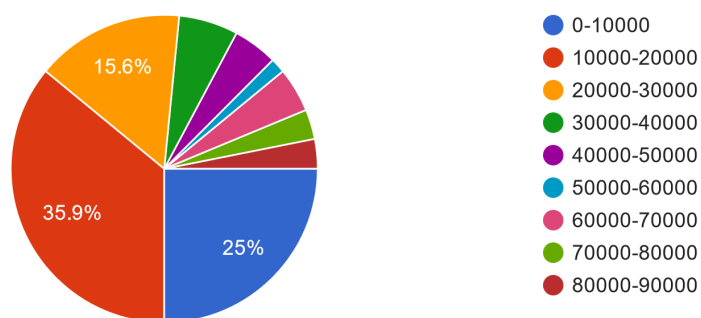
mean	31656.25
median	26000
mode	20000

kurtosis	2.5
skewness	1.6
Standard deviation	17642.1
Sample variance	311245039.7
minimum	10000
maximum	90000

Amount of money lost due to perishable nature of product (monthly)
63 responses

- 0-500
- 500-1000
- 1000-1500
- 1500-2000
- 0
- 5000
- none
- 3000-5000
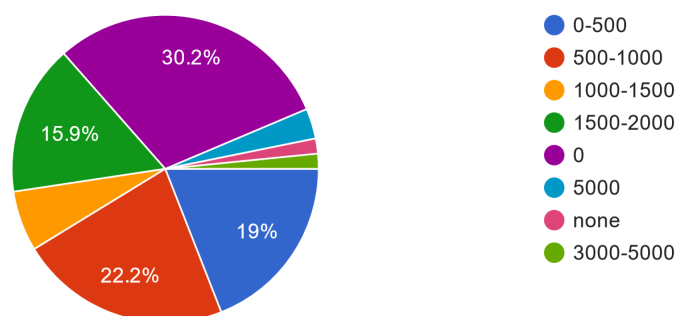
mean	924.5
median	800
mode	0
Standard deviation	852.3
minimum	0
maximum	5000

Correlation	Scale (range -1 to 1)

Income and expenditure	0.3
Income and cost of business	0.27
Cost and revenue of business	0.97

History of experiencing sources of credit:

Experience of formal banking
64 responses
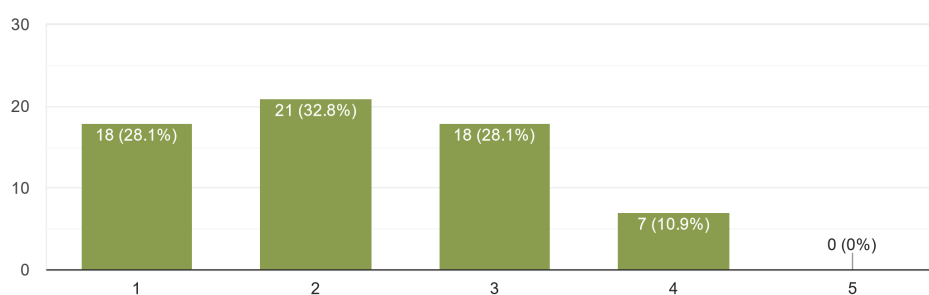
Scales are- [(1) Poor, (2) Fair, (3) Good, (4) Very Good & (5) Excellent]

Experience of Informal Credit (if taken)
41 responses
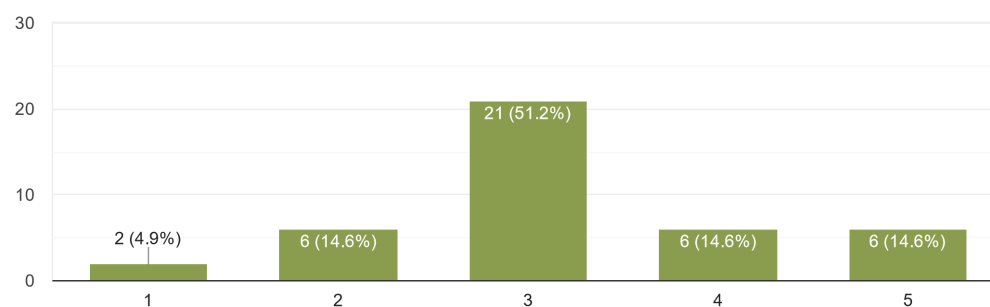
Scales are- [(1) Poor, (2) Fair, (3) Good, (4) Very Good & (5) Excellent]

If Informal Credit taken, what were the reasons
35 responses
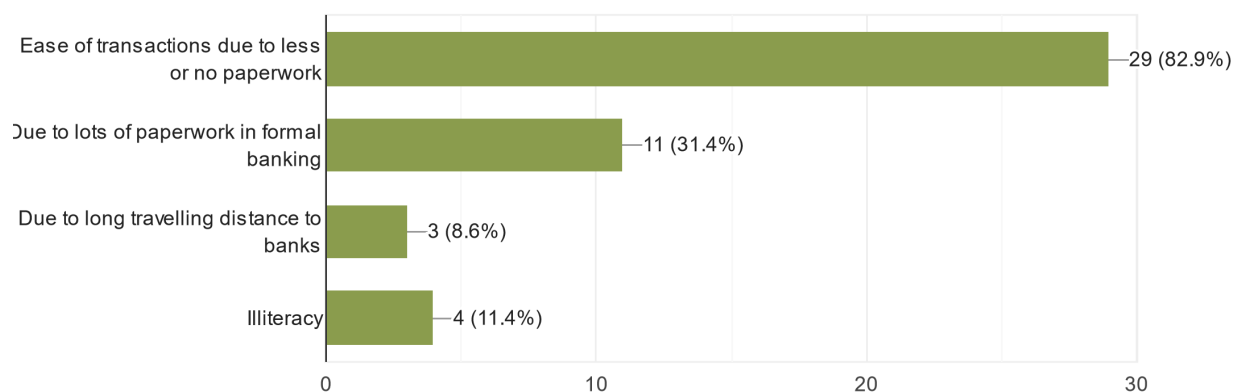
Informal Credit Experience
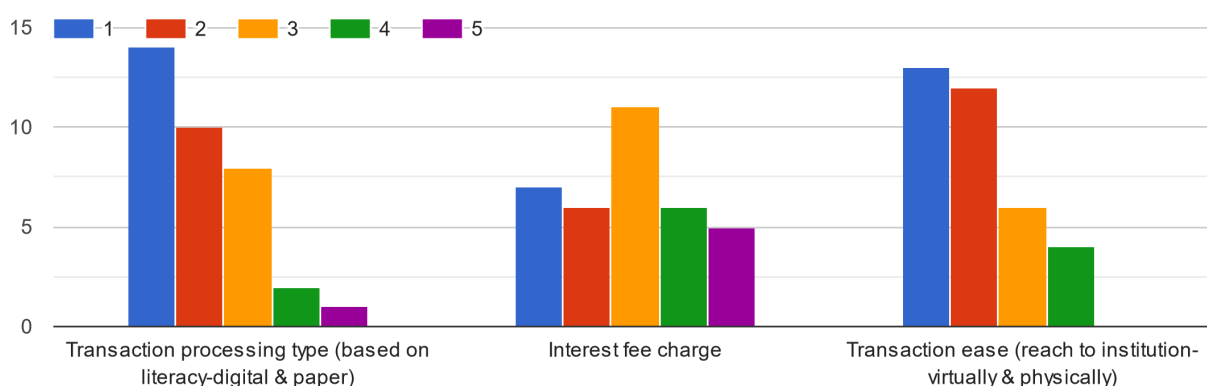
Scales are- [1-very easy, 2-easy, 3-normal, 4-hard, 5very hard]

Interpretation- experience of the formal is skewed towards left (poor experience) and informal experience is skewing towards right (excellent experience). This skewness can be further explained as there's a lot of paper works i.e. 82% responsible for the informal approach. The solution can be to make the system users procedural friendly & this can be achieved by the digital integration.

Current credit needs:

How frequent are informal borrowings taken by you during Covid?

64 responses
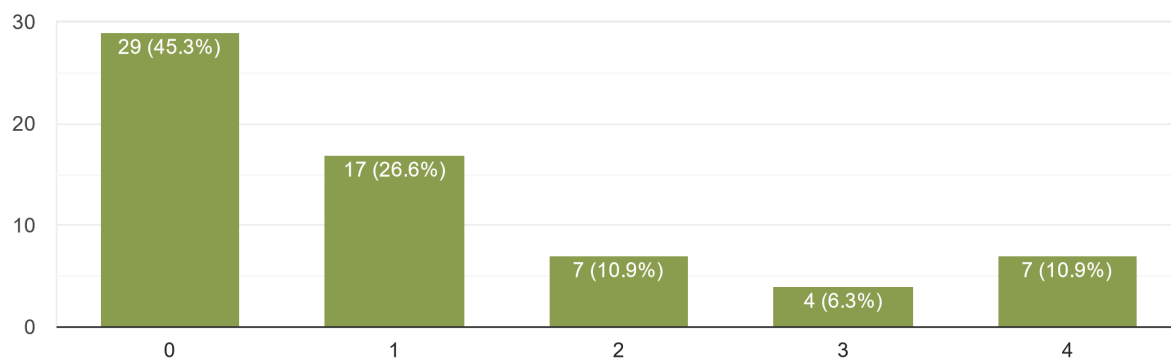
[0-None, 1- Occasionally, 2- normally,3- Frequently, 4- Very Frequently]

Have you taken any formal loan or informal borrowing recently or during lockdown due to COVID-19?
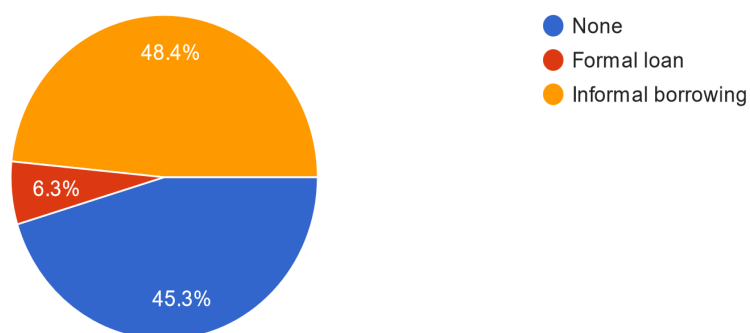
64 responses

What is the amount of credit taken (if any)? (In Rs)
35 responses

Legend:
- 1000-5000
- 5001-10000
- 10,001-15000
- Above 15,000
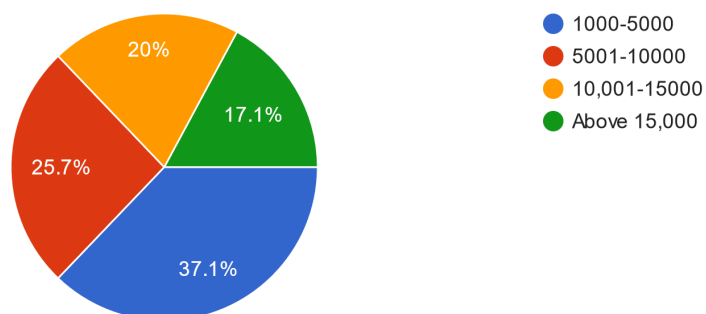
Total credit demand	415850
mean	6498
median	3125
mode	0
kurtosis	34.5
skewness	5.3
Standard deviation	13754.8
minimum	0
maximum	100000

Have you been able to pay the loan back (either taken formally or informally) during lockdown due to COVID-19?

42 responses

- Yes
- No
- Partially paid

14.3%
23.8%
61.9%
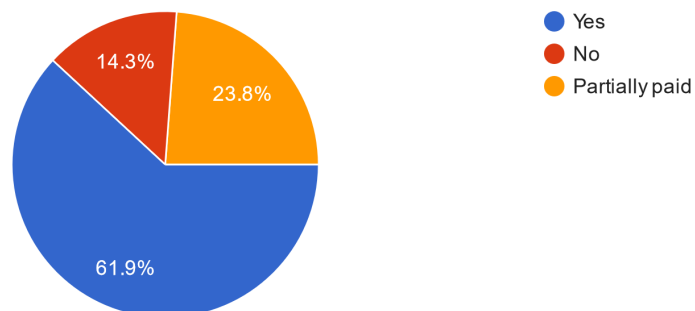
What was the method used to recover the credit given (if any taken by you) by informal lenders, on a scale of (1-10) points?

35 responses

6 (17.1%), 4 (11.4%), 6 (17.1%), 10 (28.6%), 3 (8.6%), 4 (11.4%), 0 (0%), 1 (2.9%), 1 (2.9%), 0 (0%)
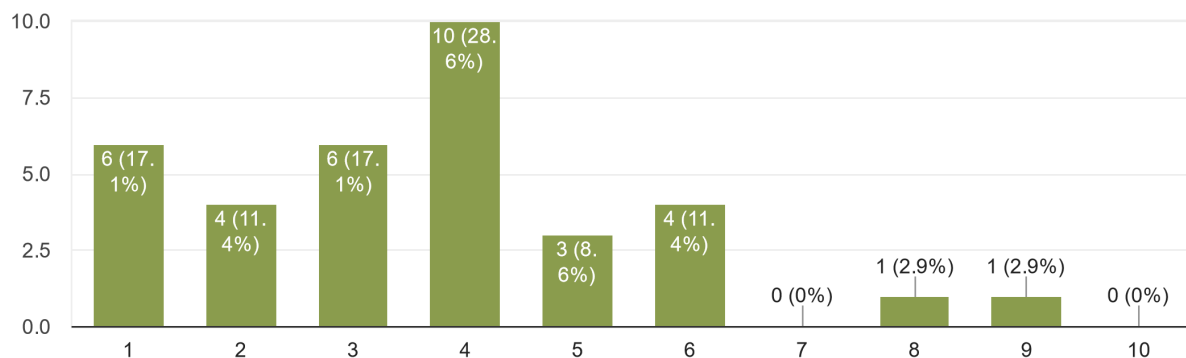
[a) Lenient behavior (1-4)points,   b) Coercive methods (5-7)points & c) Highly coercive and exploitative (8-10)points]

What was the kind of behaviour and recovery method adopted by formal banks when you (for any reason) couldn't repay the loan on time, on a scale of (1-10) points?

25 responses
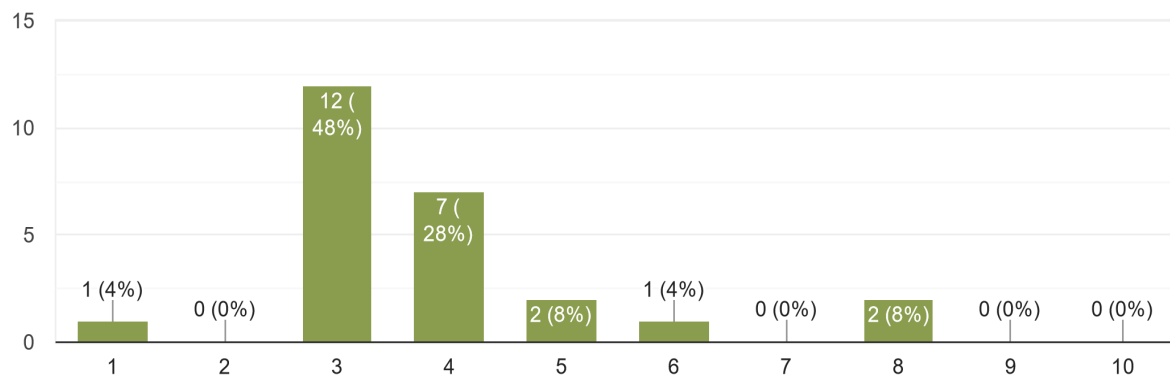
[a) Explained the terms and conditions and gave an official legal notice (1-5)points   b) Rude behavior, threatening (if done), didn't explain the consequences and gave the legal notice (6-10)points]

Have you availed benefit of any scheme (e.g. PM SVANidhi scheme) during lockdown due to COVID-19?
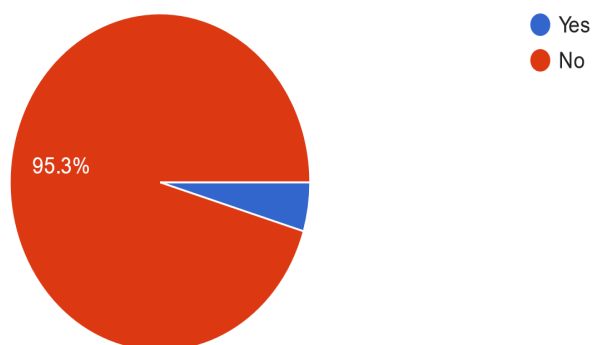
64 responses

If not availed, what are the reasons?

61 responses

Legend:
- Illiteracy
- No proper documents
- Unaware
- Don't want
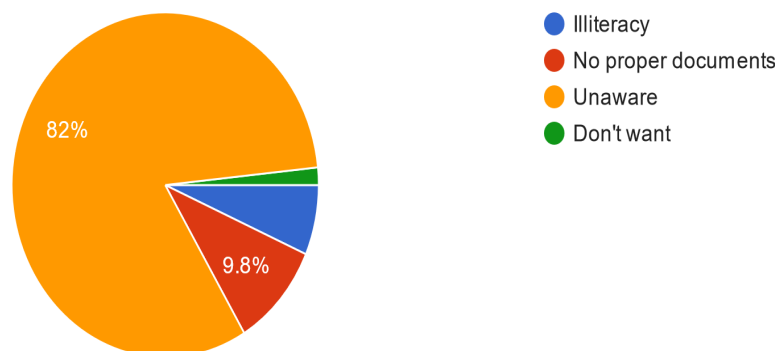
Interpretation- in the fruit selling case; the wholesale supplier itself extends the credit line for purchasing fruit from them on the weekly basis.

Majority of the credit needs are for the business. Some of them are for medical reasons due to pandemic cases. The findings show about 80% are able to repay the credit obtained by them on time. The frequency of the credit has increased due to decrease in the income in covid scene and subsequent lockdowns. The rate of interest shows increase in the rate. There is reluctance in the informal credit demand. Ironically, data shows that the % of people who do not want informal credit tallied with the % of people who don't want any credit. However 17% want informal credit and are taking informal occasionally. And only 6% have taken formal credits. Here, 60% of total are taking credit via any source which is within the range of Rs 10,000 & others are taking above Rs 10,000. Here only about 60% are able to repay shows that the changes of high risk in credit lending. There's only one scale difference in the friendly collection procedure b/w formal and informal. Here 95% have not availed any scheme benefits with the reason of high unawareness (about 82%). The policy implementation is failing in generating awareness about the initiatives to the common people.

Non-financial vulnerabilities:

Do you have a certificate/ID for street vending provided by the municipality?
64 responses

- Yes
- No
- Unaware

26.6%

73.4%
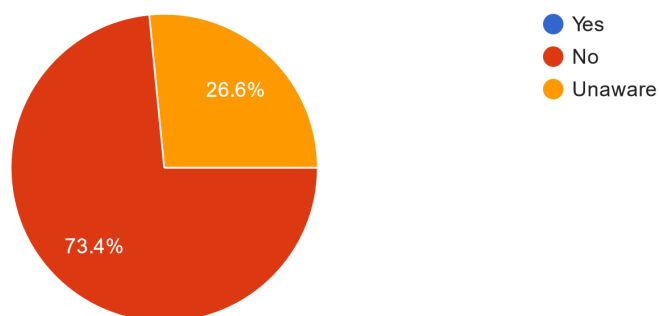
Have You faced challenges like eviction threats or harassment by municipality or police during street vending?
64 responses
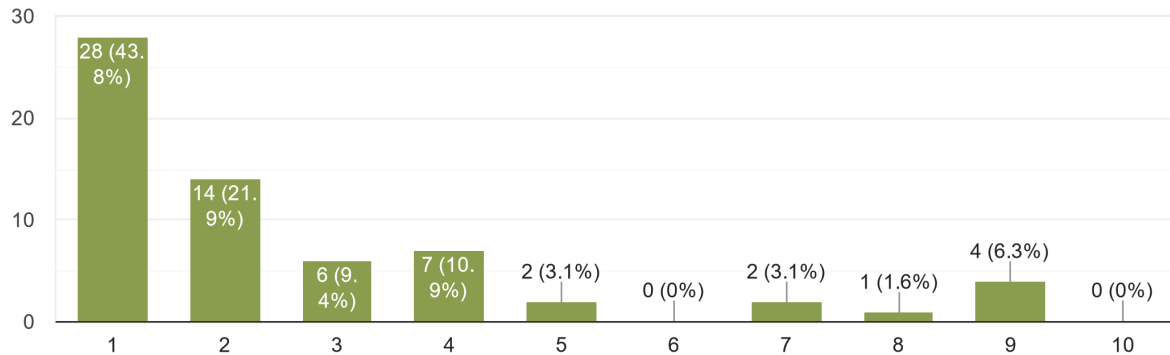
[1) No (0) 2) Occasionally (1-4) points 3) Frequently but no use of force (5-7) points 3) Frequently with use of force (8-10) points]

platform charges to carry out business (per/month) formal/informal

61 responses

Legend:
- 0-250
- 251-500
- 501-750
- 751-1000

44.3%

8.2%

47.5%
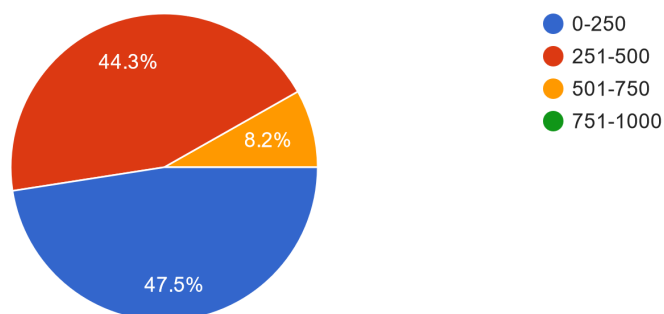
Interpretation- Almost all of the respondents had faced eviction threats or harassment from municipality or police to varying degrees. When asked about certification for carrying out their informal economic activities in the urban spaces, the majority of respondents did not possess certification from the urban local body. They practiced their occupation without the permit, and had continued doing so for many years. The other proportion of respondents were not even aware of the need for a permit. But they still had to pay a certain amount as fee for practicing their vending activity at any particular location.

Multivariable data description from the survey:

Location, kind of street vending activity and its relation to Median Income of Vendors

Kind of ..	Place of Residence	Median Per month income of vendor in Rs.
1	Dibrugarh,Assam	₹ 15,000.00
	Kolkata	₹ 12,000.00
	Ranchi	₹ 6,500.00
2	Basudhar	₹ 5,400.00
	buxar	₹ 11,710.00
	Dhansoi	₹ 4,695.00
	Gumla	₹ 8,500.00
	Itarhi	₹ 6,400.00
	Kolkata	₹ 8,500.00
	Pakdi	₹ 17,150.00
	Ranchi	₹ 9,000.00
	south Buxar	₹ 8,170.00
	Villupuram	₹ 11,785.00
	west buxar	₹ 11,950.00
3	GTB Nagar Delhi	₹ 6,500.00
	Gumla	₹ 10,000.00
	Kolkata	₹ 9,000.00
	Mukharjee Nag..	₹ 5,500.00
	Viswavidyalaya ..	₹ 4,700.00
4	Gumla	₹ 12,000.00
	Kolkata	₹ 9,000.00
5	gumla	₹ 6,000.00
	Kolkata	₹ 11,000.00
	Ranchi	₹ 5,000.00
6	Delhi	₹ 8,800.00
	Gumla	₹ 8,000.00
	Kolkata	₹ 8,500.00

[1-Vegetable seller, 2-Fruit seller, 3-Fast food vendor, 4-Household items, plastic items; 5-Footwear, 6-clothes, garments, bedsheets]

The survey was done at various habitats of students comprising different urban and semi urban places. Six different types of vending activities were chosen for the survey. In this bar chart median income of different vending activities and the income variation is projected. Because of the time limitation and covid pandemic all six different vending activities were not surveyed in every location. Vending of plastic/rubber footwear is much more profitable in Kolkata than Gumla and Ranchi. There is not much difference in median income of vendors selling clothes or bed sheets in the cities of Delhi, Gumla and Ranchi. Fruit sellers' incomes are much higher in the

semi urban areas than Kolkata. A vendor who sells vegetables in Dibrugarh realises a significantly more profit than the person who is doing the same activity in kolkata.
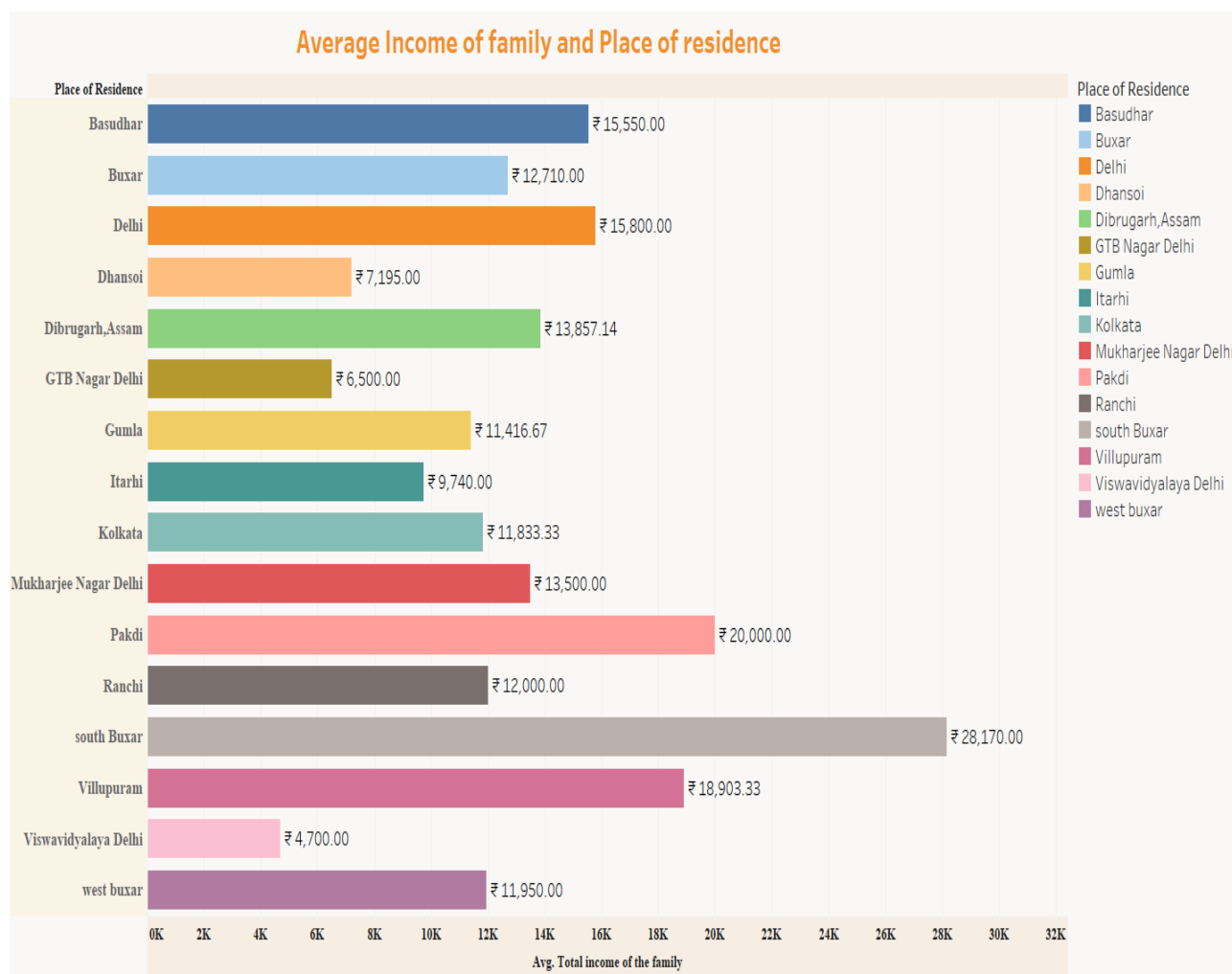
This bar chart explains the average total income of the families of the vendors irrespective of the nature of the vending in the various places where the survey was conducted. It can be inferred from the chart that vendors in south buxar incomes the highest. The reason for this is multiple members of the family are engaged in some kind of economic activity.

Effect of income on survival in two months of complete lockdown

How daily expenses met during lockdown due to COVID-19?

Running Sum of Avg. Total income of the family for each How daily expenses met during lockdown due to COVID-19?. Color shows details about How daily expenses met during lockdown due to COVID-19?. The data is filtered on How medical cum educational expenses met during lockdown due to COVID-19?, which keeps Beneficiary of Scheme, Formal banking, Informal borrowing and Savings kept at home.

This graph gives an impression that vendors having the lowest income tend to borrow more from informal sources as capacity to save money monthly is much lesser for the respective low income vendors. The income of the street vendors are the profits that they earn after deduction of all kinds of input costs. In the case of vendors whose family members also earn, even if it is a small amount, helps the family to save more. In our survey finding it was found that most of the vendors survived on the expense of their earlier savings alongwith reduction in consumption of food items.

Effect of income and no. of family members on the consumption of food and usage of basic amenities

Electricity usage and Food consumption depending upon total income of the family and number of family members
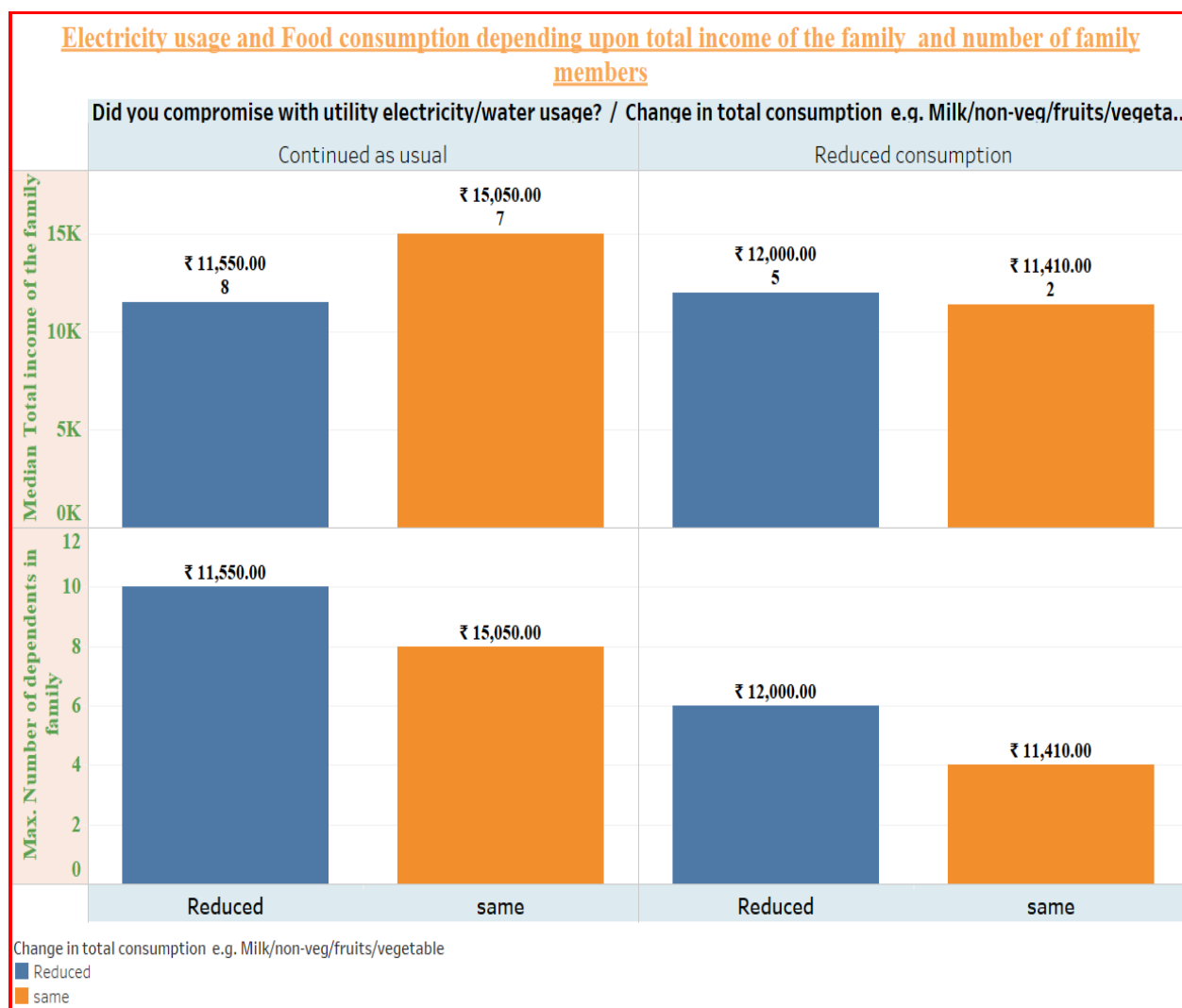
This multivariable bar chart shows the median income of the families of dependents ranging from two to ten and how it affects the consumption of food items as well as its effect on the usage of basic utilities such as water and electricity. Those vendors who are responsible for five or more than five dependents with a median income of Rs. 11,550.0 and Rs. 12000 had to reduce food consumption as well as usage of water and electricity.

revenue vs. cost of business (monthly)
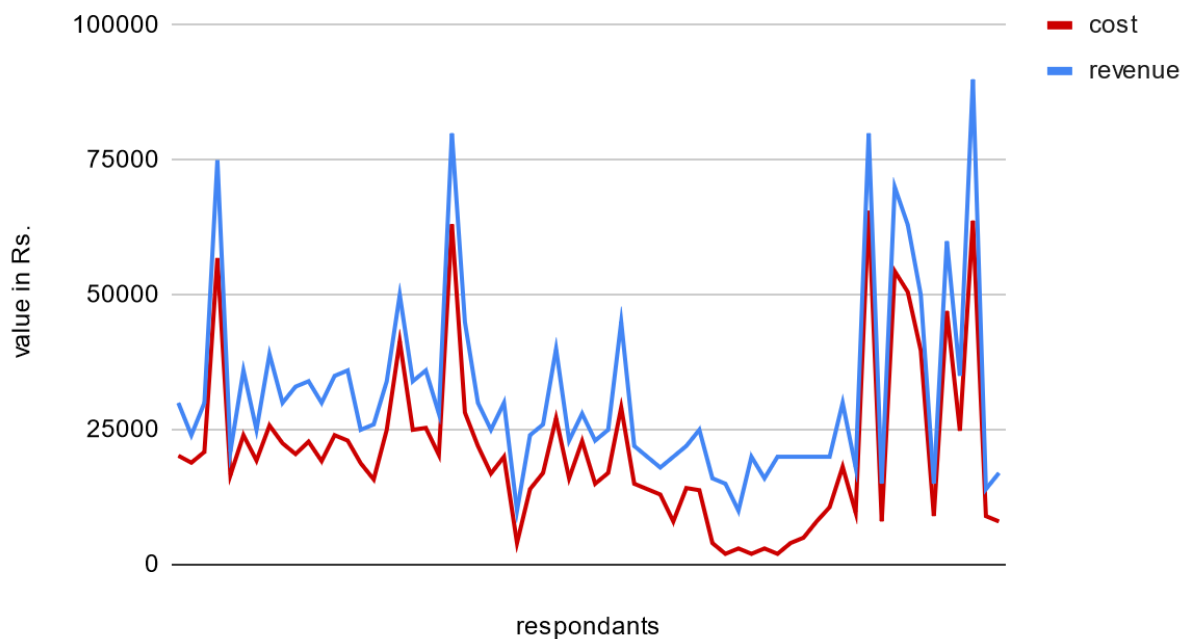
Here, the line graph infers that the revenue is higher than cost in every condition. Thus the financial condition of the business is having profitable business. The nature of the vending shows positive stacks in finances. Other conditions like family, expenses etc. are supported by this section.

credit need as per debt data
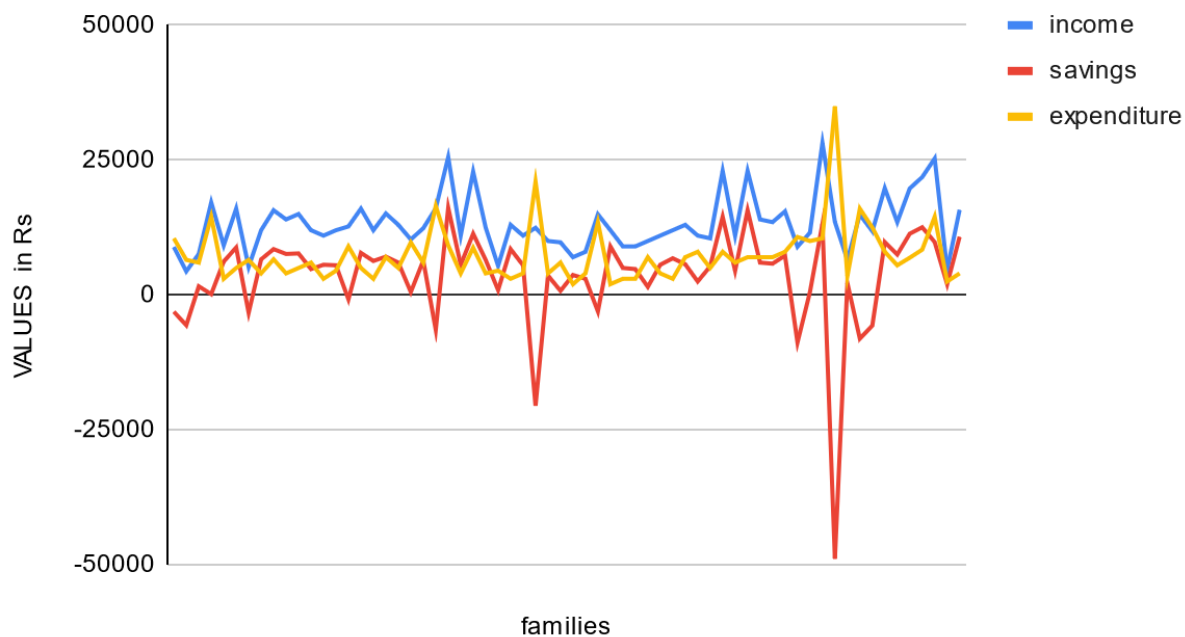
Here the data of income, savings and the expenditure are stacked together on a line graph. The savings data shows negative due to high expenditure costs. The extra medical costs are implied here too in the expanses. And further the income has reduced due to the pandemic situation.

Chapter 5: Inferential Statistics

Hypothesis formulation and testing: Here we are making hypotheses to test the results of our research and try to find out the possible research outcomes in line with our research questions by tools of inferential statistics.

Hypothesis 1:

Null Hypothesis (H0): Informal credit is coercive in nature.

Alternate Hypothesis (H1): Informal credit is not coercive in nature.

Experience of Informal Credit (if taken)
41 responses
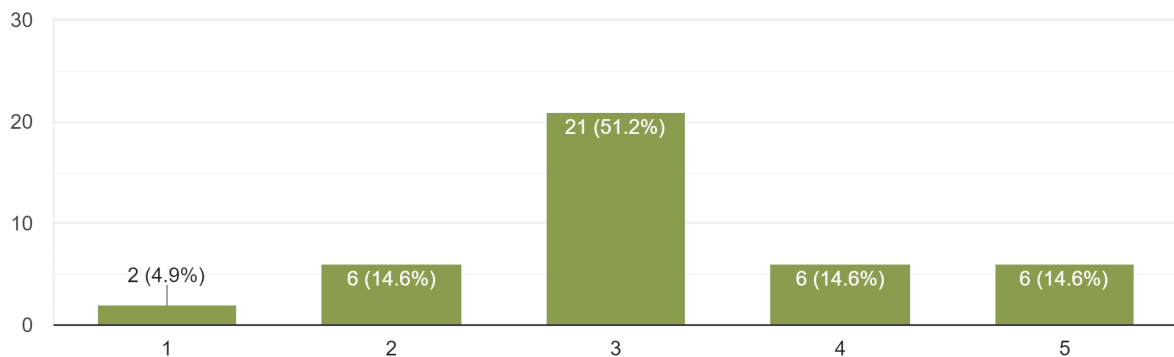
Scale: **(1) Poor, (2) Fair, (3) Good, (4) Very Good & (5) Excellent**

To understand the nature of informal credit whether it is coercive in nature or not, we are here going to hypothesis testing of our null statement, through the data collected on the experience of informal credit. From the data and graph:

P-test of graph, experience of informal credit where 41 respondents rate their experience on the scale of 1 to 5 where 1 is poor and 5 terms as excellent.

So Null Hypothesis , $U0 < 2$ (which means poor experience)

Alternative Hypothesis, $Ua > 3$ (which means better experience)

Mean of sample	3.195
Standard deviation of sample	1.030
N (Number of sample)	41
U0 (null hypothesis value)	1 (poor experience)

For level of significant value (a)= 0.05

Z-value: 13.64

Now here **P value = .00001**, we can see the p value is below the significant value 0.05.

=   **P<0.05**

So our null hypothesis, Which is that informal credit is coercive in nature, is rejected and we support the alternative hypothesis here.

Which means we found in our research that most of the people like to take informal credit and it is not coercive in nature, this further implies that because these informal credits are mostly taken from relatives and friends and does not create problems.

Hypothesis 2:

H0: There is no relation between monthly expenditure and compromise in consumption of milk, fruits and vegetables.

H1: There is a relation between monthly expenditure and compromise in consumption of milk, fruits and vegetables.

(Using Chi-square value) , at alfa (a) significant value = 0.05 for level of confidence at 95%.

Here in the below table we can see the distribution of data according to consumption and expenditure which is **observed value** from data:

Consumption	0-2500 (Expenditure)	2501-5000	5001-7500	7501+	Total
Same	0	2	11	11	24
Reduced	3	21	5	10	39
Stopped	0	1	0	0	1
Total	3	24	16	21	64

Now **Table of expected value**:

Consumption	0-2500 (Expenditure)	2501-5000	5001-7500	7501+	Total
Same	1.125	9	6	7.875	24
Reduced	1.828	14.625	9.75	12.79	39
Stopped	0.046	0.375	0.25	0.32	1
Total	3	24	16	21	64

Now **calculated chi square (x^2) = 20.079**

Degree of freedom **(DF) = 6**

At **0.05 significance level**, **tabular chi square value is 12.592,** then here we can see the calculated chi square value is more than tabular chi square value which means our null hypothesis is rejected and we select our alternative hypothesis.

- **Chi square value(Calculated) > Chi square value(Tabular)**

So, there is a correlation between consumption pattern and expenditure of family, which means expenditure is affected in covid pandemic and similarly people reduce their consumption of fruits, milk and vegetables and compromise their meals.

Hypothesis 3:

Null Hypothesis (H0): there is no relation b/w credit taken and credit repaid

Alternate Hypothesis(H1): there is relation between credit taken and credit repaid

Spearman rank correlation to find the rank correlation b/w two categorical data.

method-Spearman rank correlation:Correlation using Pearson Coefficient: Correlation is used to describe the linear relationship between two continuous variables (here,credit needs and pandemic situation). In general, correlation tends to be used when there is no identified response variable. It measures the strength (qualitatively) and direction of the linear relationship between two or more variables. The Pearson correlation coefficient measures the strength of the linear association between two variables.

At confidence level 90%; a-significance value=0.1

In here 34 respondents with full data quality are correlated.

Spearman rank correlation	Correlation coefficient
b/w credit taken and credit repaid	-0.1848020176

Set Significance	alpha	0.1
Pairwise cases	n	68
Degree of freedom	Df (n-2)	66
t-estimate	te	1.52
t-critical	tc	1.29
Decision rule	te > tc	Null is rejected; alternate is accepted.
Interpretation	There is statistical significant correlation	

At 0.1 significance value; this alternate hypothesis holds true.

The correlation b/w credit taken and credit repaid is having a confidence level of 90% which is usually low. Further infer that credit is not repaid on time. The reason for this will be the pandemic situation.

Hypothesis 4:

Null hypothesis (H0): there is no relation b/w convenience of informal credit and formal credit

Alternate hypothesis (H1): there is relation between convenience of informal credit and formal credit

Both data are categorical; thus spearman rank correlation will be used.

Significance level: 5%; confidence level: 95%

Spearman rank correlation	Correlation coefficient
b/w credit taken and credit repaid	-0.04955816054

Set Significance	alpha	0.05
Pairwise cases	n	84
Degree of freedom	Df (n-2)	82
t-estimate	te	0.45
t-critical	tc	1.66
Decision rule	te < tc	Null (H0) is accepted
Interpretation	There is no statistical significant correlation	

As per the first hypothesis; we have seen that informal credit is not coercive in nature.

And in the fourth hypothesis; here we can see that access to formal credit is not correlated with informal credit lending.

Thus, as we can see in hypothesis first the informal credit is easy to take and non-coercive in nature which implies the less accessibility of formal credit that's why in our 4th hypothesis the formal credit has no relation with the informal lending convenience at 95% on confidence level.

Chapter 6: Conclusion

The merciless Covid-19 pandemic has not only exacerbated the existing problems of the street vendors and hawkers but also has exposed the vulnerabilities they deal with on a daily basis. Our research topic and the findings have tried to measure it based on quantitative research methods and have arrived at few conclusions. The vulnerabilities are worsened as they don't have proper documents when it comes to vending certificates and other documents to access formal loans from the banks. We found that the vendors who earn the lowest have availed loans to survive during the complete lockdown period of pandemic in the form of informal borrowings from friends and relatives. Our findings further revealed that as informal borrowings were taken from friends and relatives during the pandemic, it was not coercive in nature when the time for repayment arrived.

Another very important aspect which we tried to look through our research and findings was the level of consumption during the pandemic which showed that they reduced the consumption of milk, dairy products, meat, vegetables, fruits although they continued with the usual number of meals. The pandemic drastically reduced the level of expenditure which resultantly affected the quantity of food items per meal a day.

The findings also arrived at the conclusion that the pandemic had drastically affected their daily income which made them vulnerable as when it comes to repayment of either formal loans or informal borrowings. It further led them into debt as they had to avail informal borrowings from friends and relatives. A major finding is the absence of a vending certificate which most of the street vendors do not avail under the Street Vendors Act. The vending certificate is their identity of their involvement in street vending which ensures them their rights and protection from harassment by the police. The primary cause for the non availing of the *"SVANidhi"* scheme by street vendors is that they were unaware of any such scheme launched by the central government and others couldn't because they didn't own any vending license given by the municipality of the towns/cities.

The health and education scenario further degraded due to the pandemic as we found from our data that the children of a significant number of street vendors discontinued studies as earnings of the street vendors reduced drastically. Conjugal partners of many street vendors had found

themselves out of work because of the pandemic as many of them were employed as maids in homes. Street vendors of Kolkata had to bear an extra amount in the form of internet packages of 4G connection for online tuition of their children which added an extra monetary burden on them. Utility services like consumption of electricity were reduced to a large extent compared to pre covid scenarios. Most of them do not have tap water connection and collect water from either common hand pumps or common public taps which makes them more vulnerable towards covid pandemic. Medical expenses went up which made the street vendors exhaust their savings or approach informal money lenders.

Hence, from our survey, quantitative analysis and the findings we come to the conclusion that generating awareness on the importance of the Street Vendors Act and making it mandatory for street vendors to possess a vending certificate issued by the local municipal body is of paramount importance. It will ensure that street vendors can avail the benefits they are entitled to and formalise the street vending activity which provides livelihood to a large economically and educationally disregarded section of the Indian population. Further, proper implementation of the Street Vendors Act will ensure that necessary help during a pandemic reaches the identified beneficiaries.

The research study could be improved with more number of respondents/interviewees in respect of gender along with variation of vending activities which will further provide more insights in data analysis. Time constraint and second covid wave were the major obstacles which has affected our data collection throughout our surveys in respective habitats. There is a great need for survey by taking cognition of gender representation and income gap in different vending activities as well as the unavailability of basic utilities in the respective vending space of urban, semi-urban and rural areas. Availability of more time could lead to further data and inferences from the data which can help to formulate effective solutions.

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