Marine fishing methods in India: An Economic Analysis

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INTRODUCTION

- The dynamic role of the fisheries sector in India is witnessed through the transformation of fisheries from subsistence to the status of a multi crore fishing industry over the last six decades.
- With a consistent contribution of 1.4% to the national GDP over the period 2015-2020, the sector is also responsible for providing livelihood security for about 7.6 lakh households in India .
- The fishery fleet of the country includes 1.94 lakh crafts out of which **72,559** (37.31%) are mechanized, **71,313** are motorized (36.67%) and **50,618** (26.03%) are artisanal.
- The marine fishing methods across the country are characterised by different input – output relations The economics of fishing operation of any enterprise is very important for allocation of resources.
- With this aim, the economic performance of the various fishing methods in selected centres across India was assessed

MATERIALS AND METHODS

- The FRAEE Division is carrying out All India Project on Economics of marine fisheries management and resource use.
- To assess the economic performance of the various fishing methods, major economic indicators namely net operating income, capital productivity (operating ratio), labour productivity, input-output ratio and gross value added (GVA) were worked out.
- The primary data is collected from ten sample units each.
- Selection is based on multi-stage stratified random sampling method.

RESULTS AND DISCUSSION

Economic performance of marine fishing methods in India

Table 1: Economic performance of Mechanized fishing methods in India

Location	Craft gear combination	Duration	Capital productivity	Labour productivity (kg/crew)	Input-output ratio	GVA as a % gross revenue
Muttom	Trawl	MDF	0.67	777	0.26	67.10
Thoothur	Trawl	MDF	0.60	1992	0.18	74.15
Kakinada	Trawl	MDF	0.84	348	0.48	41.56
Vizag	Trawl	MDF	0.75	713	0.32	66.55
Paradeep	Trawl	MDF	0.83	588	0.63	36.81
Digha	Trawl	MDF	0.45	206	0.45	52.16
Kolachel	Trawl	MDF	0.60	552	0.24	68.56
Mangalore	Trawl	MDF	0.83	188	0.31	67.24
CFH, Cochin	Trawl	MDF (>6 d)	0.74	262	0.49	44.71
CFH, Cochin	Trawl (HS)	MDF (>6 d)	0.84	328	0.40	20.34
CFH, Cochin	Gillnet	MDGN (>6d)	0.81	332	0.59	26.23

Table 2: Economic performance of Motorized fishing methods in India

Location	Craft-gear combination	Capital productivity	Labour productivity	Input-output ratio	GVA as % of gross revenue
Chinthappalli	Mot. GN	0.58	5.73	0.16	83.82
	Mot. Disco valai	0.56	6.32	0.11	88.61
	Mot. Jagvalai	0.58	6.07	0.17	83.31
Bandarvanipeta	Mot. GN	0.56	13.07	0.124	87.56
Penthakota	Mot. Long line	0.62	11.14	0.23	76.27
Gopalpur	Mot. Long line	0.57	13.45	0.13	86.43
	Mot. H&L	0.58	13.86	0.14	85.13
	Mot. GN	0.70	7.58	0.4	60.44
Thengapatnam	Mot. GN	0.87	75.51	0.13	84.37
Thoothur	Mot. GN	0.75	69.36	0.07	90.69
Mangalore	Mot.gGN	0.93	367.09	0.63	36.5
Malpe	Mot.GN	0.80	37.55	0.19	78.19
Malpe	Mot. OBRS	0.67	76.42	0.17	80.37
Kolachel	Mot.GN	0.79	66.65	0.09	88.18
Alapuzha	Mot.OBGN	0.82	106.37	0.24	19.6
Alapuzha	Mot.IBRS	0.71	178.38	0.17	32.14
Alappuzha	Mot.OBRS	0.74	128.26	0.23	73.83
Chellanam	Mot.OBRS	0.8	33.09	0.19	76.96

Table 3: Economic performance of non-mechanized fishing methods in India

Location	Craft -gear combination	Capital productivity	Labour productivity	Input-output ratio	GVA as% of gross revenue
Chintapalli	H&L	0.50	9	0	99.94
Bandarvanipetta	Naravalai	0.51	20	0.016	98.43
Penthakota	Bag net	0.51	15	0.01	99.02
Gopalpur	GN	0.52	14	0.04	95.7
Thengapatnam	Catamaran	0.84	25	0.11	88.83
Thoothur	Catamaran	0.58	12	0.04	87.98
Kolachel	Gill net	0.93	40	0.11	89.26
Alappuzha	Thermocol boats NM GN	0.38	17	0.18	34.09

CONCLUSION

- The results indicate that the profitability of the fishing operation isn't scale neutral and varies with the craft gear combination, area and season of operation.
- However, these economic indicators continue to reflect in developing concerted policy measures for the sustainable marine fisheries development while ensuring fisher welfare.

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