Effect of Structural and Conditional Rigidities on Moving a Beneficiary from Passive to Active State

An Empirical Investigation in a Poverty Reduction Programme in Rural India

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Most studies on poverty alleviation and reduction programmes emphasize structural bottlenecks, asymmetric information, and rent seeking behaviour. This paper provides an analytical characterization of the beneficiaries in a situation of much structural and conditional rigidity, where all beneficiaries do not move from a passive state to an active state and take advantage of the government intervention despite their having access to the benefit. From an ordered logistic analysis of primary data collected from the Supply of Improved Tool Kits to Rural Artisans (SITRA programme) in 2001-02, the study reveals that factors such as demographic characteristics, incomes from other sources, gender, and the quality of the tool kits are important variables affecting their economic behaviour. It argues that skill-biased technical change in this situation may have serious short comings.

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I

Introduction

The reduction of income poverty is largely associated with long-term economic growth. There seems to be a broad consensus among analysts and policy makers that per capita income growth is a major element of sustainable poverty reduction. However, similar rates of growth can have different impact on income poverty under different conditions and rigidities.

A whole range of mixes of the two major approaches of higher economic growth and better income distribution has been used by different governments to achieve the objective of poverty reduction – again with mixed results [van de Walle, 1995]. While the East Asian countries have generally been very successful in eradicating poverty, the South Asian ones have been able to achieve rather modest successes. Latin American countries achieved little progress in poverty reduction, largely due to low economic growth, while Africa actually witnessed an increase in its poverty [Fan, 2003].

Over the years a welter of studies has explored the impact of poverty alleviation programmes – largely in developing countries [van de Walle and Nead, 1995; Fan and Rao, 2003; ADB, 1993]. In fact, impact assessment studies are routinely conducted for almost all poverty alleviation programmes at different stages of programme

implementation either by the implementing agencies themselves or by independent research organisations. Most of these studies evaluate the programmes in terms of their ability to achieve the stated objectives of the programme, deviations from programme guidelines for implementation, efficiency of targeting and gaps between targets and achievements. Few such studies delve deeper to analyse the possible causes for the observed performances or isolate the effect of a poverty alleviation programme so as to make it more effective.

Yet such analytical studies could be very useful in designing programmes for public spending. In a study to identify the relative role of government spending on agricultural growth and rural poverty reduction using state level data for 1970 to 1993 and a system of multiple simultaneous econometric equations [Fan, Hazell and Thorat, 2000], it was shown that additional government expenditure on roads had the largest impact on poverty reduction as well as a significant impact on productivity growth. Additional government spending on agricultural research and extension, followed by additional government spending on education had the second and the third highest impact on rural poverty reduction.

In another study [Fan and Hazell, 1999] the districts in India were classified into three categories: irrigated, high-potential rainfed and low-potential rainfed. The study concluded that for each type of investment – e.g. on Roads, Irrigation, Electrification, etc. – the highest marginal impact on agricultural production and poverty alleviation occurs in one of the two rainfed lands, while irrigated areas rank second or last. Such differential marginal impacts could be exploited while redesigning these public investment programmes.

In this paper we specify an econometric model that addresses the determinants of beneficiary household's failure to use government support due to structural and conditional rigidities, and yet is still tractable enough to permit the estimation with the help of standard techniques. Under Supply of Improved Toolkits to Rural Artisans (SITRA) programme, improved toolkits were provided to poor rural artisans all over India to ensure increased income of the beneficiary artisans besides achieving improved quality, enhanced production and reduction in migration to urban areas.

Unlike the alleviation programmes, success of poverty reduction programmes requires the active participation of the poor beneficiaries. Consequently, poverty reduction

programmes also need to motivate the recipients of benefits to actively participate in economic activities at higher levels. Most studies on poverty alleviation and reduction programmes emphasize structural bottlenecks, asymmetric information, and rent seeking behaviour. This paper provides an analytical characterization of the beneficiaries in a situation of much structural and conditional rigidity, where all the beneficiaries do not move from a passive state to an active state and take advantage of the government intervention despite their having access to the benefit. Our interest lies in understanding which attributes, if any, affect the beneficiary artisans' decision to use the improved toolkit or not and what could be the rationale for such differences. We use ordered logit analysis to achieve this end.

The plan of the remaining paper is as follows. Section II discusses the SITRA programme and its design and provides the background for its evaluation. It then details the methodology, sample selection and data collection used in the study. A closer look at the conditional and structural rigidities faced by the poor rural artisans – the beneficiaries of SITRA programme – is provided in Section III, which then leads to the development of the econometric model described in Section IV. Section V presents the results of the ordered logit model and analyses its implications. The paper ends with the concluding remarks in Section VI.

II
SITRA programme

Initially during the first three five-year plans (1951-1966), India adopted a development strategy to achieve higher growth rates assuming that poverty would be alleviated through the 'trickle down' effect of growth. When that did not happen, the need for direct intervention in favour of the poor was recognised. Consequently a variety of anti-poverty programmes have been designed and implemented over the years encompassing the entire spectrum from wage employment programmes on one end through programmes for rural housing and for social assistance to programmes for self-employment and asset creation on the other. Together with economic growth these anti-poverty programmes succeeded in reducing the head count index of poverty from 37.27 per cent in 1993-94 to 27.09 per cent in 1999-2000 in the rural areas [Planning Commission, 2002].

The Integrated Rural Development Programme (IRDP) was launched in 1978 with the aim of improving the asset base of the poor and involving them in the production and income-

generating process of the economy. It has been a major self-employment programme and has been financed partly by bank credit and partly by government subsidies. Although there were similar programmes for farmers earlier, this was the first time that economic activities under the animal husbandry, small business and services sectors were included.

IRDP and its Sub-Programmes

The IRDP programme has been extensively debated and evaluated both by government agencies [GoI, 1987a, 1987b, 1988a, 1988b, 1989] and independent researchers [Sen, 1996; Gupta; 1995; Dreze, 1990; Kuriam, 1987]. While most of these studies have brought many limitations of IRDP to the fore and criticised some aspects of the programme like its insistence on lifting poor households above the poverty line, almost all of them felt there were many positive aspects and some significant achievements to the credit of the programme.

Table1: Poverty Alleviation Programmes for Self-employment

Programme	Launched in	Programme Objectives
Integrated Rural Development Programme (IRDP)	1978	To improve the asset base of the poor and involve them in the production/income generation processes of the economy
Training of Rural Youth for Self-Employment (TRYSEM) [†]	August 1979	To provide basic technical and entrepreneurial skills to poor rural youth to enable them to take up self-employment in secondary and tertiary sectors of the economy
Development of Women and Children in Rural Areas (DWCRA) [†]	1982-83	To enable economic empowerment of women and to involve poor rural women in economic activities and matters concerning the rural community
Supply of Improved Toolkits to Rural Artisans (SITRA) [†]	July 1992	To enable poor rural artisans to enhance the quality of their products, increase their production and income and ensure a better quality of life with the use of improved toolkits
Ganga Kalyan Yojana (GKY) [†]	February 1997	To provide irrigation through borewells and tubewells to individuals and groups of poor small and marginal farmers
Swarnajayanti Gram Swarozgar Yojana (SGSY) [‡]	April 1999	Coceived as a holistic programme of micro-enterprise development in rural areas with emphasis on organising the rural poor into self-help groups, capacity building, planning of activity clusters, infrastructure support, technology, credit and marketing linkages

[†] Introduced as sub-programmes of IRDP but implemented as stand-alone programmes.

[‡] On 1 April, 1999, the IRDP and allied programmes were merged into a single programme known as Swarnajayanti Gram Swarozgar Yojana (SGSY).

After its launch in 1978, the IRDP has been modified, enlarged and diversified to target narrower constituencies like women, youth and artisans as shown in Table 1. All of these

were introduced as sub-programmes of IRDP but implemented as stand-alone programmes. Based on the recommendations of a committee constituted by the Planning Commission to review self-employment and wage-employment programmes, the government merged the IRDP and allied programmes into a single programme called Swarnajayanti Gram Swarozgar Yojana (SGSY) with a shift in emphasis from the individual beneficiary to a group-based approach. The SGSY was launched on 1 April, 1999.

Supply of Improved Toolkits to Rural Artisans

Artisans from a variety of crafts, except weaving, tailoring, needle-workers and beedi-workers, were to be supplied suitable improved hand tools or a sets of tools. The average cost of a toolkit was Rs 2000; in the case of power-driven tools, the average cost was Rs 4500. Ninety per cent of the cost of the toolkit was subsidised and 10 per cent was to be contributed by the beneficiary.

Prototypes of improved tools were developed by the government design and technical development centres. The state governments were authorised to choose models/tools to suit the specific needs of their artisans. Improved toolkits were developed for cane-bamboo workers, carpenters, cobblers, leather goods makers and jewellery makers, to name a few [GoI, 2000c].

Under SITRA, there was a 50 per cent reservation for Scheduled Caste (SC) and Scheduled Tribe (ST) communities. In the absence of SC/ST beneficiaries, the implementing agency could allocate the SC/ST share to other categories of artisans. There was no provision of reservation for women and physically handicapped persons. However, if eligible, preference was to be given to such persons over others.

Evaluation of SITRA

SITRA evaluation studies were conducted to probe the apparent difference in performance in Gujarat and Maharashtra in western India [GoI, 2000a] and Bihar and Haryana in northern India [GoI, 2000b]. But a comprehensive evaluation of SITRA at the all-India level was conducted during 2000 and it brought out many interesting facets of SITRA [GoI, 2000c]. The empirical part of the present paper is based on the data collected during this evaluation study.

Methodology for Sample Selection and Data Collection

The data used in this paper was collected from primary sources based on fieldwork conducted during January – July 2000. The study covered 30 states and union territories (UTs) of India. In the first stage of the multi-stage sampling used, 20 per cent of the total number of districts in each state, subject to a minimum of two districts, were chosen. The districts were selected through purposive sampling to ensure that these districts were adequately representative of the state with respect to geographical distribution and special conditions of the state, if any. A total of 129 districts were chosen at the end of the first stage.

Thirty per cent of the blocks (rounded upward) were selected in each district in the second stage through circular systematic sampling using the Directory of Blocks as the frame of reference with some modifications to accommodate blocks having watershed development programmes.

From each of the selected block five gram panchayats were chosen using convenience sampling. A gram panchayat is the lowest administrative unit in India. In some cases a gram panchayat may consist of only one village, while in others it may have a number of villages, hamlets or *padas*. The selection of villages/gram panchayats was done carefully so that these would properly represent the implementation of the SITRA programme in the blocks. Individual artisans were the final sampling units.

The Government of India enumerated BPL households in two censuses, in 1992 and 1997. The list of BPL households in each village was obtained with due care being taken to identify the reference year. Wherever available, the BPL household list from the 1997 BPL census was used. In all other cases the 1992 BPL census list was used. From this list of BPL households, a frame of artisans (individuals not households) was prepared and beneficiaries and non-beneficiaries under SITRA were identified.

From the frame of BPL artisans, five beneficiaries (selected randomly) or all of the beneficiaries in case there were less than five were selected as beneficiary respondents and the schedule for beneficiaries filled up for each of them. A total of 6788 beneficiary artisans were covered in the entire study.

III

Conditional and Structural Rigidities among Poor Rural Artisans

Sustainable poverty reduction or eradication cannot be achieved simply by a redistribution or transfer of funds or productive assets. It requires the beneficiary to make use of the funds or the assets and engage in some economic activity. Or else, if the beneficiary continues to remain in an economic inactive or passive state – a simple asset or funds transfer may result in only transient consumption after liquidation of the asset or funds. In this section we take a close look at the profile of beneficiary rural artisans to understand their socio-economic background in general and to appreciate their conditional and the structural rigidities in particular. Later we shall test if such rigidities affect the beneficiary artisan's movement from passive to active state in so far as the use of improved toolkits is concerned.

Table 2 reveals the beneficiary artisan's experience in craftsmanship among the different states of India. At all India level young artisans having up to 10 years of experience formed about 62 per cent of the total respondent artisans. However, there were wide differences from the all India averages. While states like Andhra Pradesh, Jammu and Kashmir, Maharashtra, Kerala, Orissa and Pondicherry had artisans with longer experience in craftsmanship, it was shorter in states like Arunachal Pradesh, Himachal Pradesh, Madhya Pradesh and West Bengal.

The level of education and technical training of the beneficiary artisans are shown in Table 3. The rate of illiteracy (can not read or write) at all India level was reported to be 29 per cent among the artisan beneficiaries. Interestingly, while the rate of illiteracy among artisan beneficiaries was one of the lowest in Kerala (about 3 per cent), the state also had a large percentage of rural artisans with formal education up to SSC/HSC level but with no technical training either formal or informal. The role of formal or informal technical training appears to be an insignificant factor implying that the artisans are in the present profession by inheritance.

Table 4 presents the land ownership of artisan beneficiaries along with their primary occupation and earnings from craftsmanship. Average landholding tends to be higher in hilly and difficult terrain – e.g. Jammu and Kashmir, Lakshadweep, Manipur, Sikkim, etc. and low in fertile plains like in Haryana, Punjab, Tamil Nadu, etc. The average landholding in Uttar Pradesh appears very high (5.044 hectares) again because of

dominance of hilly districts in the sample. The primary occupation of the beneficiary artisans is also summarised in Table 4 and it can be observed that while

Table 2

Artisan Beneficiaries' Experience in Craftsmanship

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries with experience in craftsmanship of			
			0-5 years	6-10 years	11-15 years	More than 15 years
1	A & N Islands	105	55.24	18.10	9.52	17.14
2	Andhra Pradesh	308	23.70	18.51	21.75	36.04
3	Arunachal Pradesh	139	82.01	17.99	0.00	0.00
4	Assam	66	37.88	31.82	10.61	19.70
5	Bihar	772	32.38	37.44	10.10	20.08
6	D & N Haveli	25	32.00	60.00	8.00	0.00
7	Daman & Diu	44	84.09	11.36	2.27	2.27
8	Goa	12	25.00	41.67	16.67	16.67
9	Gujarat	186	32.80	26.34	12.37	28.49
10	Haryana	131	22.14	22.14	16.03	39.69
11	Himachal Pradesh	16	43.75	31.25	12.50	12.50
12	Jammu & Kashmir	120	24.17	20.00	10.83	45.00
13	Karnataka	241	18.67	34.85	19.92	26.56
14	Kerala	301	16.94	24.58	21.59	36.88
15	Lakshadweep	10	100.00	0.00	0.00	0.00
16	Madhya Pradesh	531	44.63	40.49	9.23	5.65
17	Maharashtra	351	7.41	20.80	30.20	41.60
18	Manipur	67	50.75	38.81	7.46	2.99
19	Meghalaya	-	(-)	(-)	(-)	(-)
20	Mizoram	154	29.22	37.66	20.13	12.99
21	Nagaland	96	50.00	46.88	3.13	0.00
22	Orissa	495	20.40	21.82	18.38	39.39
23	Pondicherry	34	11.76	29.41	11.76	47.06
24	Punjab	173	15.61	42.20	21.39	20.81
25	Rajasthan	144	42.36	27.08	8.33	22.22
26	Sikkim	89	32.58	65.17	2.25	0.00
27	Tamil Nadu	249	8.43	42.97	28.51	20.08
28	Tripura	134	22.39	36.57	22.39	18.66
29	Uttar Pradesh	1095	37.08	26.58	14.34	22.01
30	West Bengal	339	45.72	33.92	11.50	8.85
	All India	6427	31.49	30.62	15.19	22.70

Source: Quick evaluation survey conducted during January-July 2000
Notes:
- Not reported
Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
Figures in Columns 4 to 7 for each State and UT are percentages of total beneficiary artisans in sample

Table 3

Education and Technical Training of Artisan Beneficiaries

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who can/ have had					
			cannot read or write	can read or write	some schooling (up to 4 years)	5-9 years of school	SSC/HSC	Technical Training (formal/ informal)
1	A & N Islands	105	14.29	29.52	1.90	38.10	15.24	0.95
2	Andhra Pradesh	310	45.81	6.77	4.52	25.48	15.48	1.94
3	Arunachal Pradesh	142	76.06	14.08	4.23	4.93	0.70	0.00
4	Assam	66	18.18	15.15	7.58	15.15	43.94	0.00
5	Bihar	858	37.06	35.20	7.34	8.39	11.54	0.47
6	D & N Haveli	25	80.00	4.00	8.00	4.00	4.00	0.00
7	Daman & Diu	50	28.00	8.00	6.00	34.00	24.00	0.00
8	Goa	12	0.00	33.33	25.00	41.67	0.00	0.00
9	Gujarat	189	28.57	10.58	16.40	34.39	10.05	0.00
10	Haryana	131	22.14	37.40	4.58	22.90	10.69	2.29
11	Himachal Pradesh	16	25.00	12.50	6.25	25.00	31.25	0.00
12	Jammu & Kashmir	125	61.60	8.80	4.00	17.60	7.20	0.80
13	Karnataka	242	23.97	7.85	27.69	28.51	11.16	0.83
14	Kerala	301	2.66	9.63	15.61	29.57	39.87	2.66
15	Lakshadweep	11	0.00	0.00	9.09	54.55	36.36	0.00
16	Madhya Pradesh	701	38.94	16.26	9.70	25.39	9.70	0.00
17	Maharashtra	352	20.17	15.63	17.05	27.84	18.75	0.57
18	Manipur	71	15.49	52.11	11.27	12.68	7.04	1.41
19	Meghalaya	-	(-)	(-)	(-)	(-)	(-)	(-)
20	Mizoram	157	5.10	31.85	23.57	35.67	3.82	0.00
21	Nagaland	99	18.18	59.60	12.12	7.07	3.03	0.00
22	Orissa	521	39.16	16.89	15.93	22.26	5.57	0.19
23	Pondicherry	34	0.00	0.00	20.59	64.71	11.76	2.94
24	Punjab	173	27.17	24.28	5.20	26.01	16.18	1.16
25	Rajasthan	153	32.68	22.88	11.76	28.10	4.58	0.00
26	Sikkim	89	4.49	33.71	46.07	15.73	0.00	0.00
27	Tamil Nadu	249	13.65	43.78	13.65	23.29	5.22	0.40
28	Tripura	135	6.67	18.52	33.33	36.30	5.19	0.00
29	Uttar Pradesh	1127	29.64	15.00	9.94	27.33	17.66	0.44
30	West Bengal	344	12.21	43.90	19.77	20.35	3.20	0.58
	All India	6788	28.93	21.91	12.64	23.41	12.52	0.59

Source: Quick evaluation survey conducted during January-July 2000
Notes:
* - Not reported*
*   Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample*
*   Figures in Columns 4 to 9 for each State and UT are percentages of total beneficiary artisans in sample*

only 3 per cent of the beneficiary artisans reported their primary occupation as craftsmanship in Arunachal Pradesh, the figure was 100 or close to 100 per cent in Goa and Tamil Nadu. Average earnings from craftsmanship varied between a low of Rs 2627 in Nagaland and a high of Rs 14192 in Kerala. It can also be observed that states and UTs with relatively high percentage of artisans with craftsmanship as their primary occupation tended to have correspondingly high earnings from craftsmanship. Kerala having high literacy and being periodically ruled by communist governments tended to have strong labour awareness and unions that ensured relatively high wage rates. The large-scale emigration even from rural Kerala to the Middle East may also have contributed to such high earnings from craftsmanship.

Table 5 presents the typical products produced and sold by the beneficiary artisans. The percentage of artisans reporting to sell their service/work as per the customer's needs seems to dominate at both all India and state levels. Indeed, the figure is as high as 94 per cent in Assam and 88 per cent in Tamil Nadu, Himachal Pradesh and Kerala. In contrast, majority of the artisans in Rajasthan and Andhra Pradesh produce only custom products produced on order. Finally, the artisans who sell standard products to be sold in the market appear to constitute 31 per cent of all beneficiary artisans in Bihar and 36 per cent in Orissa.

The extent of use of the improved toolkits provided to the beneficiary artisans is captured in Table 6. About 36 per cent of all beneficiary artisans reported to be using all the tools in the toolkit, while another 32.5 per cent used some of the tools. As many as 19.5 per cent of the beneficiary artisans in Karnataka and 13.9 per cent in Orissa did not use any of the tools. On the other hand, in Gujarat, Haryana, Jammu and Kashmir and Tamil Nadu more than 50 per cent of all beneficiary artisans used all the tools received.

Table 7 presents the impact of SITRA on beneficiary artisans' income from craftsmanship. At all India level 80 per cent of the beneficiary artisans were able to raise their income after receiving the toolkits. The largest percentage of artisans who could raise their income was reported in Arunachal Pradesh, Gujarat, Maharashtra, Mizoram and Tripura (between 93 and 99 per cent). About 38 per cent artisans were unable to raise their income in Madhya Pradesh – the highest among the major states.

Table 4

**Artisan Beneficiaries' Land Ownership, Primary Occupation and Average Earnings/
Wages from Craftsmanship**

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Average land owned (ha)	Percentage of sample artisan beneficiaries with primary occupation of			Avg. Earnings/ Wages from Craftmanship (Rs per annum)
				Crafts-manship	Agriculture	Manual Dom. Labour	
1	A & N Islands	105	0.333	33.33	39.05	27.62	4535.23
2	Andhra Pradesh	310	0.282	78.39	0.00	21.61	4046.77
3	Arunachal Pradesh	142	0.927	2.82	94.37	2.82	5233.09
4	Assam	66	0.429	80.30	16.67	3.03	4892.42
5	Bihar	858	0.308	84.85	7.23	7.93	2663.63
6	D & N Haveli	25	0.287	72.00	16.00	12.00	4500.00
7	Daman & Diu	50	0.265	22.00	32.00	46.00	5070.00
8	Goa	12	0.708	100.00	0.00	0.00	6958.33
9	Gujarat	189	0.189	93.12	2.12	4.76	7099.47
10	Haryana	131	0.095	94.66	1.53	3.82	5751.90
11	Himachal Pradesh	16	0.457	50.00	25.00	25.00	5250.00
12	Jammu & Kashmir	125	1.136	80.80	18.40	0.80	4326.40
13	Karnataka	242	0.532	74.79	3.31	21.90	5213.63
14	Kerala	301	0.138	93.69	3.65	2.66	14191.70
15	Lakshadweep	11	1.455	18.18	54.55	27.27	2909.09
16	Madhya Pradesh	701	0.650	74.18	16.26	9.56	5474.10
17	Maharashtra	352	0.232	92.33	1.99	5.68	5901.98
18	Manipur	71	1.682	50.70	42.25	7.04	2987.32
19	Meghalaya	-	-	(-)	(-)	(-)	-
20	Mizoram	157	1.522	84.08	12.74	3.18	4754.77
21	Nagaland	99	1.347	17.17	69.70	13.13	2627.27
22	Orissa	521	0.387	86.76	7.10	6.14	4140.01
23	Pondicherry	34	0.000	58.82	2.94	38.24	11691.20
24	Punjab	173	0.017	89.02	1.16	9.83	5034.68
25	Rajasthan	153	0.707	63.40	11.11	25.49	4403.92
26	Sikkim	89	1.039	17.98	71.91	10.11	7210.11
27	Tamil Nadu	249	0.037	99.20	0.40	0.40	6094.37
28	Tripura	135	0.030	85.93	2.96	11.11	6022.22
29	Uttar Pradesh	1096	5.044	76.28	12.68	13.87	4260.33
30	West Bengal	344	0.239	86.34	4.07	9.59	4019.18
	All India	6757	1.19	77.59	12.51	10.36	5039.20

Source: Quick evaluation survey conducted during January-July 2000
Notes:
- Not reported
Average land owned by beneficiary artisan is in hectares.
Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
Figures in Columns 4 to 8 for each State and UT are percentages of total beneficiary artisans in sample

Table 5

Typical Products Produced and Sold by Artisan Beneficiaries

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who sell		
			Standard Products produced and kept for sale	Service/Work as per the customer's needs	Custom Products produced on order
1	A & N Islands	104	10.58	64.42	25.00
2	Andhra Pradesh	218	6.42	38.99	54.59
3	Arunachal Pradesh	141	31.91	21.99	46.10
4	Assam	66	0.00	93.94	6.06
5	Bihar	773	31.44	62.87	5.69
6	D & N Haveli	2	0.00	100.00	0.00
7	Daman & Diu	19	15.79	57.89	26.32
8	Goa	12	8.33	91.67	0.00
9	Gujarat	183	6.01	68.85	25.14
10	Haryana	125	10.40	80.80	8.80
11	Himachal Pradesh	16	0.00	87.50	12.50
12	Jammu & Kashmir	121	9.09	43.80	47.11
13	Karnataka	241	5.39	63.07	31.54
14	Kerala	293	5.80	87.37	6.83
15	Lakshadweep	7	14.29	71.43	14.29
16	Madhya Pradesh	529	2.08	69.57	28.36
17	Maharashtra	344	7.27	64.53	28.20
18	Manipur	62	14.52	66.13	19.35
19	Meghalaya	-	(-)	(-)	(-)
20	Mizoram	156	8.97	33.33	57.69
21	Nagaland	98	15.31	61.22	23.47
22	Orissa	492	36.38	36.59	27.03
23	Pondicherry	34	2.94	82.35	14.71
24	Punjab	171	6.43	73.10	20.47
25	Rajasthan	134	14.93	20.15	64.93
26	Sikkim	88	0.00	71.59	28.41
27	Tamil Nadu	248	4.84	88.31	6.85
28	Tripura	133	21.80	9.77	68.42
29	Uttar Pradesh	1030	11.75	57.48	30.78
30	West Bengal	342	11.99	64.62	23.39
	All India	**6182**	**13.99**	**59.06**	**26.33**

Source: Quick evaluation survey conducted during January-July 2000
Notes:
  - Not reported
  Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
  Figures in Columns 4 to 6 for each State and UT are percentages of total beneficiary artisans in sample

Table 6

Artisan Beneficiaries' Use of Toolkits

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who are			
			No/ Using none	Using some	Using Most	Using All
1	A & N Islands	104	3.85	23.08	27.88	45.19
2	Andhra Pradesh	310	7.74	39.68	48.06	4.52
3	Arunachal Pradesh	141	0.00	27.66	47.52	24.82
4	Assam	66	4.55	40.91	9.09	45.45
5	Bihar	770	0.26	47.79	22.47	29.48
6	D & N Haveli	25	20.00	0.00	52.00	28.00
7	Daman & Diu	50	6.00	18.00	38.00	38.00
8	Goa	12	0.00	50.00	8.33	41.67
9	Gujarat	186	0.00	8.06	20.97	70.97
10	Haryana	131	1.53	25.95	12.21	60.31
11	Himachal Pradesh	16	6.25	37.50	25.00	31.25
12	Jammu & Kashmir	124	0.00	0.81	33.06	66.13
13	Karnataka	241	19.50	41.08	21.16	18.26
14	Kerala	295	9.15	14.58	16.61	59.66
15	Lakshadweep	11	45.45	18.18	9.09	27.27
16	Madhya Pradesh	533	5.07	46.72	21.95	26.27
17	Maharashtra	345	8.41	42.90	15.65	33.04
18	Manipur	67	1.49	17.91	50.75	29.85
19	Meghalaya	-	(-)	(-)	(-)	(-)
20	Mizoram	157	0.64	38.22	16.56	44.59
21	Nagaland	97	25.77	1.03	29.90	43.30
22	Orissa	512	13.87	47.46	19.53	19.14
23	Pondicherry	34	5.88	52.94	17.65	23.53
24	Punjab	171	9.36	68.42	8.19	14.04
25	Rajasthan	139	4.32	23.02	55.40	17.27
26	Sikkim	89	0.00	0.00	19.10	80.90
27	Tamil Nadu	248	4.03	16.53	21.37	58.06
28	Tripura	131	0.00	16.79	21.37	61.83
29	Uttar Pradesh	1102	5.26	25.68	27.13	41.92
30	West Bengal	342	0.58	21.35	42.11	35.96
	All India	**6449**	**5.75**	**32.49**	**25.68**	**36.08**

Source: Quick evaluation survey conducted during January-July 2000

Notes:

  - Not reported

   Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample

   Figures in Columns 4 to 7 for each State and UT are percentages of total beneficiary artisans in sample

Table 7

Impact of SITRA on Artisan Beneficiaries' Income from Craftsmanship

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who have had	
			increase in income	no increase in income
1	A & N Islands	105	33.33	66.67
2	Andhra Pradesh	310	88.06	11.94
3	Arunachal Pradesh	142	99.30	0.70
4	Assam	66	89.39	10.61
5	Bihar	858	83.10	16.90
6	D & N Haveli	25	92.00	8.00
7	Daman & Diu	50	38.00	62.00
8	Goa	12	91.67	8.33
9	Gujarat	189	93.12	6.88
10	Haryana	131	91.60	8.40
11	Himachal Pradesh	16	75.00	25.00
12	Jammu & Kashmir	125	87.20	12.80
13	Karnataka	242	69.42	30.58
14	Kerala	301	71.43	28.57
15	Lakshadweep	11	18.18	81.82
16	Madhya Pradesh	701	62.05	37.95
17	Maharashtra	352	93.18	6.82
18	Manipur	71	90.14	9.86
19	Meghalaya	-	(-)	(-)
20	Mizoram	157	95.54	4.46
21	Nagaland	99	83.84	16.16
22	Orissa	521	79.65	20.35
23	Pondicherry	34	29.41	70.59
24	Punjab	173	82.66	17.34
25	Rajasthan	153	86.27	13.73
26	Sikkim	89	8.99	91.01
27	Tamil Nadu	249	92.37	7.63
28	Tripura	135	96.30	3.70
29	Uttar Pradesh	1127	81.37	18.63
30	West Bengal	344	79.94	20.06
	All India	**6788**	**79.49**	**20.51**

Source: Quick evaluation survey conducted during January-July 2000
Notes:
  - Not reported
  Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
  Figures in Columns 4 to 5 for each State and UT are percentages of total beneficiary artisans in sample

IV

Econometric Model

The econometric analysis adopted in this study is limited to the ordered logit model, a technique used most frequently in cross-sectional studies of dependent variables that take on only a finite number of values possessing a natural ordering. The ordered logit model, also known as the cumulative logit model, estimates the effects of independent variables on the log odds of having lower rather than higher scores on the dependent variable.

$$Ln\left(\frac{p(Y \le j)}{p(Y > j)}\right) = \alpha_j - \sum_{k=1}^{K} \beta_k X_k, \quad \text{for } j = 1 \text{ to } J\text{-}1$$

In the equation, α_j are intercepts indicating logodds of lower rather than higher scores when all independent variables equal zero. Note that the effects of the independent variables $\beta_k X_k$ are subtracted from rather than added to the intercepts. This is done so that positive coefficients indicate increased likelihood of higher scores on the dependent variables. The intercepts for $J - 1$ categories express the categorical nature of the dependent variable while a parallel odds restriction to let independent variables have the same effects on all cumulative logit results in a parsimonious model for ordinal data. As ordered logit models are not linear in the parameters, they are estimated by using maximum likelihood techniques.

Table 8 defines all the variables used in the model. The dependent variable BDUT represents the beneficiary artisan's decision regarding use/non use of toolkits. This has four categories: 0= using none, 1= using some, 2 = using most, and 3 = using all.

The issue of the artisan's decision to use or not to use the support provided may form a major contribution to poverty literature. In most cases the policy makers are confused between poverty reduction and alleviation strategies. The former is the long run type and the latter is the short run type. The SITRA programme is a poverty reduction type of programme but some of the criteria for choosing beneficiaries are not self-fulfilling.

The independent variable AGE is demographic and may contribute to conditional rigidity of the beneficiary artisan. This factor is defined by the beneficiary artisan's age (1 = upto 19 years, 2 = 20-39 years, 3 = 40-59 years, and 4=60 years and above).

Table 8: Definition of Variables

Dependent Variable

BDUT	Beneficiary artisan's decision regarding use of toolkits
	0 using none
	1 using some
	2 using most
	3 using all

Independent Variables

AGE	Age of beneficiary artisan
	1 upto 19 years
	2 20 - 39 years
	3 40 - 59 years
	4 60 years and above
LED	Level of education/skill
	1 cannot read/write
	2 can read/write
	3 some schooling (upto 4 years)
	4 SSC/HSC
	5 Technical training (formal/informal)
EAM	Number of earning members in the household
TYPPR	Typical products produced or services sold
	0 standard product produced and kept for sale
	1 sell the service/work as per customer's needs
	2 custom produce on order
BHIC	Beneficiary household's income from artisanal work/crafts (in Rs p.a.)
BHTI	Beneficiary household's total income in an agriculture year (in Rs p.a.)
BHPQT	Beneficiary artisan's perception regarding the quality of the toolkits
	0 poor/none are good
	1 some are good
	2 most are good
	3 all are good
TNUD	Toolkit is not used due to
	1 not in usable condition
	2 does not know how to use toolkits
	3 not in beneficiary household's possession or sold it
	4 tool(s) does/do not relate to the craft of the benefiary artisan
	5 no demand for the products made using the toolkit

While categories 1, 2 and 3 are preferred while selecting beneficiaries, the programme will be successful if they can successfully use the improved toolkits. If this variable significantly affects the artisan's decision to use the toolkit, then it should be used for targeting policies.

The variable LED defines the level of education and skill of the beneficiary artisan. This has been measured in five categories such as 1 = cannot read and write, 2 = can read and write, 3 = some schooling, 4 = SSC/HSC, 5 = technical training. If LED is found positive, then this could perhaps be interpreted as the skill and training of the artisan affecting the likelihood of use the toolkits. The variable could also affect the way an artisan adopts and adapts the new technology represented by the improved toolkits. These variables could lead to a higher or lower wage inequality depending on the sign of the coefficient.

With the help of EAM of the beneficiary household, we seek to capture the economic pressure within the household. This is measured simply by the number of regular earning members in the household. There are many sample beneficiary households with 0 earning members and some with as high as 4 or 5 earning members. We would like to account for the effect of this variable on the probability of a beneficiary artisan using the improved toolkit.

The variable TYPPR measures an interesting characteristic of an artisan – how exactly is the labour offered in the market. If this variable is found significant, then skilled artisanal labour may not be homogenous and supply of improved toolkits might actually raise wage inequality. The sign and significance of the coefficient for this variable would reflect, for example, if artisanal labour used for standard or commoditised products is valued differently from the same used in customised products or services. While all the previously listed ones represented conditional rigidities faced by the beneficiary artisan, this variable would be part of the structural rigidity faced by the beneficiary artisan.

The beneficiary household's income from artisanal work/crafts is represented as BHIC, while the total income of the household is captured in the variable BHTI. Both these variables are measured in Rupees per annum. It is realized that these variables are difficult to measure – particularly in the rural setting – and that too among poor rural artisans.

Finally the variables such as BHPQT and TNUD are captured as proxies of structural rigidity variables. BHPQT measures the beneficiary artisan's perception regarding the quality of the toolkit. This is measured in four categories: 0 = poor/none are good, 1 = some are good, 2 = most are good, and 3 = all are good. Intuition suggests that poor condition of the toolkit may deter the beneficiary artisan from using it. Likewise, TNUD may affect the outcome of the beneficiary artisan's decision to use or not to use the given toolkit. TNUD is captured in five categories such as 1 = not in usable condition, 2 = does

not know how to use the toolkit, 3 = not in beneficiary artisan's possession, 4 = tool(s) does/do not relate to the craft of the beneficiary artisan, and 5 = no demand for the products made using the toolkit.

V

Results and Analysis

In Table 9-12(b), we report the maximum likelihood estimates of the ordered logit model on a selection of eight explanatory variables as detailed above. The estimation, using the SPSS software package, was performed on the dataset consisting of 6788 observations (beneficiary artisans). We could not use 4187 observations because of some missing data. Thus only 2601 observations were considered for the purpose of the ordered logit analysis (Table 9).

Table 9: Case Processing Summary

		N
BDUT	0	240
	1	1675
	2	591
	3	95
Valid		2601
Missing		4187
Total		6788

Table 10: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig
Intercept Only	4973.085			
Final	3448.984	1524.101	24	.000

Table 11: Pseudo R-Square

Cox and Snell	.443
Nagelkerke	.519
McFadden	.305

Table 10 shows the value of Chi-square as 1524.10 with 24 df and is the most relevant value here. This is the likelihood ratio test that all coefficients for all independent variables are equal to zero. This null hypothesis can be rejected since the test is highly significant. The pseudo R-square measures indicate that the model performs fairly well

(Table 11). The Nagelkerke R^2 value will usually be the most relevant value to report. It corrects the Cox and Snell value so that it can theoretically achieve a value of 1. It is to be mentioned here that pseudo R^2 measures confound goodness of fit and explanatory power of the model.

Table 12(a): Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig
Threshold	[BDUT = 0]	-.234	.399	.346	1	.557
	[BDUT = 1]	4.746	.407	136.146	1	.000
	[BDUT = 2]	8.327	.447	347.236	1	.000
Location	AGE	-3.972E-02	.079	.250	1	.617
	LED	-.171	.034	25.109	1	.000
	EAM	-.137	.045	9.346	1	.002
	TYPPR_	-2.097E-02	.073	.082	1	.774
	BHIC	-2.658E-05	.000	7.348	1	.007
	BHTI	1.496E-05	.000	2.481	1	.115
	BHPQT	2.723	.082	1097.563	1	.000
	TNUD	.174	.035	24.196	1	.000

Table 12 (b): Parameter Estimates

		95% Confidence Interval	
		Lower Bound	Upper Bound
Threshold	[BDUT = 0]	-1.016	.547
	[BDUT = 1]	3.949	5.543
	[BDUT = 2]	7.451	9.203
Location	AGE	-.195	.116
	LED	-.238	-.104
	EAM	-.225	-4.922E-02
	TYPPR	-.164	.122
	BHIC	-4.579E-05	-7.361E-06
	BHTI	-3.656E-06	3.357E-05
	BHPQT	2.562	2.884
	TNUD	.105	.244

Tables 12(a) and 12(b) provide the estimation results of the ordered logit model. All the explanatory variables are significant except AGE, TYPPR and BHTI. The variable LED i.e. 'level of education' by the artisan reveals an interesting negative and strongly significant coefficient. *Ceteris paribus*, artisans with lower general education are more likely to use the toolkits. It is to be noted that a small and negligible percentage (only 0.5%) of sample beneficiaries had any technical training – either formal or informal.

The negative coefficient of EAM i.e 'number of earning members in the beneficiary household' indicates that beneficiary households with fewer earning members are more

likely to use the toolkits than ones with more earning members. This is likely due to the fact that having fewer earning members in the household puts greater pressure on the artisan to try out different options to change the economic status of the household.

Interestingly, the beneficiary household's income from artisanal work/crafts (BHIC) increases the probability of not using the toolkits. The rationale for this may be similar to what was discussed above in case of EAM. However, the significance level of this variable is only 0.007 and so the null hypothesis that the coefficient is zero can be rejected only at 10 percent significance level and cannot be rejected at, say, 5 percent significance level. Surprisingly, the total income of the beneficiary household (BHTI) does not affect the decision to use the toolkit.

The beneficiary household's positive perception regarding the quality of the toolkits (BHPQT) indicates the higher probability to use the tool kits. In particular, this model sheds light on how the quality of toolkits affects the beneficiary artisan's decision to use these. This gives us more insights about the structural condition of the toolkit market, their appropriateness to a particular skill category and then the quality of the tool kits. This variable appears to be the one of the most powerful and significant.

The TNUD (toolkits are not used) variable appears to have increased the probability of the beneficiary artisan of not using the toolkits. Our result therefore implies that the impact of such inference may have serious consequences. This may be due to the fact that the toolkits are not in usable condition because there is strong nexus between local level decision maker and the toolkit manufacturer. Hence the toolkits are not used by the beneficiary artisans.

VI

Conclusion

A large volume of literature has been generated in India and abroad on understanding the consequence of public expenditure in rural areas. While much of this literature has focused on farm and non-farm aspects on various economic issues, the present study uses field data to analyse the effect of structural and conditional rigidities on moving a beneficiary from passive to active state with the help of data collected under SITRA programme.

As mentioned earlier, most such studies have concentrated on evaluating the effectiveness of government interventions in meeting the stated programme objectives and targets, gaps

between desired and actual targeting of beneficiaries and adherence to programme guidelines. The few studies which have been conducted to find the differential marginal impact of different government interventions have all used secondary macro data. The study reported in this paper uses micro-level data obtained from primary sources comprising a fairly large sample of poor beneficiary artisans.

The ordered logit framework allows us to identify factors that explain the beneficiary artisan's decision to use or not to use the support provided by the government. We are thus able to show that discreteness does matter, in the sense that simpler linear regression analysis can not capture the important features of conditional and structural rigidities. With this application, we hope to have demonstrated the flexibility and power of ordered logit model as a tool for investigating the dynamic aspect of poverty reduction programmes.

When looking at the explanatory variables, we find that indeed there is strong evidence that governments are confused about the concept of poverty reduction and alleviation strategies. This finding is important for two reasons. First, it means that there are two different types of stakeholders in poverty reduction programmes, i.e. those who would remain passive even after the receipt of the benefit and others who are likely to move from passive to active state. Identifying aging artisans as beneficiaries of the programme may not bear much fruit as they are unlikely to become economically active ones due to their conditional rigidities.

What do our results suggest for policy? Our findings could provide a rationale for a policy in this context. A thorough understanding of the conditional and structural rigidities faced by a beneficiary artisan and how these affect his economic behaviour would be very useful in both designing and implementation of poverty reduction programmes. It should be noted that while appreciation of significant conditional rigidities are useful while designing such programmes – particularly while targeting the beneficiaries – structural rigidities are important while implementing and monitoring these programmes

Narrower targeting on "less-favoured" artisans who are more likely to use the toolkits and hence increase their income from craftsmanship and so promote both economic growth and poverty reduction, again leading to a win-win situation is one such possibility. Although such conclusions appear counter-intuitive initially, they may appear entirely plausible if the cost of working with improved toolkits is factored in an artisan's decision

on the supply of skilled artisanal labour with improved toolkits. The role of opportunity costs have been studied in workfare programmes where self-selection has been explained using opportunity cost of a beneficiary (Ravallion and Datt, 1995), but surely its role extends far beyond workfare to all poverty reduction programmes in explaining the economic behaviour of different beneficiaries. A deeper understanding of the costs and consequences of selection of beneficiary households in specific programmes could be quite valuable for scholars and policy makers.

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TABLE 1

Poverty Alleviation Programmes for Self-employment

Programme	Launched in	Programme Objectives
Integrated Rural Development Programme (IRDP)	1978	To improve the asset base of the poor and involve them in the production/income generation processes of the economy
Training of Rural Youth for Self-Employment (TRYSEM) [†]	August 1979	To provide basic technical and entrepreneurial skills to poor rural youth to enable them to take up self-employment in secondary and tertiary sectors of the economy
Development of Women and Children in Rural Areas (DWCRA) [†]	1982-83	To enable economic empowerment of women and to involve poor rural women in economic activities and matters concerning the rural community
Supply of Improved Toolkits to Rural Artisans (SITRA) [†]	July 1992	To enable poor rural artisans to enhance the quality of their products, increase their production and income and ensure a better quality of life with the use of improved toolkits
Ganga Kalyan Yojana (GKY) [†]	February 1997	To provide irrigation through borewells and tubewells to individuals and groups of poor small and marginal farmers
Swarnajayanti Gram Swarozgar Yojana (SGSY) [‡]	April 1999	Coceived as a holistic programme of micro-enterprise development in rural areas with emphasis on organising the rural poor into self-help groups, capacity building, planning of activity clusters, infrastructure support, technology, credit and marketing linkages

[†]   Introduced as sub-programmes of IRDP but implemented as stand-alone programmes.

[‡]   On 1 April, 1999, the IRDP and allied programmes were merged into a single programme known as Swarnajayanti Gram Swarozgar Yojana (SGSY).

<p align="center">**Table 2**</p>

<p align="center">**Artisan Beneficiaries' Experience in Craftsmanship**</p>

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries with experience in craftsmanship of			
			0-5 years	6-10 years	11-15 years	More than 15 years
1	A & N Islands	105	55.24	18.10	9.52	17.14
2	Andhra Pradesh	308	23.70	18.51	21.75	36.04
3	Arunachal Pradesh	139	82.01	17.99	0.00	0.00
4	Assam	66	37.88	31.82	10.61	19.70
5	Bihar	772	32.38	37.44	10.10	20.08
6	D & N Haveli	25	32.00	60.00	8.00	0.00
7	Daman & Diu	44	84.09	11.36	2.27	2.27
8	Goa	12	25.00	41.67	16.67	16.67
9	Gujarat	186	32.80	26.34	12.37	28.49
10	Haryana	131	22.14	22.14	16.03	39.69
11	Himachal Pradesh	16	43.75	31.25	12.50	12.50
12	Jammu & Kashmir	120	24.17	20.00	10.83	45.00
13	Karnataka	241	18.67	34.85	19.92	26.56
14	Kerala	301	16.94	24.58	21.59	36.88
15	Lakshadweep	10	100.00	0.00	0.00	0.00
16	Madhya Pradesh	531	44.63	40.49	9.23	5.65
17	Maharashtra	351	7.41	20.80	30.20	41.60
18	Manipur	67	50.75	38.81	7.46	2.99
19	Meghalaya	-	(-)	(-)	(-)	(-)
20	Mizoram	154	29.22	37.66	20.13	12.99
21	Nagaland	96	50.00	46.88	3.13	0.00
22	Orissa	495	20.40	21.82	18.38	39.39
23	Pondicherry	34	11.76	29.41	11.76	47.06
24	Punjab	173	15.61	42.20	21.39	20.81
25	Rajasthan	144	42.36	27.08	8.33	22.22
26	Sikkim	89	32.58	65.17	2.25	0.00
27	Tamil Nadu	249	8.43	42.97	28.51	20.08
28	Tripura	134	22.39	36.57	22.39	18.66
29	Uttar Pradesh	1095	37.08	26.58	14.34	22.01
30	West Bengal	339	45.72	33.92	11.50	8.85
	All India	6427	31.49	30.62	15.19	22.70

Source: Quick evaluation survey conducted during January-July 2000
Notes:
- Not reported
Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
Figures in Columns 4 to 7 for each State and UT are percentages of total beneficiary artisans in sample

Table 3

Education and Technical Training of Artisan Beneficiaries

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who can/ have had					
			cannot read or write	can read or write	some schooling (up to 4 years)	5-9 years of school	SSC/HSC	Technical Training (formal/ informal)
1	A & N Islands	105	14.29	29.52	1.90	38.10	15.24	0.95
2	Andhra Pradesh	310	45.81	6.77	4.52	25.48	15.48	1.94
3	Arunachal Pradesh	142	76.06	14.08	4.23	4.93	0.70	0.00
4	Assam	66	18.18	15.15	7.58	15.15	43.94	0.00
5	Bihar	858	37.06	35.20	7.34	8.39	11.54	0.47
6	D & N Haveli	25	80.00	4.00	8.00	4.00	4.00	0.00
7	Daman & Diu	50	28.00	8.00	6.00	34.00	24.00	0.00
8	Goa	12	0.00	33.33	25.00	41.67	0.00	0.00
9	Gujarat	189	28.57	10.58	16.40	34.39	10.05	0.00
10	Haryana	131	22.14	37.40	4.58	22.90	10.69	2.29
11	Himachal Pradesh	16	25.00	12.50	6.25	25.00	31.25	0.00
12	Jammu & Kashmir	125	61.60	8.80	4.00	17.60	7.20	0.80
13	Karnataka	242	23.97	7.85	27.69	28.51	11.16	0.83
14	Kerala	301	2.66	9.63	15.61	29.57	39.87	2.66
15	Lakshadweep	11	0.00	0.00	9.09	54.55	36.36	0.00
16	Madhya Pradesh	701	38.94	16.26	9.70	25.39	9.70	0.00
17	Maharashtra	352	20.17	15.63	17.05	27.84	18.75	0.57
18	Manipur	71	15.49	52.11	11.27	12.68	7.04	1.41
19	Meghalaya	-	(-)	(-)	(-)	(-)	(-)	(-)
20	Mizoram	157	5.10	31.85	23.57	35.67	3.82	0.00
21	Nagaland	99	18.18	59.60	12.12	7.07	3.03	0.00
22	Orissa	521	39.16	16.89	15.93	22.26	5.57	0.19
23	Pondicherry	34	0.00	0.00	20.59	64.71	11.76	2.94
24	Punjab	173	27.17	24.28	5.20	26.01	16.18	1.16
25	Rajasthan	153	32.68	22.88	11.76	28.10	4.58	0.00
26	Sikkim	89	4.49	33.71	46.07	15.73	0.00	0.00
27	Tamil Nadu	249	13.65	43.78	13.65	23.29	5.22	0.40
28	Tripura	135	6.67	18.52	33.33	36.30	5.19	0.00
29	Uttar Pradesh	1127	29.64	15.00	9.94	27.33	17.66	0.44
30	West Bengal	344	12.21	43.90	19.77	20.35	3.20	0.58
	All India	**6788**	**28.93**	**21.91**	**12.64**	**23.41**	**12.52**	**0.59**

Source: Quick evaluation survey conducted during January-July 2000
Notes:
  - Not reported
   Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
   Figures in Columns 4 to 9 for each State and UT are percentages of total beneficiary artisans in sample

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Table 4

**Artisan Beneficiaries' Land Ownership, Primary Occupation and Average Earnings/
Wages from Craftsmanship**

</div>

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Average land owned (ha)	Percentage of sample artisan beneficiaries with primary occupation of			Avg. Earnings/ Wages from Craftmanship (Rs per annum)
				Crafts-manship	Agriculture	Manual Dom. Labour	
1	A & N Islands	105	0.333	33.33	39.05	27.62	4535.23
2	Andhra Pradesh	310	0.282	78.39	0.00	21.61	4046.77
3	Arunachal Pradesh	142	0.927	2.82	94.37	2.82	5233.09
4	Assam	66	0.429	80.30	16.67	3.03	4892.42
5	Bihar	858	0.308	84.85	7.23	7.93	2663.63
6	D & N Haveli	25	0.287	72.00	16.00	12.00	4500.00
7	Daman & Diu	50	0.265	22.00	32.00	46.00	5070.00
8	Goa	12	0.708	100.00	0.00	0.00	6958.33
9	Gujarat	189	0.189	93.12	2.12	4.76	7099.47
10	Haryana	131	0.095	94.66	1.53	3.82	5751.90
11	Himachal Pradesh	16	0.457	50.00	25.00	25.00	5250.00
12	Jammu & Kashmir	125	1.136	80.80	18.40	0.80	4326.40
13	Karnataka	242	0.532	74.79	3.31	21.90	5213.63
14	Kerala	301	0.138	93.69	3.65	2.66	14191.70
15	Lakshadweep	11	1.455	18.18	54.55	27.27	2909.09
16	Madhya Pradesh	701	0.650	74.18	16.26	9.56	5474.10
17	Maharashtra	352	0.232	92.33	1.99	5.68	5901.98
18	Manipur	71	1.682	50.70	42.25	7.04	2987.32
19	Meghalaya	-	-	(-)	(-)	(-)	-
20	Mizoram	157	1.522	84.08	12.74	3.18	4754.77
21	Nagaland	99	1.347	17.17	69.70	13.13	2627.27
22	Orissa	521	0.387	86.76	7.10	6.14	4140.01
23	Pondicherry	34	0.000	58.82	2.94	38.24	11691.20
24	Punjab	173	0.017	89.02	1.16	9.83	5034.68
25	Rajasthan	153	0.707	63.40	11.11	25.49	4403.92
26	Sikkim	89	1.039	17.98	71.91	10.11	7210.11
27	Tamil Nadu	249	0.037	99.20	0.40	0.40	6094.37
28	Tripura	135	0.030	85.93	2.96	11.11	6022.22
29	Uttar Pradesh	1096	5.044	76.28	12.68	13.87	4260.33
30	West Bengal	344	0.239	86.34	4.07	9.59	4019.18
	All India	**6757**	**1.19**	**77.59**	**12.51**	**10.36**	**5039.20**

Source: Quick evaluation survey conducted during January-July 2000
Notes:
  - Not reported
  Average land owned by beneficiary artisan is in hectares.
  Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
  Figures in Columns 4 to 8 for each State and UT are percentages of total beneficiary artisans in sample

Table 5

Typical Products Produced and Sold by Artisan Beneficiaries

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who sell		
			Standard Products produced and kept for sale	Service/Work as per the customer's needs	Custom Products produced on order
1	A & N Islands	104	10.58	64.42	25.00
2	Andhra Pradesh	218	6.42	38.99	54.59
3	Arunachal Pradesh	141	31.91	21.99	46.10
4	Assam	66	0.00	93.94	6.06
5	Bihar	773	31.44	62.87	5.69
6	D & N Haveli	2	0.00	100.00	0.00
7	Daman & Diu	19	15.79	57.89	26.32
8	Goa	12	8.33	91.67	0.00
9	Gujarat	183	6.01	68.85	25.14
10	Haryana	125	10.40	80.80	8.80
11	Himachal Pradesh	16	0.00	87.50	12.50
12	Jammu & Kashmir	121	9.09	43.80	47.11
13	Karnataka	241	5.39	63.07	31.54
14	Kerala	293	5.80	87.37	6.83
15	Lakshadweep	7	14.29	71.43	14.29
16	Madhya Pradesh	529	2.08	69.57	28.36
17	Maharashtra	344	7.27	64.53	28.20
18	Manipur	62	14.52	66.13	19.35
19	Meghalaya	-	(-)	(-)	(-)
20	Mizoram	156	8.97	33.33	57.69
21	Nagaland	98	15.31	61.22	23.47
22	Orissa	492	36.38	36.59	27.03
23	Pondicherry	34	2.94	82.35	14.71
24	Punjab	171	6.43	73.10	20.47
25	Rajasthan	134	14.93	20.15	64.93
26	Sikkim	88	0.00	71.59	28.41
27	Tamil Nadu	248	4.84	88.31	6.85
28	Tripura	133	21.80	9.77	68.42
29	Uttar Pradesh	1030	11.75	57.48	30.78
30	West Bengal	342	11.99	64.62	23.39
	All India	6182	13.99	59.06	26.33

Source: Quick evaluation survey conducted during January-July 2000
Notes:
- Not reported
Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
Figures in Columns 4 to 6 for each State and UT are percentages of total beneficiary artisans in sample

Table 6

Artisan Beneficiaries' Use of Toolkits

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who are			
			No/ Using none	Using some	Using Most	Using All
1	A & N Islands	104	3.85	23.08	27.88	45.19
2	Andhra Pradesh	310	7.74	39.68	48.06	4.52
3	Arunachal Pradesh	141	0.00	27.66	47.52	24.82
4	Assam	66	4.55	40.91	9.09	45.45
5	Bihar	770	0.26	47.79	22.47	29.48
6	D & N Haveli	25	20.00	0.00	52.00	28.00
7	Daman & Diu	50	6.00	18.00	38.00	38.00
8	Goa	12	0.00	50.00	8.33	41.67
9	Gujarat	186	0.00	8.06	20.97	70.97
10	Haryana	131	1.53	25.95	12.21	60.31
11	Himachal Pradesh	16	6.25	37.50	25.00	31.25
12	Jammu & Kashmir	124	0.00	0.81	33.06	66.13
13	Karnataka	241	19.50	41.08	21.16	18.26
14	Kerala	295	9.15	14.58	16.61	59.66
15	Lakshadweep	11	45.45	18.18	9.09	27.27
16	Madhya Pradesh	533	5.07	46.72	21.95	26.27
17	Maharashtra	345	8.41	42.90	15.65	33.04
18	Manipur	67	1.49	17.91	50.75	29.85
19	Meghalaya	-	(-)	(-)	(-)	(-)
20	Mizoram	157	0.64	38.22	16.56	44.59
21	Nagaland	97	25.77	1.03	29.90	43.30
22	Orissa	512	13.87	47.46	19.53	19.14
23	Pondicherry	34	5.88	52.94	17.65	23.53
24	Punjab	171	9.36	68.42	8.19	14.04
25	Rajasthan	139	4.32	23.02	55.40	17.27
26	Sikkim	89	0.00	0.00	19.10	80.90
27	Tamil Nadu	248	4.03	16.53	21.37	58.06
28	Tripura	131	0.00	16.79	21.37	61.83
29	Uttar Pradesh	1102	5.26	25.68	27.13	41.92
30	West Bengal	342	0.58	21.35	42.11	35.96
	All India	6449	5.75	32.49	25.68	36.08

Source: Quick evaluation survey conducted during January-July 2000

Notes:

  - Not reported

  Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample

  Figures in Columns 4 to 7 for each State and UT are percentages of total beneficiary artisans in sample

Table 7

Impact of SITRA on Artisan Beneficiaries' Income from Craftsmanship

Sl No.	States/UTs	Total no. of sample artisan beneficiaries	Percentage of sample artisan beneficiaries who have had	
			increase in income	no increase in income
1	A & N Islands	105	33.33	66.67
2	Andhra Pradesh	310	88.06	11.94
3	Arunachal Pradesh	142	99.30	0.70
4	Assam	66	89.39	10.61
5	Bihar	858	83.10	16.90
6	D & N Haveli	25	92.00	8.00
7	Daman & Diu	50	38.00	62.00
8	Goa	12	91.67	8.33
9	Gujarat	189	93.12	6.88
10	Haryana	131	91.60	8.40
11	Himachal Pradesh	16	75.00	25.00
12	Jammu & Kashmir	125	87.20	12.80
13	Karnataka	242	69.42	30.58
14	Kerala	301	71.43	28.57
15	Lakshadweep	11	18.18	81.82
16	Madhya Pradesh	701	62.05	37.95
17	Maharashtra	352	93.18	6.82
18	Manipur	71	90.14	9.86
19	Meghalaya	-	(-)	(-)
20	Mizoram	157	95.54	4.46
21	Nagaland	99	83.84	16.16
22	Orissa	521	79.65	20.35
23	Pondicherry	34	29.41	70.59
24	Punjab	173	82.66	17.34
25	Rajasthan	153	86.27	13.73
26	Sikkim	89	8.99	91.01
27	Tamil Nadu	249	92.37	7.63
28	Tripura	135	96.30	3.70
29	Uttar Pradesh	1127	81.37	18.63
30	West Bengal	344	79.94	20.06
	All India	**6788**	**79.49**	**20.51**

Source: Quick evaluation survey conducted during January-July 2000
Notes:
- Not reported
  Figures in Column 3 for each State and UT are numbers of beneficiary artisans in sample
  Figures in Columns 4 to 5 for each State and UT are percentages of total beneficiary artisans in sample

Table 8

Definition of Variables

Dependent Variable

BDUT	Beneficiary artisan's decision regarding use of toolkits
	0 using none
	1 using some
	2 using most
	3 using all

Independent Variables

AGE	Age of beneficiary artisan
	1 upto 19 years
	2 20-39 years
	3 40-59 years
	4 60 years and above
LED	Level of education/skill
	1 cannot read/write
	2 can read/write
	3 some schooling (upto 4 years)
	4 SSC/HSC
	5 Technical training (formal/informal)
EAM	Number of earning members in the household
TYPPR	Typical products produced or services sold
	0 standard product produced and kept for sale
	1 sell the service/work as per customer's needs
	2 custom produce on order
BHIC	Beneficiary household's income from artisanal work/crafts (in Rs p.a.)
BHTI	Beneficiary household's total income in an agriculture year (in Rs p.a.)
BHPQT	Beneficiary artisan's perception regarding the quality of the toolkits
	0 poor/none are good
	1 some are good
	2 most are good
	3 all are good
TNUD	Toolkit is not used due to
	1 not in usable condition
	2 does not know how to use toolkits
	3 not in beneficiary household's possession or sold it
	4 tool(s) does/do not relate to the craft of the benefiary artisan
	5 no demand for the products made using the toolkit

Table 9

Case Processing Summary

		N
BDUT	0	240
	1	1675
	2	591
	3	95
Valid		2601
Missing		4187
Total		6788

Table 10

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig
Intercept Only	4973.085			
Final	3448.984	1524.101	24	.000

Table 11

Pseudo R-Square

Cox and Snell	.443
Nagelkerke	.519
McFadden	.305

Table 12 (a)

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig
Threshold	[BDUT = 0]	-.234	.399	.346	1	.557
	[BDUT = 1]	4.746	.407	136.146	1	.000
	[BDUT = 2]	8.327	.447	347.236	1	.000
Location	AGE	-3.972E-02	.079	.250	1	.617
	LED	-.171	.034	25.109	1	.000
	EAM	-.137	.045	9.346	1	.002
	TYPPR_	-2.097E-02	.073	.082	1	.774
	BHIC	-2.658E-05	.000	7.348	1	.007
	BHTI	1.496E-05	.000	2.481	1	.115
	BHPQT	2.723	.082	1097.563	1	.000
	TNUD	.174	.035	24.196	1	.000

Table 12 (b)

Parameter Estimates

		95% Confidence Interval	
		Lower Bound	Upper Bound
Threshold	[BDUT = 0]	-1.016	.547
	[BDUT = 1]	3.949	5.543
	[BDUT = 2]	7.451	9.203
Location	AGE	-.195	.116
	LED	-.238	-.104
	EAM	-.225	-4.922E-02
	TYPPR	-.164	.122
	BHIC	-4.579E-05	-7.361E-06
	BHTI	-3.656E-06	3.357E-05
	BHPQT	2.562	2.884
	TNUD	.105	.244

Table 13

Parameter Estimates

BDUT		B	Std. Error	Wald	df	Sig
0	Intercept	8.626	.900	91.834	1	.00
	AGE	-.252	.250	1.015	1	.314
	LED	.212	.108	3.818	1	.051
	EAM	.546	.165	10.983	1	.001
	TYPPR	-.282	.221	1.626	1	.202
	BHIC	7.044E-05	.000	3.361	1	.067
	BHTI	-2.566E-05	.000	.489	1	.484
	BHPQT	-5.916	.264	502.143	1	.000
	TNUD	-1.097E-02	.100	.012	1	.913
1	Intercept	8.571	.795	116.352	1	.000
	AGE	-.179	.219	.670	1	.413
	LED	.194	.096	4.114	1	.043
	EAM	.495	.153	10.424	1	.001
	TYPPR	4.356E-02	.187	.054	1	.816
	BHIC	4.024E-05	.000	1.257	1	.262
	BHTI	-8.277E-06	.000	.058	1	.809
	BHPQT	-3.490	.213	267.775	1	.000
	TNUD	-.396	.078	26.041	1	.000
2	Intercept	5.276	.758	48.495	1	.000
	AGE	-.262	.208	1.578	1	.209
	LED	-7.560E-02	.092	.681	1	.409
	EAM	.336	.146	5.299	1	.021
	TYPPR	-.238	.175	1.845	1	.174
	BHIC	1.639E-05	.000	.223	1	.637
	BHTI	1.100E-05	.000	.110	1	.740
	BHPQT	-1.370	.192	51.137	1	.000
	TNUD	1.847E-02	.067	.077	1	.782

Table 14

Parameter Estimates

BDUT		Exp (B)	95% Confidence Interval for Exp (B)	
			Lower Bound	Upper Bound
0	Intercept			
	AGE	.777	.476	1.269
	LED	1.236	.999	1.528
	EAM	1.727	1.250	2.385
	TYPPR	.754	.489	1.163
	BHIC	1.000	1.000	1.000
	BHTI	1.000	1.000	1.000
	BHPQT	2.695E-03	1.606E-03	4.522E-03
	TNUD	.989	.812	1.204
1	Intercept			
	AGE	.836	.545	1.283
	LED	1.214	1.007	1.465
	EAM	1.641	1.215	2.216
	TYPPR	1.045	.724	1.506
	BHIC	1.000	1.000	1.000
	BHTI	1.000	1.000	1.000
	BHPQT	3.049E-02	2.007E-02	4.631E-02
	TNUD	.673	.578	.784
2	Intercept			
	AGE	.770	.512	1.158
	LED	.927	.775	1.110
	EAM	1.399	1.051	1.863
	TYPPR	.788	.559	1.111
	BHIC	1.000	1.000	1.000
	BHTI	1.000	1.000	1.000
	BHPQT	.254	.174	.370
	TNUD	1.019	.894	1.161