

INDIGENOUS  
 (2%)  
 TRADITIONAL  
 PICTURES  
 A. (30%)  
 Lower (88%)  
 Upper (30%)

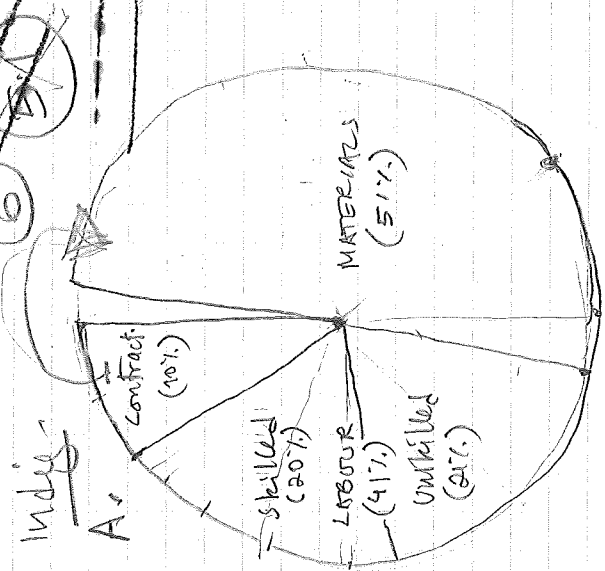
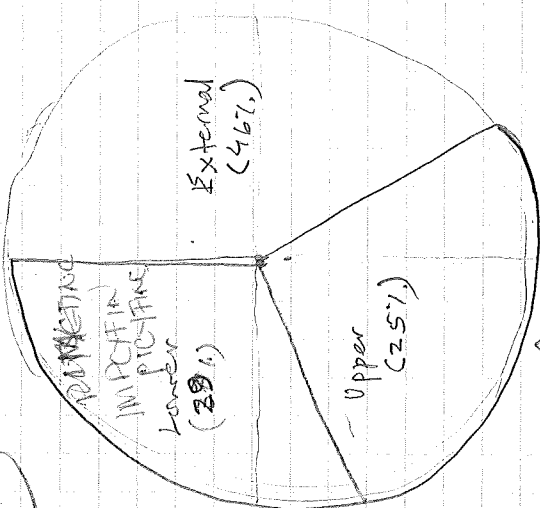
INDIGENOUS

QTY  
 COST

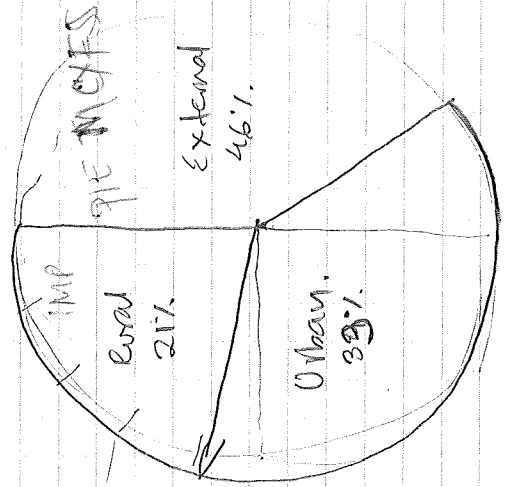
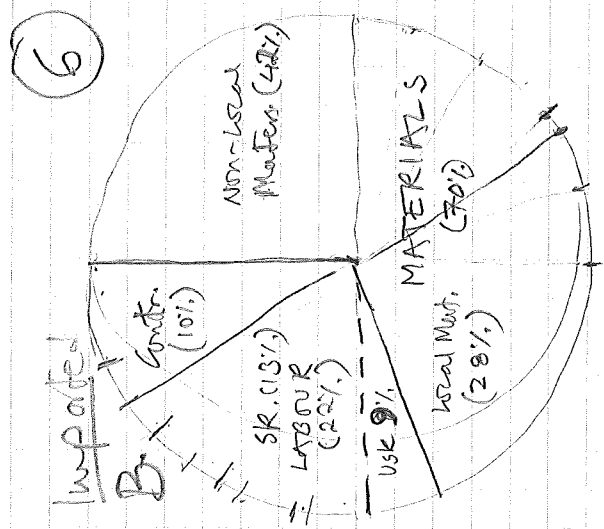
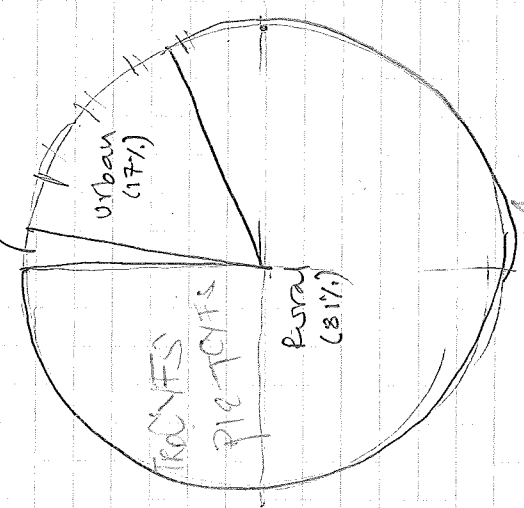
81.08  
 17.10  
 98.18  
 2.04  
 100.22

1/6

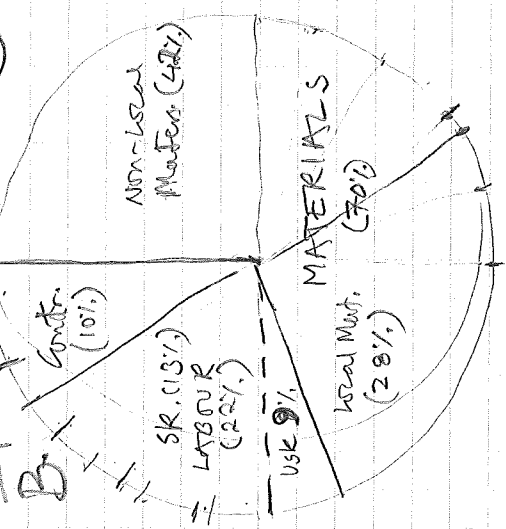
S.I.  
 A.



ext. 2%

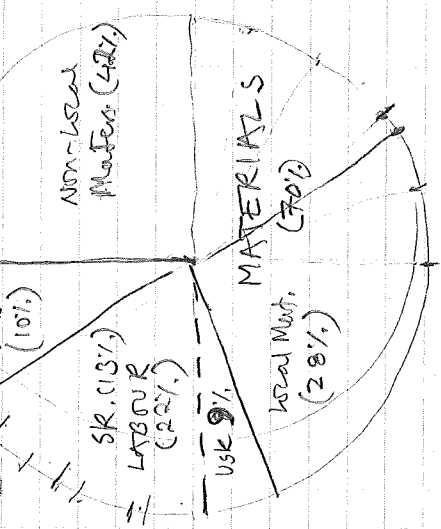
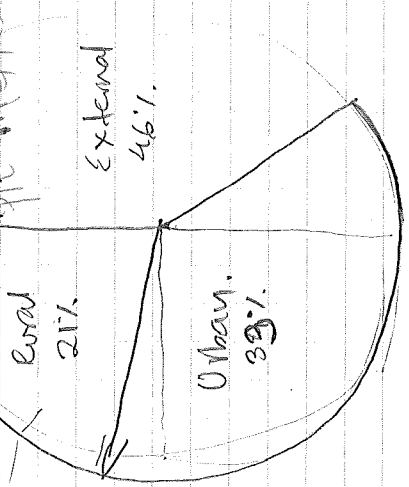


IMPORTED

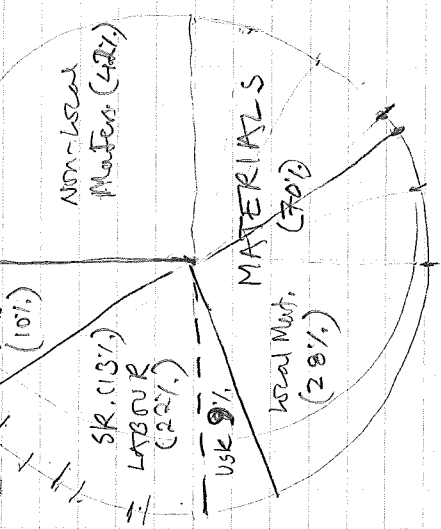


6

IMPORTED



IMPORTED



IMPORTED

GAINERS & LOSERS - from distribution of assets & products

Gains & losses of income from new technology from industry to inv. const. Tech industries. (Per Rs 100 of const. expenditure) or % of total const. investment

GAINERS

SPATIALLY  
with  
no  
ind. trans.

INDUSTRY

Group social/funct. groups in district.

External groups  
(+40)

6

5

4

3

2

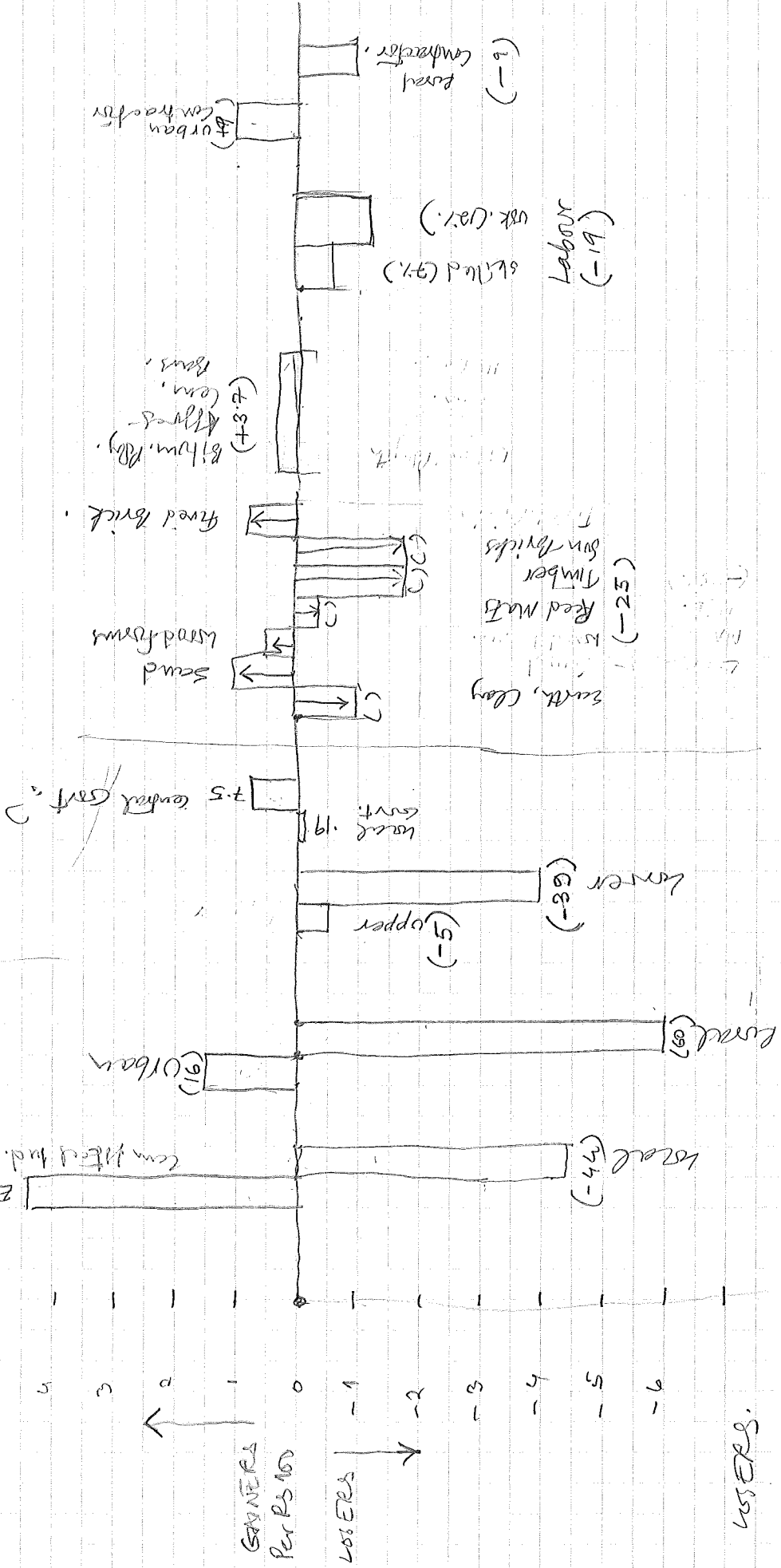
GAINERS  
Per Rs 100

LOSERS

5

6

LOSERS



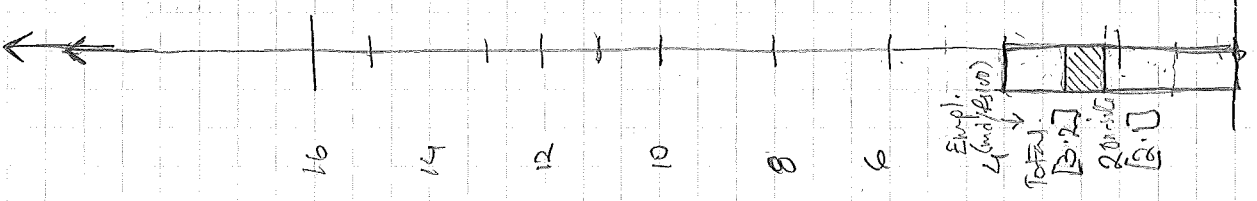
2.1

- ① Continuous Employment.
- ② Int. earned ~~higher~~ <sup>before</sup> ~~work~~ <sup>work</sup> + extra ~~extra~~ <sup>revenues</sup>.
- ③ "learning by doing".
- ④

Chart MINTCAT

tmc hrt (Point. G111, c. 20%)  
 instead (Maintenance 0.20%)

mic  
 mire  
 Lsk  
 Lusk



- 1) COST-EFFECTIVENESS.
- 2) EMPLOYMENT.
- 3) 5% / R1500
- 4) ON-SITE (Monday/Es 100) = 2.1.
- 5) ON-SITE + in market prod. & supply = 3.2.

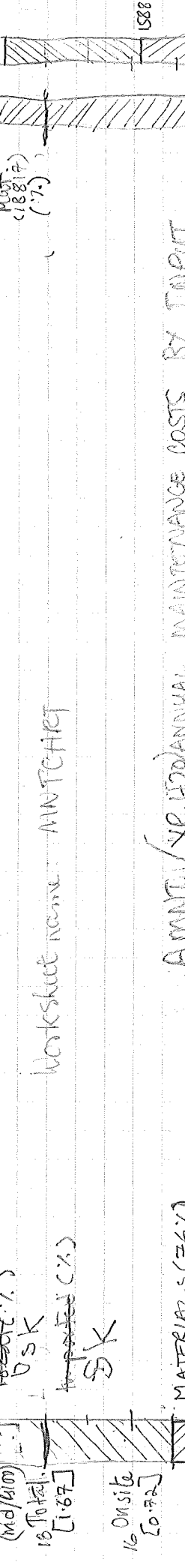
Int. on 1500 @ 10% rate = 1500/yr. C-ATM - IronTech

MODERN CONSTRUCTION TECHNOLOGY  
 DISBURSEMENT OF MAINTENANCE COSTS BY TYPE OF INPUT

(T) 26500  
 21000  
 15886  
 7122 (%)

Worksheet name: MAINTCHART

AMNT (YR. H2) ANNUAL MAINTENANCE COSTS BY INPUT  
 WGR (YR. H2) COSTS (6.22%)  
 GRAPH CMC (Total M, C+M 0%, 20%)



LABOUR (76%)  
 Imported (45%)  
 Local (31%)

EMPLOYEES (16)  
 (16/100)  
 Total (167)  
 Onsite (167)

LABOUR (76%)  
 Imported (45%)  
 Local (31%)

LABOUR (76%)  
 Imported (45%)  
 Local (31%)

LABOUR (76%)  
 Imported (45%)  
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LABOUR (76%)  
 Imported (45%)  
 Local (31%)

147 - 20, 490 - 147  
 100 x 147  
 20, 490

TLJOLNW

$$N = \frac{r(1+p)C}{(p+q)w_u(1+d)}$$

$C$	= Total Constr. Cost =	=	4092	20490
$r$	= share of lab. cost in total	=	1832 <small>(45%) w(45)</small>	4895 <small>(24.)</small>
$w_u$	= Daily cost / wk worker.	=	15	20
$w_s$	= " / sk. "	=	40	60
$Q$	= # of wk. works employed by the av. sk. worker	=	3	3
$p$	= Ratio of sk to wk lab. cost $\frac{w_s}{w_u}$	=	2.67	3
$N$	= E generated in workdays =			

① IND:

$$N = \frac{1832(1+3)4029}{(2.67+3)15} = \frac{0.45(1+3)4029}{(2.67+3)15}$$

$$= \frac{29,524,512}{85.05} = \frac{7252.2}{85.05}$$

$$= 347,143 \text{ mandays.}$$

② IMP:

$$N = \frac{4895(1+3)20490}{(3+3)20} = \frac{0.24(1+3)20490}{120}$$

$$= \frac{401,194,200}{120} = \frac{19670}{120}$$

$$= 3,343,285$$

CSST & HBWG. COVERAGE

Imp. bldg.

- Imposed ~~const.~~ Technology 5 times more expensive than the Indigenous Technology.

ie 5 times more sheltered space can be provided by the Indig Techn. for the same investment, even w/ the higher more frequent maintenance taken into account (discounted)

++

\* Fin. & Ec.

- Employment. For Rs 100 const. xpendits.

	on-site	off-site
Indig.	2.1	1.5 unskilled.
Imp.	0.72	0.5 " "

- Incomes: - % in area  
\* on-site \* off-site.

= Labour Productivity. \* m<sup>2</sup> days / sq ft. space.  
\* " / k bricks.

- Profitability: - \* Financial \* Economic.

- Savings. \* Y dicitl \* Y d ± const. cost / savings.

Fig. NET GAINS & LOSSES AMONG INPUT SUPPLIERS THROUGH SWITCHING FROM  
 (pdio) INDIGENOUS TO IMPORTED PRODUCTION TECHNOLOGIES (First Round Effects)  
 (Brick Kilns: Wall Type, Agri-Waste Fired to Trench Type, Coal Fired Kiln)

INCOME GAINS AND LOSSES						
1: From First Round of Payments						
2: Second Round of Payments						
INPUT	PRODUCTION TYPE	A: INDIGENOUS	B: IMPORTED	SWITCHING	Local	2: SWITCHING
		Wall Type, Agri-waste Fired Kiln	Trench Type, Coal Fired Kiln	GAINS & LOSSES	Coeff- icients	From A to B (Net Income Gains & Losses
A: RECEIPTS		100.00	100.00	0.00		-46.37
B: EXPENDITURES		85.04	97.47	12.43		-33.94
C: INCOME of Entrepreneur		14.96	2.53	-12.43	1.00	-12.43
1.0 CAPITAL		0.86	1.35	0.49		0.15
Plant (Kiln & Rooms)		0.63	0.83	0.20	0.76	0.15
Equipment		0.23	0.52	0.29	0.00	0.00
2.0 LAND		0.86	0.62	-0.24	1.00	-0.24
3.0 MATERIALS		32.24	47.14	14.90		-17.08
3.1 Local		32.24	11.72	-20.52		-20.52
Clay, Water, Sand		1.79	1.55	-0.24	1.00	-0.24
Wood		4.26	10.17	5.91	1.00	5.91
Agri-Waste (not incl. Transp)		26.19	0.00	-26.19	1.00	-26.19
3.2 Non-Local		0.00	35.42	35.42		3.44
Oil (incl. Transp)		0.00	17.19	17.19	0.20	3.44
Coal (not incl. Transport)		0.00	18.23	18.23	0.00	0.00
Transport		29.54	24.09	-5.45		-19.50
a) Local Truck Firms		29.54	0.00	-29.54	0.66	-19.50
b) Outside Truck Firms		0.00	24.09	24.09	0.00	0.00
4.0 LABOUR		20.63	22.28	1.65		1.65
Skilled		2.00	1.71	-0.29	1.00	-0.29
Unskilled		18.63	20.57	1.94	1.00	1.94
5.0 MISCELLANEOUS		0.91	1.99	1.08		1.08
Taxes (Rs/Year)		0.67	0.39	-0.28	1.00	-0.28
Interest (Rs/Year)		0.24	1.60	1.36	1.00	1.36

491-0095

2.8  
3 | 7.0  
6  
10

NOTE: where there are 2 graph names 1st one is graph file name (for printing) 2nd one is graph name use.

### A. INDIGENOUS TECHNOLOGY

WORKSHEET FILENAME	GRAPH NAME	TITLE
MNTCHT	AMNTRAD (MNT)	Indigenous Construction <del>Technique</del> <del>log</del> Annual Maintenance Costs by Input (Stacked Bar)
TCM	TMCHRT	Indigenous <del>Technology</del> <sup>Construction</sup> Costs by Type of Input (Mint, Total (+Mint 0% & 20%) Stacked Bar)
ISTYF	IICYFIN <del>INDPREM</del>	Import Intensive Construction Income <del>flows</del> (Per Rs 100 Spent), By Income Group (Pie Chart)
ISTYF	IICYFS	Import Intensive Construction; Income Flows Per Rs 100 Spent, Spatially (Pie Chart)
ISTYF	TRDCYFS	Indigenous Construction; Income Flows Per Rs. 100 Spent, Spatially (Pie Chart)
ISTYF	TRDCYFIN	Indigenous Construction; Income Flows Per Rs. 100 Spent, By Income Group (Pie Chart)

36.99

18

MNTCHRT

IIMCART

Import-Intensive  
Construction, Costs, By type  
of input (Mnt, Total 0%, 20%)

LIAMNT

Import-Intensive Construction  
Annual Maintenance Costs  
By Input

~~LSTYFI~~  
~~MNT~~

~~TRDCYFRCP~~  
~~TRDCYFRCP~~

LSTYFI

TRDCYFRCP

Indigenous Construction  
Income Flows / Rs 100  
Spent, By Recipient (Pie)

II CYFRCP

Import-Intensive Construct  
Income flows - / Rs 100  
Spent by Recipient

GNRLSRS 1

~~GNLSFUNCGRP~~

~~Switching~~ Construction  
Technologies: Income, Gains  
& Losses <sup>from Technology</sup>  
(By Input).  
Change, By Functional Group.

GNRLSRS 2

GNLSSPAT

Unconstr Spatial Distribution  
of Y Gains & Losses from  
Technology Change (Ext, W/in)  
Rur Urb

GNRLSRS2

GNLSYGP.

Income gains & losses  
from Technology Change, By  
Y group (Hi, Lo - local Govt.)



