

Indigenous Self-reliance and Economic Transformation in Tribal Areas

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THESIS COMPLETION CERTIFICATE

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Date: August 26, 2022

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Abstract

The main idea of the study was to identify effective ways and means to enhance and supplement the income of the farmers within their ecosystem, resources, and capabilities. It proposed transforming some agricultural produce, artisan goods and traditional services into commercial produce/products to enable indigenous people to break free from poverty, and gradually to integrate them with the larger or the global economy.

The data on BPL, malnutrition, literacy, HDI, scarcity of water and low productivity of the land in Kathikund, were worrisome and these conditions had continued for a long time, appearing to be a ‘poverty trap’ and ‘low-level equilibrium trap’.

This study was conducted in three tribal villages, viz. Asanbani, Asanpahari, and Dhankuta of Kathikund CD Block, Jharkhand. To evaluate the causes of poverty and to explore opportunities to reposition indigenous self-reliance, 88 households out of nearly 110 total households were interviewed. To examine the factors of increase in the income of the sericulture farmers, 54 out of total 60 sericulture farmers were interviewed while 40 out of total 45 women of three SHGs were interviewed to investigate the start-up problems of the Self-help Groups. The study of the impact of the organized facilitation on the income of the sericulture farmers, which was provided by the Central Silk Board of India, was made with reference to 2009 and 2019.

The results showed that there was a significant impact of organised facilitation of indigenous economic potential on the income of the farmers. The role of development actors is a critical factor at the start-up phase of SHGs for their success.

Further, a few critical issues unfolded, such as, water scarcity, dysfunctional native leadership, disconnected formal education, depleting flora and faunae; provision, reform, and management of which would be critical to economic transformation. These issues were among the major causes of poverty in tribal areas.

This dissertation contributes to discussion on ‘effective ways’ to transform tribal economy, examining the major factors of success of sericulture in the area. It also underscores the role of development actors and unravels some generally intangible root-causes of the problems of tribal areas. The approach of this study is very close to that of Development studies with a special thrust on indigenous self-reliance.

Further studies are required in the areas of organized agricultural marketing, water harvesting, afforestation, aligning school education with indigenous livelihood, revivifying native leadership, agroforestry, and agro-entrepreneurship. Creating opportunities for the people to utilize ‘*jal, jangal, jamin*’ and nurture nature, is quintessential to achieve indigenous self-reliance.

TABLE OF CONTENTS

Part – I

Thesis Completion Certificate.....	ii
Plagiarism certificate	iii
Declaration of Authorship	iv
Acknowledgement	v
Abstract	vii
Table of Contents	ix
List of Tables	xv
List of Figures	xvi
List of Abbreviations	xvii

Part – II

CHAPER - 1: INTRODUCTION

1.1 Introduction	2
1.2.1 Describing the subject: Indigenous Self-reliance	4
1.2.2 What Indigenous Self-reliance is NOT.....	6
1.2.3 Economic transformation.....	7
1.2.4 Tribal areas.....	7
1.2.5 Explanation of core concepts, theories, and ideas	8
1.3 Background and Research Setting	14
1.3.1 Geography, ecosystem, and demography.....	14
1.3.2 Economic profile of the area.....	19
1.3.3 Socio-cultural setting.....	25
1.3.4 Historical setting: Santal Hul and Santal Pargana.....	26
1.3.5 Research setting: Rationale for selecting the three villages.....	30
1.4 Motivation for the study.....	31
1.5.1 Scope of the study.....	35
1.5.2 Beyond the scope of the study.....	37
1.6 Relevance and implications of the study.....	38
1.7 Organization of the study / Thesis outline.....	41
1.8 Summary.....	42

CHAPTER - 2: REVIEW OF LITERATURE

2.1: Introduction.....	44
2.2 Theoretical Foundations: Approach to self-reliance, tribal development and rural reconstruction.....	44
2.2.1 M.K. Gandhi: Swadeshi, Gram Swaraj, Sarvodaya.....	44
2.2.2 Rabindranath Tagore: Sriniketan experiment on rural reconstruction.....	46
2.2.3 Marthandam (YMCA) experiment by Dr. Spencer Hatch.....	47
2.2.4 Gurgaon experiment by F.L. Brayne.....	48
2.2.5 Rural reconstruction in Baroda.....	49
2.2.6 Firka Development Scheme, Madras (Chennai).....	50
2.2.7 Etawah pilot project, Uttar Pradesh.....	51
2.2.8 Nilokheri experiment, Karnal, Haryana.....	52
2.2.9 Area approach to rural development.....	53
2.2.10 Community Development (CD) Programme.....	54
2.2.11 Antyodaya.....	55
2.2.12 Don Bosco Vocational Training Centres & RRTC.....	55
2.2.13 Mohammed Yunus, Micro Finance, Bangladesh.....	56
2.2.14 Millenium Development Goals (MDG) and Sustainable Development Goals (SDG).....	56
2.2.15 Co-operative societies in India: Dr.Verghese Kurien & AMUL.....	57
2.3 Policy approach to rural and tribal development.....	58
2.3.1 Policies, plans and schemes.....	58
2.3.2 Constitutional safeguards and Acts: SPT Act (CNT Act and Wilkinson Rule), PESA Act, Samata Judgement, Forest Act.....	60
2.3.3 Poverty and Unemployment Alleviation Programmes.....	63
2.3.4 Priority Sector Lending.....	65
2.3.5 Financial Inclusion.....	66
2.3.6 Direct Benefit Transfer (DBT), Planning Commission.....	66
2.3.7 Educational and Training Institutes for Rural Self-employment & Rural Development.....	67
2.3.8 Village Adoption schemes by banks, 1960.....	69
2.4 Critical Appraisal of Previous literature.....	70
2.4.1 Self-reliance, 'Development from within'.....	70
2.4.2 Critique on schemes for poverty and unemployment alleviation.....	72

2.4.3 Rural development, Agriculture & Farmers, and Infrastructure.....	75
2.4.4 Environment (Nature) and indigenous biodiversity.....	78
2.4.5 Human Resource development: education and training.....	81
2.4.6 Forest, tribal life, and Development.....	84
2.4.7 Theoretical Framework.....	86
2.5 Research Gap.....	98
2.6 Conceptual Framework.....	100
2.7 Summary.....	103

CHAPTER - 3: RESEARCH METHODOLOGY

3.1 Introduction.....	106
3.2 Research questions.....	106
3.3 Research design.....	107
3.4 Designing questionnaire and methodological tools.....	108
3.4.1 Interview questionnaire.....	108
3.4.2 Participant observation.....	109
3.4.3 Focus groups.....	109
3.4.4 A Case study.....	110
3.4.5 Eye of insight.....	110
3.4.6 Naturalistic inquiry.....	110
3.5 Statement of the problem.....	111
3.6 Objectives of the study.....	112
3.7 Research Hypotheses and variables.....	113
3.8 Population and sampling design.....	114
3.8.1 Population.....	114
3.8.2 Sampling design.....	115
3.9 Data collection: Pilot survey and Main survey.....	116
3.9.1 Primary source of data	116
3.9.1.1 Pilot Survey.....	117
3.9.1.2 Main survey.....	118
3.9.1.3. Time period	119
3.9.1.4 Data processing framework.....	119
3.9.2 Secondary source of data.....	120
3.10 Problems in the research field.....	120

3.11 Suggestions and things to consider during survey in the field.....	122
3.12 Summary.....	125

CHAPTER - 4: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction.....	127
4.2 Scales.....	127
4.3 Data analysis and interpretation of the Main study.....	129
4.3.1 Farmers' engagement in various economic activities.....	129
4.3.2 Annual average income of the sericulture farmers (2009 to 2019).....	130
4.3.3 Households (88) in different income groups.....	132
4.3.4 Land holding patterns of the farmers.....	134
4.3.5 Reported annual average expenditure of a family.....	134
4.3.6 Satisfaction / dissatisfaction level of the respondents on the factors affecting income from sericulture and other farming.....	135
4.3.7 Other factors affecting the income of the farmers.....	136
4.3.8 Literacy level of the 88 respondents.....	137
4.3.9 The farmers' major expectations or improvements wished.....	138
4.3.10 Hypothesis testing of the Main study.....	141
4.4 Data analysis and interpretation of the Case study.....	143
4.5 Summary	147

CHAPTER - 5: RESULTS, DISCUSSIONS AND CONCLUSIONS

5.1 Introduction.....	149
5.2 Result for Objective I: Major Causes of Poverty in Tribal Areas.....	150
5.2.1 Inadequate infrastructure.....	150
5.2.2 Lack of appropriate education.....	152
5.2.3 Inadequate skill adaptation or adaptability.....	155
5.2.4 Dearth of organized market linkage.....	156
5.2.5 Weakening of social institutions or social capital.....	158
5.2.6 Ineffective leadership: traditional, political, and civil society.....	159
5.2.7 Ineffective governance & non-alignment of policies with local conditions...	161
5.2.8 Environmental degradation, deforestation, lowering underground water table, and soil pollution.....	165
5.2.9 Diminishing indigenous self-reliance.....	166

5.2.10 A vicious circle.....	167
5.3 Result for Objective II: Identifying some indigenous economic potentials for transforming them from subsistence to commercial produce/products.....	169
5.4.1 Sericulture in Kathikund: an effective initiative in economic transformation.....	176
5.4.2 Success stories of sericulture farmers.....	179
5.4.3 Result for Objective II: Factors of success of sericulture in Kathikund.....	180
5.4.4 Justification for acceptance or rejection of hypotheses.....	183
5.4.5 A learning from sericulture in Kathikund.....	184
5.5.1 Discussion I: Some experiments in indigenous self-reliance where desired results could not be achieved: causes thereof.....	186
5.5.2 Discussion II: A few successful examples of initiatives in indigenous self-reliance from some other regions of Jharkhand and India.....	189
5.5.3 Discussion III: Some insights and interpretations.....	200
5.5.4 Discussion IV: Critical issues which emerged from the study.....	214
5.6.1 Appropriateness of undertaking one Case Study.....	216
5.6.2 A Case study: Start-up problems of SHGs.....	217
5.6.3 Result of Objective III: Findings and Discussions of the Case Study.....	220
5.7 Theoretical Implications and Practical Implications: effect on future research, policy formation, and actions	225
5.7.1 Theoretical Implications	226
5.7.2 Implications for Researchers.....	227
5.7.3 Implications for Universities and Research Institutions.....	228
5.7.4 Implications for Schools and Training institutions.....	228
5.7.5 Implications for Government Ministries, Departments and Administrations.....	228
5.7.6 Implications for Various Boards and Committees.....	229
5.7.7 Implications for Gram Sabha and village leadership.....	229
5.7.8 Implications for Voluntary agencies, civil societies, and development actors.....	230
5.7.9 Implications for Entrepreneurial opportunities.....	230
5.7.10 Implications for Farmers.....	231
5.7.11 Implications for Department of Forest, Agriculture, and Irrigation.....	231
5.7.12 Implications for Financial Institutions.....	232

5.7.13 Implications for Emergent and Political leaders.....	232
5.8 Contributions the research.....	233
5.9 Limitations of the study and Scope for further research.....	235
5.9.1 Limitations of the study.....	235
5.9.2 Scope for further research.....	236
5.10 Concluding Statement.....	237

BIBLIOGRAPHY.....	239
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APPENDICES.....	253
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Appendix 1: Village-wise list of 88 households and their income in 2019.....	254
Appendix 2: List of 54 sericulture farmers and their income in 2019.....	257
Appendix 3: List of 40 SHG women and their family income in 2019.....	259
Appendix 4: Questionnaire (Main study, Qualitative).....	260
Appendix 5: Questionnaire (Main study, Quantitative).....	262
Appendix 6: Questionnaire (Case Study).....	263

ANNEXURES.....	264
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Annexure 1: Explanation of some terms used in the Case study.....	264
Annexure 2: Constitutional Safeguards for Scheduled Tribes (STs)	265
Annexure 3: Schemes launched by Ministry of Tribal Affairs (MoTA) for Scheduled Tribes	266
Annexure 4: A song by Padma Shri Madhu Mansoori.....	267

PUBLICATIONS AND PRESENTATIONS BY THE SCHOLAR IN THE RESEARCH AREA.....	268
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Part - III

LIST OF TABLES

Table No	Title of Table	Page No
1.1	Demography: villages and blocks in Kathikund	18
1.2	Major crops, fruits, vegetables, and livestock	20
1.3	Agricultural produce, artisan products, crafts, Implements & services	21
1.4	Pattern of land use	23
1.5	Schools and health facilities in Kathikund	24
2.1	Summary of literature reviewed	89
3.1	The major development indicators of Kathikund	111
4.1	Village wise per farmer average annual income, 2009 & 2019	130
4.2	Annual average expenditure of a family on basic raw food	134
4.3	Main study: result of Hypothesis testing	141
4.4	Profile of 40 SHG women and their income	144
4.5	Factors of SHGs' success/failure	145
4.6	Case study: result of Hypothesis testing	145
5.1	Some Indigenous economic potentials of the area	169

LIST OF FIGURES & MAPS

Figure No	Title of Figure	Page No
2.1	Conceptual Framework: Main Study	101
2.2	Conceptual Framework: Case Study	101
2.3	Flowchart: Methodological steps	102
2.4	Flowchart: Main thrust areas of the study	104
4.1	Farmers' engagement in various economic activities	129
4.2	Annual average income of the sericulture farmers from different sources with reference to 2009 and 2019	131
4.3	Annual average income of 88 households	132
4.4	Households (88) in different income groups in %	132
4.5	Village wise annual average income of farmers	133
4.6	Size of landholding of the 88 farmers	134
4.7	Satisfaction/dissatisfaction level of the 54 sericulture farmers on the factors affecting their income	136
4.8	Other factors affecting the income of the farmers	136
4.9	Literacy level of the 88 respondents	137
4.10	Major expectations of the farmers for good quality of life	139
4.11	Average monthly income of agricultural households in India as reported by NABARD	140
Map 1	Jharkhand: Research area	15
Map 2	Map of India	16
Map 3	Tracing Dumka district & Research area – Kathikund	17

List of Abbreviations

Acronym	Full Form
AIBP	Accelerated Irrigation Benefit Project
APMC	Agricultural Produce Marketing Committees
APEDA	Agricultural and Processed Food Products Export Development Authority
ALD	Alcoholic Liver Diseases
ASER	Annual Status of Education Report
BIRD	Bankers Institute of Rural Development, Lucknow
BPL	Below Poverty Line
BRO	Border Road Organisation
CSBI	Central Silk Board of India, Bengaluru
CPR	Common Property Rights
CD Block	Community Development Block
CAB	College of Agricultural Banking, Pune
DBT	Direct Benefit Transfer
DRDA	District Rural Development Agency
DWCRA	Development of Women and Children in Rural Areas
EADI	European Association of Development Research and Training Institutes
FMD	Foot-and-mouth disease
FAO	Food and Agriculture Organization (UNO)
GKY	Garmin Kaushal Yojna
HDI	Human Development Index
HYV	High Yielding Varieties
ICDS	Integrated Child Development Services
IGA	Income Generating Activities
IFOAM	International Federation of Organic Agriculture Movements
IRDP	Integrated Rural Development Programme
ITDP	Integrated Tribal Development Programme
IFAD	International Fund for Agricultural Development
IMFL	Indian Made Foreign Liquor

JIADA	Jharkhand Industrial Area Development Authority
JHALCO	Jharkhand Hill Area Lift Irrigation Corporation Ltd.
JMF	Jharkhand Milk Federation
JOHAR	Jharkhand Opportunities for Harnessing Rural Growth
JSLPS	Jharkhand State Livelihood Promotion Society
KCC	Kisan Credit Card
KGBV	Kasturba Gandhi Balika Vidyalaya
MNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MDG	Millennium Development Goals
MDM	Mid-Day Meal
MFP	Minor Forest Products
MSME	Micro, Small and Medium Enterprises
MSE-CDP	Micro & Small Enterprises – Cluster Development Programme
MUDRA	Micro Units Development and Refinance Agency Ltd.
MPCE	Monthly Per Capita Expenditure on food
MIDC	Maharashtra Industrial Development Corporation
MYRADA	Mysore Resettlement and Development Agency
MWS	Million Wells Scheme
MoRD	Ministry of Rural Development
MoTA	Ministry of Tribal Affairs
NRLM	National Rural Livelihood Mission
NFSA	National Food Security Act
NITI	National Institution for Transforming India
NAFED	National Cooperative Agricultural Marketing Federation of India
NAP	National Agriculture Policy 2000
NFP	National Forest Policy
NWP	National Water Policy
NPA	Non-Performing Asset
NSSO	National Sample Survey Office
NABARD	Nationals Bank for Agriculture and Rural Development

NFIS	National Financial Inclusion Strategies
NIRD	National Institute of Rural Development and Panchayati Raj
NDDB	National Dairy Development Board of India
NSTFDC	National Scheduled Tribes Finance Development Corporation
NSDP	Net State Domestic Product
NFHS	National Family Health Survey
ODI	Organizational Development Intervention
PESA	Panchayats (Extension to Scheduled Areas) Act, 1996
PMKVY	Prime Minister Kaushal Vikas Yojna
PSL	Priority Sector Lending
PDS	Public Distribution System
TPDS	Targeted Public Distribution System
PURA	Providing Urban amenities in Rural Area
PPC	Pilot Project Centre, Jharkhand
PRIs	Panchayat Raj Institutions
PLP	Potential Linked Credit Plan, NABARD
PROBE	Public Report on Basic Education
PPR	Peste des petits ruminants (viral disease of sheep & goats)
RBI	Reserve Bank of India
RRB	Regional Rural Banks
ROSCA	Rotating Credit and Savings Association
RSETI	Rural Self Employment Training Institutes
RUDSETI	Rural Development and Self Employment Training Institutes
RWSSP	Rural Water Supply and Sanitation Project
RKVY	Rashtriya Krishi Vikas Yojna
RRTC	Rural Resource and Training Centre (Umran, Meghalaya)
SHG	Self-help Group
SDG	Sustainable Development Goals
SHPI	Self-help Group Promoting Institutions

SME	Small and Medium Enterprises
SAMETI	State Agriculture Management & Extension Training Institute, Jharkhand
SEWA	Self-Employed Women's Association
SWOP	Social Welfare Oriented Programme
SGSY	Sawarnjayanti Gram Swarojgar Yojna
SITRA	South India Textile Research Association
SVRCC	Swami Vivekananda Rural Community College, Keezhpathupattu
SPEM	State Poverty Eradication Mission, Kerela
TSP	Tribal Sub-plan
TRYSEM	Training of Rural Youth for Self-employment
TRIFED	Tribal Cooperative Marketing Development Federation of India Ltd.
UCIL	Uranium Corporation of India Limited
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNTERM	United Nations Terminology Database
USP	Unique Selling Proposition
UIDAI	Unique Identification Authority of India (Aadhaar)
UDISE	United District Information System for Education
WEGS	Wage Employment Guarantee Scheme
WHO	World Health Organization (UNO)

CHAPTER - I

INTRODUCTION

CHAPTER – I

INTRODUCTION

1.1 Introduction

The ugly combination of poverty, unemployment and inequality of income has been the overarching concern of the human society for quite some time. It has challenged the best of economists, thinkers, and leaders. “Poverty is, of course, a matter of deprivation” (Sen & Dreze, 1999). It is primarily a consequence of lack of opportunities to realise potential. Basic poverty manifests as inadequacy of food, clothes, shelter, health facilities and education, whose familiar antecedents are unemployment and inadequate income. Therefore, identifying economic potentials of the place and the people, creating an environment for the people to realise their potential, building capabilities, and generating employment opportunities, are critical to poverty eradication and basic wellbeing.

For realising such potentials and discovering employment opportunities in rural and tribal areas, it is prudent, first to look within. Roosevelt (1920), in his autobiography, has suitably quoted Squire Bill Widener, “Do what you can, with what you’ve got, where you are”. Believing in and harnessing internal resources and forces, both natural and human, are quintessential to achieve self-reliance.

Amartya Sen’s major propositions in economics include poverty and famines, inequality, concept of capability, entitlement, freedom of choice, health and education, social opportunity, expansion of market, and human rights. According to him illiteracy, deficient health care, unemployment, capability failures, and bureaucratic administration are the major causes of poverty. He emphasized upon

the role of women as a prime force for change. He underscored the impact of public action on human development.

Human society has economically evolved much far, from hunting and gathering society to digital world and quantum computing. Yehudi Cohen described society's system of economic production, a typology of societies, "Adaptive strategies", based on correlation between their economies and social features, namely, foraging, horticulture, agriculture, pastoralism, and industrialism (Davis, 2019). The tribal economy in India, is predominantly agrarian, a mix of agriculture, horticulture, and pastoralism. But farming in Kathikund area had not been able to move from subsistence to surplus. Transformation from subsistence agriculture to commercial agriculture could be an effective approach to eradicate poverty. It would also entail reviving native institutions, *gram sabha*, and local leadership, promoting native farm produce, biodiversity, reviving forest and rivers, water harvesting, transforming/repositioning farming practices, establishing agricultural marketing, and aligning formal education to native and rural livelihood. The approach of this study is very close to the basic concept of economics. *"Economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people. The essence of economics is to acknowledge the reality of scarcity and then figure out how to organize society in a way which produces the most efficient use of resources. That is where economics makes its unique contribution."* (Samuelson & Nordhaus, 2009).

This study, exemplifying the initiatives taken in sericulture in Kathikund, has revealed how indigenous economic potentials of the area; natural and human, were developed by providing organized facilities and facilitation, to supplement the

income of the farmers. Replication of such facilities and facilitation into other agricultural produce, traditional skills, services, and artisan products, could similarly supplement the income of the farmers “to end poverty, everywhere, permanently” (UNO-SDG, 2015).

Achievement of this foundation level of development, i.e., freedom from poverty, would usher in avenues for next level of economic activities, such as, food processing, agro-entrepreneurship, trading, franchisee, marketing and sales, manufacturing (MUDRA & MSME), etc. It would lead to discovery of competitive advantage or Unique Selling Proposition (USP). It would create a self-energizing entity or society. It would empower rural and tribal areas to achieve socio-economic stability and integration with the larger economy, becoming net contributors to the national economy or GDP. In simple words, the main enquiry of this study is to improve the quality of life in tribal areas.

1.2.1 Describing the subject

Indigenous means belonging naturally to a place; native, local, *swadeshi*.

Indigenous Self-reliance may be referred to as a system where people achieve their needs, using native resources and skills, having access, right and control over local common property resources. It is a reliance on judicious utilization of local potential, capability of the people, their organizations, and participation of people in the development process. (Kim & Ismail, 2013; Gray, 1997; Kumar, 2014; UNDP, 2020)

It is a process of “development from within”, i.e., endogenous development which means achieving social, cultural, and economic transformation of our societies

primarily through internal forces and resources, investment in human capital, innovation and revitalization of traditions, respect for the environment, and equitable relation of production. (Binns & Nel, 1999)

It relates to Development studies which deals with identifying development problems and empowering people to change their lives, particularly in low-income countries (www.eadi.org). Its focus is not only on methods of promoting economic development, economic growth, and structural change but also on improving the potential for and of the population, e.g., nutrition, health, education, infrastructure, leadership, and organizations; either through public or private channels; with focus on local skills, local resources, natural habitat, environment, and their non-disruptive empowerment. (Helin, 2008)

Its focus is Human Development, i.e., “The process of widening people’s choices and the level of well being they achieve ... the three essential choices for people are to lead a long and healthy life, to acquire knowledge and to have access to the resources needed for a decent standard of living ... Income is also a means, with human development the end” (UNDP,1997). According to Mahbub-Ul-Haq, human development is about real freedom ordinary people have, to decide who to be, what to be and how to live (NCERT, 2020). “Economic development entails political freedom, freedom of opportunity and economic protection from abject poverty” (Sen, 1999).

It promotes ownership and participation of people in the development process (Kumar, 2014). It is primarily a “bottom-up” approach to development. It is empowering the indigenous people to be the masters of their destiny (Gray, 1997). It is achieving economic transformation using local resources, people, and their

systems. “Indigenous and local knowledge systems and practices generate synergies between biodiversity and human wellbeing” (Box 1.1, UNDP, 2020).

In agricultural practice, it encourages organic agriculture, native seeds, native varieties of livestock, biodiversity, biological cycles, and soil biological activity. It advocates a system of agriculture that is adaptable to the local and regional conditions, promoting crop rotation, multiple cropping, green manures and compost, biological pest control and mechanical cultivation, rather than the use of inputs and methods which have adverse effects, and which are un-affordable and expensive to maintain. (Shiva, 2012; Rao, 2018)

This concept is akin to Gandhian approach to Rural Development; Swadeshi or Gram Swaraj, Sriniketan Experiment on Rural Reconstruction initiated by Rabindranath Tagore and Marthandam (YMCA) Experiment by Dr. Spencer Hatch. This concept and approach also embody the essence of rural development as expounded by United Nations Asian Development Institute. In the Indian context, particularly in Jharkhand, many issues relating to Indigenous self-reliance were covered under policies and schemes on rural and tribal development.

1.2.2 What Indigenous self-reliance is NOT: To understand Indigenous self-reliance well, it is pertinent to mention what Indigenous self-reliance does not mean or imply.

- i. It does not equate to Autarky (Kim & Isma'il, 2013) nor is it synonymous with economic nationalism (Bombay Sarvodaya Mandal, 2013).
- ii. It does not imply a purposeless return to the past. It is taking forward the relevant and the best practices from the past and then to reposition them to time, i.e., being responsive to changing circumstances.

- iii. It does not dismiss advantages of external relations.
- iv. It is not protectionism.
- v. It is not a development in isolation nor by assimilation, but by integration (*Panchsheel*. Systems theory).
- vi. It does not preclude training, knowledge and learning from external world.
- vii. It is not against modernization nor against adopting modern technology; it should but be gradual and non-disruptive.
- viii. It is not against providing urban amenities in rural areas, but without destroying the rural indigenous character.
- ix. It is not ‘Only the GDP’ perspective of growth. It is multidimensional, i.e., it includes poverty alleviation, judicious distribution of income and ascertaining value system in the society.
- x. It does not approve of growth and development based on violence with nature/the mother earth. (It is survival with nature, co-existence, and harmony with nature.)

1.2.3 Economic Transformation: It involves moving labour and other resources from lower to higher productivity activities; i) within sectors, e.g., subsistence crops to high value crops or commercial crops, ii) across all sectors, e.g., agriculture to manufacturing (Velde, 2013). It is widely held that poverty alleviation and economic growth cannot be sustained without economic transformation and productivity change.

1.2.4 Tribal Areas: In the context of the study, it means “Scheduled Areas” as referred to in clause (1) of Article 244 of the Constitution of India and as defined in PESA Act, 1996.

1.2.4.1 Tribes: The Constitution of India does not define the criteria for recognition of (Scheduled) Tribes. As per Census 1931, Scheduled Tribes are termed as “Backward Tribes” living in the “Excluded” and “Partially Excluded” areas. The Lokur Committee (1965) recommended five criteria for identification, namely, primitive traits, distinct culture, geographical isolation, shyness of contact with the community at large, and backwardness. “Communities which might be regarded as tribes by reason of their social organization and general way of life” (Lokur Committee, 1965). Bhuria Commission (2002-04) focused on a wide range of issues from the Fifth Schedule to tribal land and forests, health and education, the working of Panchayats and the status of women. A High-level Committee (2013) under the chairmanship of Prof. Virginius Xaxa was constituted to study the five critical issues related to tribes: i. livelihood and employment, ii. education, iii. health, iv. involuntary displacement and migration, and v. legal and constitutional matters.

1.2.5 Explanation of core concepts, theories, and ideas: This study, being a multi-disciplinary study, it is appropriate to explain some core concepts, theories, and ideas to promote a common understanding and interpretation within the context.

Development: “Development is about expanding the choices, people have, to lead lives that they value”. (UNDP, 1997)

Development Studies: It is a multi-disciplinary field of study that seeks to understand social, economic, political, technological, and cultural aspects of societal change, particularly in developing countries (www.eadi.org).

Livelihood: It is a means of living; an income; a means of securing the necessities of life.

Income: Money/ payment / produce received for/from work or through investments.

Rural development: It is the process of sustainable improvement in the quality of life and economic well-being of people living in rural areas, often relatively isolated and sparsely populated. It comprises three basic elements and achievement thereof:

- i) Basic necessities of life; food, cloth, and shelter; as well as access to basic literacy, health care, productive job opportunities, and security of life and property,
- ii) Self-respect (dignity) and iii) Freedom; economic and political; and freedom from social servitude.

It is traditionally centred on exploitation of land-intensive natural resources such as agriculture and forestry. As an academic discipline, it is multidisciplinary in nature representing an intersection of agricultural, social, behavioural, engineering and management sciences.

Commercial agriculture/agribusiness: a cropping method in which crops are grown and livestock are raised to sell the produce / products in the market to make profit; to capitalize on demand and prices of market. Such crops are known as **cash crops** or **profit crops**.

Organic agriculture/farming: It is a holistic agricultural production management system which promotes and enhances agro-ecosystem health, biodiversity and biological cycles and soil biological activity. It emphasises that regional conditions require locally adapted systems, rather than the use of inputs with adverse effects (FAO/WHO and IFOAM). The principal methods of organic farming include crop rotation, multiple cropping, green manures and compost, biological pest control and mechanical cultivation.

Repositioning: Its synonyms are to redefine, revisit, re-explore, re-arrange, re-organize, reorient, and revivify. It is the process of changing the way that people view/take/think about a produce/product/a service/ a company (In this study the

products and services specifically refer to agriculture including marketing and trading, and a company would primarily mean native communities or village institutions). It also implies re-aligning indigenous produce/products with the demands of the market to augment income and profit of the farmers, and to integrate them with the larger economy.

Agro-entrepreneurship: The process of backward and forward value addition whereby farmers use creative ways of improving the quality and quantity of agricultural produces or get involved in agro-industry activities. (Jaffee & Morton, 1994)

Community development: It is “a process where community members come together to take collective action and generate solutions to common problems” (UN). It seeks to empower individuals and groups of people with the skills they need to effect change within their communities; aiming to build stronger and more resilient local communities.

Agricultural marketing: It is inferred to cover the services involved in moving an agricultural product from the farm to the consumer. It is planning, organizing, directing, and handling of agricultural produce to satisfy the farmer, producer, and the consumer.

Extension education: A method of educating the farmer in his farming activities. It is rural adult education designed to build rural people in their many-sided activities with special reference to improvement in agriculture. Its aim is to carry science to farming; the systematic application of science to farming for improved productivity and nutrition. “Result-demonstration” is the cornerstone of extension education (Reddy, 2012).

Social Audit: an accountability tool that measures, evaluates, identifies gaps in service delivery and elicits promises to rectify these gaps with the direct participation of intended beneficiaries in this process (accountabilityindia.in).

Autarky: a state of self-sufficiency and is typically used to describe a nation or economy which is fully closed. Autarkic countries do not participate in international trade, discourage imports, and do not receive outside support or aid.

Economic nationalism: a set of practices to create, bolster and protect national economies in the context of world market. It implies economic protectionism, increasing tariff level and trade barriers.

Organization Development: It is applied behavioural science dedicated to improving organizations, and the people in them, through the theory and practice of planned change. Its main goal is to keep organizations healthy, resilient, and viable in the changing world. Organizational development intervention (ODI) is a set of structured activities in which target groups or individuals engage in a sequence of tasks with goals of organizational and individual development (French, Bell & Vohra, 2006).

Rural reconstruction: Rural reconstruction implies strengthening the village economy, culture, society, and political structure, including pioneering work in village health. Its primary objective is eradication of poverty by means of reconstruction of agriculture, artisanship, cottage industries, etc. [The Rural Reconstruction Movement was initiated in China in the 1920s by Y.C. James Yen, Liang Shuming, Ding Xianand others to revive the Chinese villages. It aimed to change the Chinese countryside; by strengthening the village economy, culture, and political structure, including village health. In 1948, the Sino-American Joint

Commission on Rural Reconstruction carried out land reform and education projects. Later, the JCRR was key in laying the rural foundation for the quick economic growth in China and Taiwan.]

Poverty: It is the state of existing in amounts or resources that are too small to meet basic needs. Sen (1983) described poverty as not just a lack of money, but inadequacy of capability to realize full potential as a human being.

Social capital: Networks of social relations with shared norms, values and understanding that facilitate co-operation and reciprocity among the members of a group (Tata Sustainability Group, 2018). Its focus is on “social relations that have productive benefits” (Reddy, 2012).

Learned helplessness: Learned helplessness occurs when someone repeatedly faces uncontrollable, stressful situations, then does not exercise control when it becomes available. They have "learned" that they are helpless in that situation and no longer try to change it, even when change is possible, as explained by American Psychological Association and Prof. Martin Seligman.

Systems theory: A system is a set of distinct parts that form a complex whole. It stresses upon the interactive nature and inter-dependence of external and internal factors in an organization; synergy and non-summativity. It views an organization as an organism. The goal of a systematic approach is to identify the most efficient means to generate consistent and optimum results; primarily to enable and create a self-energizing and self-sustaining entity.

Community development: It is “a process where community members come together to take collective action and generate solutions to common problems”

(UNTERM). Community development seeks to empower individuals and groups of people with the skills they need to effect change within their communities; aiming to build stronger and more resilient local communities.

Common Property Resources (CPR): Resources owned and managed collectively by a community or society rather than by individuals; individuals have only ‘usufruct rights’ i.e., to use the yield from the resources but no right to destroy it (the substance), e.g., forest, river, lakes, tanks, grazing grounds, threshing grounds, etc. This study means ‘community resources’ also, as mentioned in PESA Act, 1996.

Social entrepreneurship: It can be described as ... an approach by companies and entrepreneurs, in which they develop, fund, and implement solutions to social, cultural, or environmental issues. It may be a profit or a non-profit company but essentially it focuses on positive return to the society. More than what it does, it can be described better by what it entails, especially, health care, education, poverty alleviation, employment generation, environment conservation, and community development. It is a social purpose business having altruistic goals and affects society positively. It tries to maximize gains in social satisfaction and not profit gains, for example, Micro Finance by Mohammad Yunus, a Nobel laureate, of Bangladesh, ‘One Acre Fund’ helps small farmers to grow more and reduce hunger, Ningale revolutionised nursing, Shankar Netralaya founded by S.S. Badrinath, and Dr. Devi Shetty of Narayana Health revamping health care. Social entrepreneurs have innovative ideas to solve the world’s most pressing problems by creating products, systems, and solutions to help change people’s lives.

Nature Relatedness (NR): It describes individual levels of connectedness with the natural world. It is also known as nature connectedness, i.e., the extent to which

individuals include nature as part of their identity. Schultz describes its three components: i) the cognitive component is the core of nature connectedness and refers to how integrated one feels with nature, ii) the affective component is an individual's sense of care for nature, and iii) the behavioural component is an individual's commitment to protect the natural environment.

Synaptic pruning: It refers to a process in the brain by which extra synapses are eliminated to increase the efficiency of neuronal transmissions; eliminating irrelevant matters when making choices.

Social dualism: “Social dualism is the clashing of an imported social system with an indigenous social system of another style. Most frequently the imported social system is high capitalism ... Social dualism thus is a kind of social disintegration caused by the rise of capitalism in less developed economies” (Boeke, 1953).

Intellectual Imperialism: the domination of one people by another in their world of thinking (Alatas, 2000).

Glocalization: the practice of conducting business according to both local and global considerations (Oxford Languages & Investopedia).

Cluster: A cluster is a group of enterprises located within an identifiable contiguous area or a value chain and producing same/similar products/complementary products/services, which can be linked together by common physical infrastructure facilities that help address their common challenges (dcmsme.gov.in).

1.3 Background and Research Setting: This paragraph gives relevant information on geography, ecosystem, economic profile, pattern of land use and crops, Human

Development Index (HDI), traditional economy of self-reliance, history, and social systems of Asanbani, Asanpahari and Dhankuta of Kathikund and Dumka district.

1.3.1 Geography, ecosystem, and demography: Dumka district is located between 24.26 N latitude and 87.25 E longitude. Kathikund block (24.36 N and 87.41 E) is in the southern outskirts of the Rajmahal hills, the historical Damin-i-koh. It is 22 KM north of Dumka, the district headquarters. It is located between two rivers, Gumra and Kathikund (*Bajar gada*). Geologically, Rajmahal hills, a (Jurassic) volcanic igneous province in Eastern India, covering parts of Bihar, Jharkhand, and West Bengal, is among the oldest residual hills in the world (O'Malley, 1910). 'The Annals of rural Bengal' describes the area, "This well-watered land, rich in noble scenery". Birbhum highlands was described as 'the Switzerland of Bengal' by Rev. James Long in Calcutta Review (Hunter, 1868). It was part of Jungle Terai under British Raj after it assumed Diwani in 1765 (O'Malley, 1910).

Map 1: Jharkhand: Research area ★



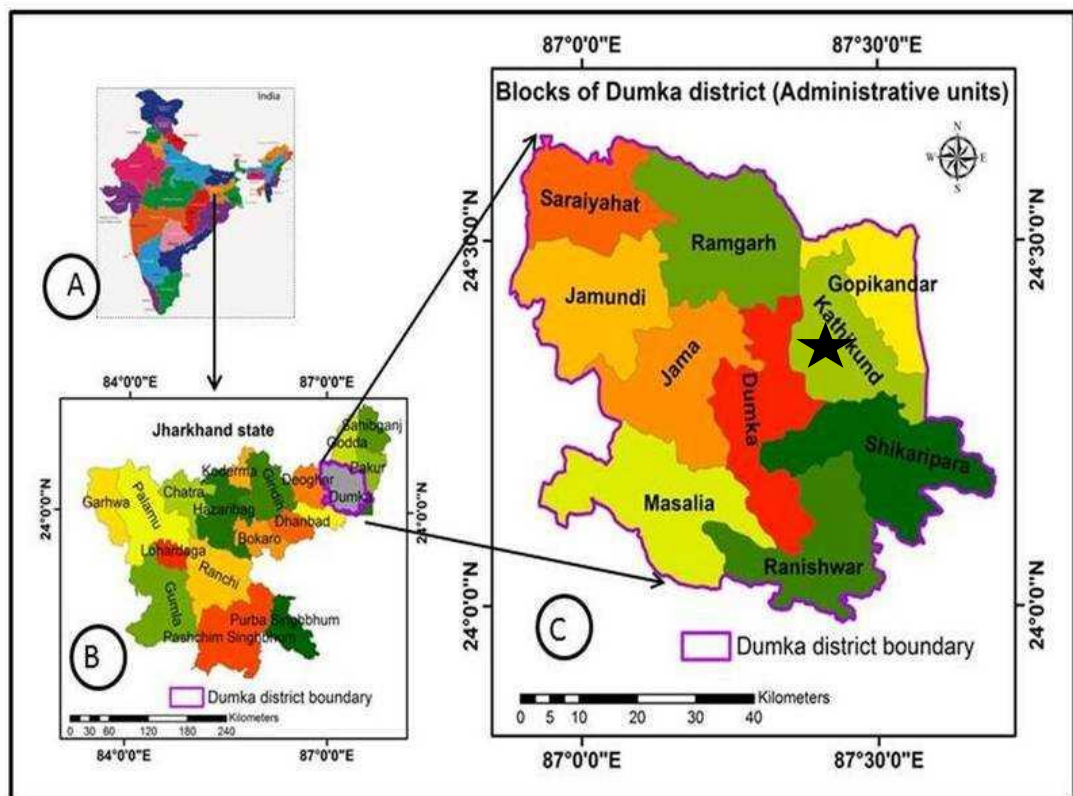
Map 2: Map of India

Source: Survey of India



Dumka is the sub-capital (*up-Rajdhani*) of Jharkhand and the Headquarter of the Santal Pargana region. It has a sizable population of scheduled tribes (28%) and scheduled castes (12%) who mostly live in the rural areas. It is also a scheduled district. Its population is predominantly rural, i.e., 90%. Kathikund block is 100% rural area with 193 villages. Its total population is 71,458 (Census, 2011). The population comprises mainly of the tribals (63%), Muslims (14%) and SC (2.5%). The major tribes comprise the Santals, Paharia, Mahali and the Kols. The main SC population comprises Doms (Chamars). More than 80% workforce is engaged in primary sector, the agriculture. The major sources of drinking water in the villages are from open dug well (26%) and hand-pump (62%).

Map 3: Tracing Dumka district & Research area: Kathikund ★



Environment and ecosystem: Kathikund derived from *kath(i)* meaning wood and *kund* meaning store or reservoir. The name suggested that Kathikund was a dense forest. According to Dr. Francis Buchanan-Hamilton, an East India Company surgeon, who travelled through the hills in 1807-09, the hills were covered with forest, too dense to penetrate (O'Malley, 1910). From around 1825-35, the forest was cleared for human settlement. There was a big wood depot near the present 'Social forestry' building. Kathikund still had 33% forest cover which was more than the national average of 22.54% (2018) [Jharkhand: 29.61%, 2018]. However, the fauna and flora had been fast diminishing for the last 50-60 years. Water scarcity in the area was the first symptom of depleting forest. Re-afforestation by Forest department looked ineffective. Illegal felling of trees had outdone afforestation. In the earlier days, the villagers had the habit of planting trees. This good habit was rare to witness these days. The animals had vanished except occasional appearance of monkeys, peacocks, wild boars, and rabbits. Many fountains and streams had dried up and the rivers had become rain-fed. Sal, teak, mango, palas, mahua, terel (tendu), tamrind (imli), asan, arjun, and jackfruit (kathal) were the major trees.

Table 1.1: Demography: villages & blocks in Kathikund.

Census2011	Population	ST %	SC % / Muslims	Gender ratio
India	1,210,854,977	8.6	16.6(14.20)	(2011) 943
Jharkhand 24 districts	32,988,134	26.3	11.8 (14.53)	948
Dumka 10 blocks	1,321,442	43.22	6.02 (8.09)	977
Kathikund 193 villages	71,458	63.5	2.5 (14.00)	1007
Asanpahari	663	92.0	8.0	>1000
Asanbani	370	100	0.0	>1000
Dhankuta	304	100	0.0	>1000

Source: www.census2011.co.in

All these three villages were homogeneous to a large extent in terms of their economy, lifestyle, and livelihood. The households of Asanpahari had relatively small landholding. The Dom tola of Asanpahari was excluded for this survey as none from this tola undertook sericulture. Two SHGs of this Dom tola were referred to in the case study.

1.3.2 Economic profile of the area: More than 80% workforce engaged in (subsistence) agriculture; mainly Kharif (June to December). They supplemented their income with daily wage labour earnings in the non-cropping season. Most of the households raised some livestock, but in limited numbers of 3 to 4, such as, cattles, goats, pigs, and poultry. Quite a few of the households had undertaken sericulture which had become their major source of income. Some reported to migrate seasonally to the neighbouring states as well as to other states. Many people of Asanpahari engaged in daily wage labour because they had small landholding. Besides, they had inadequate irrigation facilities or water harvesting (Figure 4.10).

The major crops comprised rice, maize, arhar, mustard, few cereals, and some seasonal vegetables. They supported their other expenses by raising cattles, pigs, goats, and poultry. The cultivation of rice, which was the staple food of the people, was entirely dependent on the vagaries of monsoon. Maize was the second line of defence. Few households cultivated wheat. Some households cultivated mustard, potato, onion, brinjal, tomato, chilli, and beans as rabbi (winter) crops. But all these farming had been done primarily on subsistence level.

The overall average landholding in these three villages by a household was one acre (3 bigha), fragmented over about 3-4 different plots. This average was less than half acre in Asanpahari. Quite a few large stretches of cultivable land were seen

uncultivated for years which the people ascribed to lack of water or irregular rain. In the last 30 years the underground water table had gone down too deep to dig an open dug-well. About 30-40 years back water was available at 20-30 feet deep in open dug-well (Kujur, 2013). The depleting forest cover indicated that forestation by the government had not been effective enough. The people had traditional habit of planting trees but unfortunately many had lost this habit now. The rivers had become primarily rain-fed. These villages were located near a sizable river, Gumra; the valley of Rajmahal hills as its catchment area. But no water reservoir was visible in the area. Dumka district was among the six districts of Jharkhand covered under Rural Water Supply and Sanitation Project (RWSSP). But no effective effort for water harvesting and watershed development was evident in the area.

Financial literacy: All the respondents had bank accounts and Aadhaar (UIDAI) cards. The people were hesitant to take loans from banks. Some had borrowed money from moneylenders on short term basis.

Table 1.2: Major crops, vegetables, fruits, livestock, and minor forest products

Khariff Mid-June to December	Main: rice, maize, arhar Others: jute, urad, moong, bajra, bora
Rabbi November to March	Main: wheat, bajra, masoor, peas, mustard Vegetables: potato, tomato, brinjal, papaya, cabbage, cauliflower, raddish Others: chilli, turmeric, onion, garlic, ginger
Cash crops	Sericulture (two seasons: mid-July to September and October to January)
Major fruits	Mango, jackfruit, mahua, jamun, terel, ber, guava, papaya, custard apple
Cash livestock	Cattles, pigs, goats, chicken, duck, pigeon, fish
Traditional minor forest products	Sal leaf, tendu leaf (bidis), datum (sal), awla, wild-berries, oal (yam), roots (kapu), ranu, herbal medicines, mushrooms, firewood, animal-feed

Source: Field Survey, 2018

Table 1.3: Agricultural produce, artisan products, crafts, implements and services

Community	Other traditional produce, besides agriculture
Santals	Ropes, woodwork – plough, cots, stool; brooms, mats, leaf plates and cups, fishing nets and fish-traps
Mahali	Bamboo crafts: sift, baskets, brooms,
Kamar (ironsmith)	Axe, spade, sickle, agricultural implements
Teli (oil crushers)	Mustard oil
Kunkal, Kumhar (potters)	Clay pots, terracotta toys, idols for festivals
Julaha, Muslims (textiles)	Gamcha, lungi, panchi, parhand
Dom or chamar, leatherwork, drummers	Making musical drums, occasional drummers at marriage and festivals, mid-wifery and massage
Nais, the barbers	Hair cutting, ritual “ <i>Mundan</i> ”
Moirā, Bhuyan	Making puffed rice and beaten rice, ursa pitha

Source: Field Survey, 2018

It is important to note that these communities in the area had been living as a composite society. They had a symbiotic relationship with one another since ages. Although these groups lived in separate hamlets, some of them co-habited the same village, for instance, most of the Santal villages traditionally included some households of Mahalis, Kols, Nais and Kamars.

Traditional Economy of self-reliance: Traditionally the people of these three villages had been largely self-reliant. They ploughed and tilled their land by themselves, processed paddy to rice and grinded pulses in their own traditional way. They dug their own well, made river bunds in co-operation. They built, thatched, and maintained their houses themselves. They made fishing nets; cutting, digging, and hunting tools; agricultural tools and implements; ploughs, spades, ropes, mats, brooms, cots, stools. They crushed oil, made pottery, made iron / brass tools and

implements and made ornaments. They used home produced milk, curd, ghee, beaten rice, puffed rice and popcorn. They raised livestock. They did organic agriculture with multi cropping pattern, using recycled organic wastes from natural compost pit, *guric' ghadlak'*. Agriculture, agricultural by-products, fodder, livestock, compost manure, etc. made a complementary economic chain making economic activities cost effective. The early evidence of these economic activities may be found in the works of O'Malley (1910), Hunter (1868) and Datta (1970),

Every tribal family had a kitchen garden. They ate only home-grown vegetables and non-vegetables. They had knowledge of herbal medicines, midwifery, massage system and animal castration. They rarely bought rice, grains, and vegetables. Essential goods and services were produced and consumed within their habitat. They exchanged their surplus produce for few other necessities, such as, salt, oil, clothes, and sweets for the children. The elders recounted that they bought only salt, oil, and clothes from market. Therefore, the purpose of regular marketing had acquired a popular phrase, '*sunum-bulun*' meaning 'oil and salt'. They solved their disputes in village councils. They trusted their traditional leadership, institutions, and ethos.

But now, most of these self-reliance practices had been diminishing. Besides, in the global village era or the mainstream influence, it was neither practicable nor desirable to reinstate the same type of self-reliance. But at the same time, it would be unwise to neglect the best practices of self-reliance, such as, kitchen gardening, organic farming, multi cropping pattern, seed collection, carpentry, making leaf plates and cups, planting *Munga* (Moringa) tree, jackfruit, and other fruit-bearing trees, herbal medicines and in fact, many more.

On reality check, it may be stated that the traditional self-reliance did not mean that they enjoyed material prosperity or an idyllic life. It basically meant that they did most of the activities, mainly production of their food by themselves. They might not had been eating much, but they did not eat poisonous food. Their material simplicity was balanced by their social cohesiveness and collective community consciousness. External influence on their agriculture and life then, was relatively much less than today. But reportedly, their happiness quotient was offset by the exploitation by some *Dikkus/Mahajans* who lent them money at exorbitant rate of interest and usurped their agricultural produce in realisation of the loan/interest. The people also reported ineffective implementation of the development schemes.

Pattern of land use in Jharkhand: Soil of Dumka district is mainly red soil. It is less clayey, sandier and laterite in nature. These soil types have formed from decomposition of crystalline rocks and stones. Red soil has rich content of iron, but it has small humus content. It contains low content of essential nutrients like nitrogen, phosphorus, and lime.

Table 1.4: Pattern of land use

Category	Areas in Lakh Hectares	Areas in %
Geographical area	79.70	-
Cultivable area (incl. cultivable waste land)	29.74 Approx. (8.0)	37.30 % (10%)
Forest area	23.92	30.00 %
Scrub forest	4.38	5.50 %
Waterbodies	1.59	2.00 %
Waste Land	7.17	9.00 %
Built-up area	3.99	5.00 %
Other	8.93	11.20 %
Total	79.72	100.00 %
<i>Annual rainfall, Jharkhand</i>	<i>1430 mm</i>	<i>56 inches</i>

(India – 1083 mm, Meghalaya & Assam – 2800 mm)

Source: Water Resource Department and SAMETI, Government of Jharkhand, 2020

Natural resources and minerals: Minor Forest products included, firewood, sal and tendu leaves, mangoes, berries, mushroom, and some eatable roots. No mining was reported in the area except discovery of some coal at a shallow depth in a nearby village, forty years before, which the local people were allowed to mine. Otherwise, Jharkhand's mineral deposits comprised 40% of India's total mineral resources, mainly, coal, iron, copper, bauxite, limestone, etc. (jharkhandminerals.gov.in).

Human Development Index (HDI) and BPL: The Census 2011 returned 42% people below poverty line (BPL) in Dumka district. The development indicators of Kathikund block, were among the most worrisome in the state: BPL (50%), HDI (.467), literacy, health, underweight children (61%), and MPCE (Rs.920/-) (Table 3.1). These three villages were covered under most of the development schemes of the Government, such as, ICDS, PDS, MDM and most other flagship schemes.

Schools and hospitals: Each of the three villages had a primary school with basic infrastructure. Asanpahari had two special residential schools up to Class X, exclusively for Paharia boys and girls. There was a government school up to Class 12 (inter college) and one Kasturba Gandhi Balika Vidyalaya near these villages. Malaria, Jaundice, Typhoid, and malnutrition (50%) were the major health concerns.

Table 1.5: Schools and health facilities in P.S. Santali cluster, Kathikund

12 clusters in Kathikund block 30 schools in P.S. Santali cluster	Primary (1 to 5)	13
	Middle	6
	High, incl. KGBV	4
	Plus 2, inter college	1
	Private, primary and middle	6
Community health centres at Block		1
Primary health centres		2
Health sub-centre		1
Sahiya for 190 villages		176
(Rinchi) Hospital, run by NGO, Sanmat (Welfare Dept. Govt of Jharkhand)		1

Source: Field Survey, 2019

1.3.3 Socio-cultural setting: Asanbani and Dhankuta were 100% tribal villages. Dhankuta included some Mahalis, the bamboo artisans. Asanpahari was cohabited by the Pahariyas, the Santals, the Kols and Doms. The Paharias had around 25 households. They were a specially protected tribe (Adimjati). They enjoyed special benefits/provisions under the State Government. The Santals comprised of around 25 households. The Doms (Scheduled Caste) had around 15 households. All these three communities lived in three different hamlets, *tola*.

Babulal Murmu, Naren Soren and Samuel Murmu were the Heads, *Manjhi* of their villages; Asanbani, Dhankuta and Asanpahari, respectively. In addition, the Paharia community had a Mantri as their leader in Asanpahari. Some households of the Paharia community appeared affluent and influential. Reportedly, no progressive activities had been initiated by the village Panch in these villages. The role of the Manjhi had reduced to officiating some ceremonies, like, festivals, marriage, death and chairing the occasional village councils, *Kulhi Durup*'. No village council was reported to have been held to discuss developmental issues, economic problems of the village and the solutions. By and large, the village administration looked dysfunctional, except for social occasions.

Traditionally the Santals had been following tribal belief whose major characteristics comprised of a) ancestor worship, b) nature relatedness and c) community-oriented life. The Santals hailed mountains (*Buru*) as god, "*Maranburu*" along with the Sun-god, "*Sinbonga*". They treated *Buru* with forest and trees as the repository/source of water, food, fruits, fodder, fuel, medicines, etc. Their worship place, *Jaher than*, is a group of Sal trees. Their songs and folk tales have regular references to nature, birds, and animals. According to the Santals'

creation myth, earthworm, crocodile, eel, crab, shrimp, and tortoise helped God create this earth. The Santals traced their descent to the mythical Swans, “*Hans-Hasil*” who were believed to have given birth to the first human couple, “*Pilchu haram & Pilchu budhi*”. Every village had a shrine, “*Manjhi than*” in honour of their ancestors. *Sohrae* and *Baha* are their major festivals. *Sohrae* (mid-January) is a post-harvest festival indicating their agrarian lifestyle. *Baha*, meaning flower (February-March), is the festival of renewal of Nature cycle; new leaves and flowering of trees; sal, mango, jackfruit, palas, etc. Community living and equality of human beings, *Hor*, had been the hallmark of tribal life.

The Paharias (Mal Paharia) of Asanpahari could not narrate their traditional belief nor did they observe their traditional festivals in recent years. Santals spoke Santali language. The Paharias and the Doms spoke Khortha language. All the respondents had a practical speaking proficiency in Hindi. The Santals had preserved their traditional creation myth, folktales, songs, and dances. They also had retained and evolved their traditional dress, *Panchi-Parhand* and *gamcha*.

1.3.4 Historical setting: Santal Pargana district was carved out of Bhagalpur and Birbhum districts by the Act 37 of 1855, a non-regulation district, to be known Santal Parganas (O’Malley, 1910), with its head quarter at Dumka, immediately after the Santal Hul (1855-56). It comprised six divisions, Deoghar, Godda, Jamtara, Rajmahal, Pakur and Dumka. Mr. Ashley Eden was the first Deputy Commissioner of Santal Pargana. In the initial years, the power session judge was assigned to the Session Courts of Bhagalpur and Birbhum with circuit court at Dumka. In 1943 the post of Damin Magistrate-cum-Superintendent was created in Kathikund. He took

cognizance of the complaint cases and held trial of the civil and criminal cases of Damin areas (districts.ecourts.gov.in).

Santal Hul; factors and impact: Santal Hul was not a sporadic incident. Long-lasting sense of injustice and exploitation caused by indebtedness, displacement, ‘chased away’ feeling, land alienation and deprivation had led to the historical Santal Hul (Revolt). The tribes felt insecure in their own land. “A special enquiry was made, and it was recognized that the Santals had genuine grievances” (O’Malley, 1910). Tilka Manjhi (1779-85), Birsa Munda (1890), Jaipal Singh Munda (1940-60), et al, fought for justice for the tribes. Santal Hul was the greatest reference point for the Santals. The Santal Rebellion, 1855-56, led by the legendary Sido Murmu-Kanhu Murmu brothers, was an uprising against the nexus of a) The British rule: land tax extortion by the Zamindars/Tehsildars/Talukdars, b) the police, the administration and the courts, and c) the infamous local moneylenders and traders (*mahajan / dikku*). Although the Damin-i-koh demarcation was made with an intention to protect the Paharias, it was reported to have been ineffective.

Even after 165 years since Santal Hul, the fear of land grabbing or land alienation still haunted the tribes. They had lost a sizable land to the *Dikkus* as result of indebtedness and *Ucchadi*, i.e., auction of their land when they could not pay the land tax during the British Raj.

Dikku (euphemistically called outsiders; etymologically it meant troublemakers, *dikkat karne wale*) first entered the tribal villages as salt sellers and traders. They gradually started lending money to the tribes at an exorbitant rate. The Santals who were finance and accounting illiterate, fell into debt-trap. They mortgaged their land,

utensils, and ornaments, and even lost them eventually. Many were forced to become bonded labourers in their own land, *Kamiyoti* (O'Malley, 1910).

The main achievement of the Santal Hul was the formation of Santal Pargana as a revenue non-regulation district with its head quarter at Dumka in 1855, restoration of village leadership and settlement of landed rights in 1872 (O'Malley, 1910). Santal Pargana Tenancy Act, 1949 essentially restricted transfer of tribal land to anyone, except to the Government for development projects. When Jharkhand separated from Bihar on November 15, 2000, Dumka was made the sub-capital of Jharkhand. Eventually, the Santal Pargana was divided into 6 districts, Dumka, Deoghar, Godda, Jamtara, Pakur, and Sahibganj. Dumka is a "Scheduled Area" under the provisions of the Fifth Schedule of Article 244(1) of the Constitution of India.

Nevertheless, till today, the tribes in Jharkhand suffer from a fear-consciousness of losing their – '*jal, jangal and jamin*' and illusion of 'development'. Marginalisation and exclusion had pushed people to maladaptive ways (Nathan & Xaxa, 2012 & Bagaicha Research Team, 2015).

Dumka district appeared as the part of the map of 'The Red Corridor' in the state of Jharkhand, i.e., the Naxalite-Maoist insurgency. But the researcher did not hear of nor came across any Naxalite activities in the area during the research period.

It is important to make a mention of the three leaders who had made significant contribution in the post-independence era, particularly for the people of the area.

Lal Hembrom (1914-64): Lal Hembrom, a Freedom fighter, was popularly known as Lal Baba. He had organized 'Lal Sena' to fight against the British Raj. He was

convicted for long years in imprisonment, but Freedom of India came to his rescue. In 1952 he was elected as an MP from Dumka-Hazaribagh joint constituency. He was class 6 literate but had a great vision. He focused on organizing and developing the youth. He was an epitome of simplicity and integrity, i.e., public interest should prevail over individual interest. He did not build any house for himself but built schools and colleges. He envisioned building a new India educating local youth. On his request Jawaharlal Nehru supported him to build SP College, Dumka. Nehru had proposed to name it Lal Baba College. But Lal Baba named it Santal Pargana College, which is popularly known as SP College, established in 1954. He also established Jila School and Ashram School. His younger brother, Bariar Hembrom, MLA, also was a dedicated statesman. He motivated the people, “*Aap log gada are karo, hum tumko pomp dega*”, meaning, do the river bunding (water harvesting) and the leader will provide water pump machine.

In the early 1970s, Father Anthony Murmu and Shri Shibu Soren, the “Guruji”, emerged to redeem people from the land hungry money lenders and traders (*Mahajans/Dikku*).

Father Anthony Murmu (1930-85): Fr. Anthony Murmu started social work as a Catholic priest. He witnessed poignant scenes of tribes being harassed and oppressed by *dikkus*, the petty traders, cunning moneylenders, and opportunistic land grabbers. He wrote Sido-Kanhu drama and got it performed widely, in a modest *Nukkad* style, working hard for socio-cultural revival by recounting glories of ‘Santal Hul’. He eventually abandoned priestly profession and engaged in full-time social activism and joined politics. He became an MP in 1977 from Rajmahal first time. He protested levy (tax) on land in favour of farmers and labourers and opposed

Nasbandi. He made remarkable contributions to freeing tribes' land from the clutches of moneylenders, right to forest and common property resources, Kahalgaon NTPC, doubling Sahebganj railway loop line, Santali language and literature. Tragically, he was killed along with 14 other Santals, in Banjhi firing incident on April 19, 1985. He is buried in Bhagalpur (Sahibganj) Catholic church cemetery.

Shri Shibu Soren: Shibu Soren is a living legend. He is fondly called “Guruji” by the people. He started his public life in early 1970s as a social activist. His main aim of the struggle was to free the tribes' land from the clutches of the moneylenders, *mahajans / dikkus*. The tribes had been trapped into indebtedness by the *dikkus* who had then grabbed tribes' land. Many tribes had then turned into bonded labourers in their own fields/land. Apparently, it was a serious injustice on the vulnerable tribes. After a decade of struggle, he managed to redeem quite a few grabbed lands back to the tribes. He became an MP in 1980 from Dumka first time. He was accredited for separating Jharkhand from Bihar in 2000. He was hailed as the messiah of the people of Jharkhand. He continued to be in active politics. His son, Shri Hemant Soren was the incumbent Chief Minister of Jharkhand.

1.3.5 Research setting: Rationale for selecting the three villages

The three villages of Kathikund block; viz. Asanbani, Asanpahari, and Dhankuta, were selected based on the following rationale:

- i) These three villages were adopted by National Silk Board of India for sericulture.
- ii) They were 100% rural and in tribal area.
- iii) They were situated amidst natural surroundings, hills, and forest.

- iv) The HDI and BPL of Kathikund block were worrisome (Table 3.1).
- v) The economy of these three villages was predominantly agriculture.
- vi) Low productivity of the land, single crop, and large uncultivated cultivable land.
- vii) School dropout was 60%. People reported lack of appropriate education.
- viii) There was an acute scarcity of water, lowering underground water table, lack of irrigation facilities and watershed development,
- ix) Kathikund was a scheduled/ CD block. These villages comprised near 100% tribal population.
- x) Observed apathy of political leadership and administration and dysfunctional village leadership.
- xi) There was a presence of sericulture in the area.
- xii) There was insufficient research or study on the current subject in the area.
- xiii) The researcher belonged to Dumka district and was familiar with the area.

These conditions were assumed to be suitable to examine the viability of “development from within” or indigenous self-reliance approach. The major indicators, BPL and HDI of Kathikund called for an urgent attention for socio-economic transformation of the area. These three villages, to a great extent, represented the average tribal villages in Jharkhand.

1.4 Motivation for the study: Triggered Ideas; in search of a solution

The researcher traced the trigger for this study to his working in RBI for over 27 years, getting exposure to various departments including Rural Planning and Development Department (RPCD) now rechristened as Financial Inclusion and

Development Department (FIDD), Department of Banking Supervision (DBS), Department of Co-operative Banking Supervision (DCBS) and Banking and Currency Management. This study is a search for an answer to the following predicaments:

i) In the District Level Coordination/Review Committee (DLCC/DLRC), the achievements of the banks in priority sector lending, like, Kisan Credit Card (KCC), SGSY, PMRY, MSME, etc. are reviewed. The achievement during the time generally fell short of the target. The CD ratio of Jharkhand was around 30% against the national average of 70% in 2004-06 (RBI Basic Statistical Returns, 2020). There could be many causes for short achievement, but three factors looked striking; a) inadequate and unorganized market linkage of agricultural produce, b) most agencies, like NGOs, imparted skill training to SHGs, bank-linked them, but then disconnected from them before they achieved maturity, and c) a good many bank employees posted in rural branches did not connect nor identify with rural areas.

ii) During the year 2005, the process of consolidation of Regional Rural Banks was in progress consequent upon increasing accumulated losses of many Regional Rural banks (RRB); 196 RRBs in 2004 to 45 RRBs in 2019 (NABARD Annual Report, 2018-19). The researcher was a nominee director in four RRBs. It looked more than coincidental that most of the Chairmen of the RRBs did not relate with the rural area and they considered their rural posting as hardship or a temporary accommodation to get next posting of choice. Presumably, it affected their judicious involvement with the bank adversely. Many bank staff also considered rural branches as hardship centres. Across banks, trying to avoid rural posting was a common phenomenon, even by the staff who hailed from rural areas. Observing such reluctance to live in

rural area, the researcher resolved to search for a solution: to make rural areas lucrative for living, to make agriculture and agri-business bankable occupation or livelihood.

iii) In the year 2006 when Muhammad Yunus and Grameen Bank of Bangladesh were awarded Nobel Peace Prize for initiating socio-economic development at grassroot level; micro-finance to Self-Help Groups (SHGs), it was intriguing and difficult to understand why many SHGs did not do well in Jharkhand and Bihar.

Later, the researcher observed that many SHGs which were guided and monitored by some Urban Co-operative banks, worked well in rural areas of Maharashtra, particularly in Shirpur, Jalgaon, Baramati, Kolhapur, and Ichalkaranji. Such UCBs had dedicated SHG department/cell, having staff who had attitude and aptitude for rural development, and they guided the SHGs on a continuous basis. Most of the UCBs in Maharashtra had the privilege of guardianship of the local political leaders. These leaders brought in leadership, vision, guidance, and financial support / subsidies, in addition to the overall guardianship.

iv) Banks' major business function is financial intermediation for which they engaged in credit appraisal and credit monitoring. But the researcher felt that thrust on credit nurturing and business intermediation was essential to ensure sustainable economic activities in rural areas. The people in rural areas needed effective support in financial management, identification of viable economic activities, skill training and handholding, market linkage, etc. to promote gainful economic activities and to prevent Non-Performing Assets (NPA).

v) Infrastructure: In various fora, the bank officials pointed out inadequacy of the infrastructure, mainly water for irrigation and organized agricultural marketing as

the reasons behind below par credit growth (CD ratio) in rural areas. The government officials were generally reserved about the inadequacy of infrastructure.

vi) In the periodical reviews, the MSMEs mostly recorded a dismal performance despite special thrust accorded to MSMEs. Many Governors of RBI and top bankers, especially Dr. Duvvuri Subbarao had reiterated that it was a rich proposition to bank with the poor. One summer intern in RBI, Kolkata presented her findings that elaborate documentation compelled small entrepreneurs (MSMEs) resort to informal and non-bank credit avenues.

vii) In the event of failure of the institutional mechanism, it was cowardice to sit idle, especially when people had a system of self-reliance. Usha Mukherjee (1952) referred to R.N. Tagore in 'Sriniketan experiment on Rural Reconstruction', "... It is a matter of disgrace that we are in the habit of turning to Government officials for help in everything". In fact, an initiative in indigenous self-reliance can facilitate the Government to do better and government schemes to be more effective; public-government coordination is essential, e.g., Paani Foundation effectively coordinated with the local people and the administration in Ahmednagar for water harvesting.

Summative experiences and exposures had led to this research; in search of the 'effective way' in tribal and rural development, to augment agricultural output and to supplement farmers' income. During the pilot survey, the researcher came across sericulture which had worked effectively in Kathikund. In this study, the factors of success of sericulture in the area had been elaborated, which exemplified that replicating such approach (facilities and facilitation) into other agricultural produces, traditional services, and artisan products could yield desired results, i.e., gainful employment and poverty eradication.

1.5.1 Scope of the study

Three villages, namely, Asanbani, Asanpahari and Dhankuta under Kathikund block of Dumka district, were identified, primarily because they were adopted by the Central Silk Board of India. The sericulture farmers of these three villages were the main respondents of the study to examine the practice and progress of sericulture in the area in the reference period of about last 30 years (1990-2020) and to assess how a systematic approach to sericulture had supplemented the income of the farmers. The assessment of change in the farmers' income has been made with reference to the years 2009 and 2019.

This study has given a contextual reference to the economy, environment, and geography, HDI, social life; tradition, culture, and history, particularly the Santal Hul or The Santal Rebellion 1855-56 and the recent struggles of the people. The survey and the study in the field was undertaken from early 2017 till the middle of 2020 visiting the area (Kathikund, Dumka district, Jharkhand, India) in the interval of 3-4 months for around 4-5 days every visit. The survey period got extended beyond planned period due to COVID-19 lockdown. This research focused on identifying indigenous economic potentials, mainly in agriculture and traditional occupations where farmers could augment their income with some repositioning or reorientation, within their ecosystem without migrating out.

The main scope of the study included,

- The households of sericulture farmers of Asanbani, Asanpahari, and Dhankuta, including women, children, and youth.
- Socio-economic profile of Asanbani, Dhankuta, and Asanpahari

- Sericulture centres in Kathikund block; Central Silk Board of India, Pilot Project Centre (PPC) of Jharkhand Government and PRADAN, an NGO.
- General profile of Kathikund block and Dumka district.
- Practices, traditions, and social institutions affecting the economy of the people.
- Teachers, academicians, intelligentsia, and social workers in the area (Dumka district) and in the parts of Jharkhand.
- Government officials, officials of sericulture centres, political leaders, traditional leaders, bankers, contractors, etc.
- Reference to Constitutional safeguards, Acts, and policies for rural and tribal development.
- Reference to Government policies and flagship schemes (PDS, ICDS, MDM, MGNREGS, NRLM, TSP, ITDP, market for tribal produce, etc.) for rural and tribal development.
- Occupations and economic activities, income, health of the area.

The complementary scope included,

- Some emerging rural and tribal entrepreneurs and innovative farmers in parts of Jharkhand as well as a few from other parts of India.
- References have been made to working of SHGs and Co-operative (credit) societies in Gujarat and Maharashtra; AMUL (Gujarat), GOKUL (Kolhapur), Textile Park in Shirpur, MIDC (Maharashtra), and APMC.

- A reference to a few neighbouring villages with a view to compare some progressive farming practices, habits, and related customs.
- A few examples of indigenous self-reliance from other parts of India.
- Taking cognizance of inter-community services in the area as a composite society: The Santals form a composite society, co-existing in a symbiotic relationship with Kamar (ironsmith), Mahali (bamboo artisans), Nais (barbers), Kunkal (potters), Teli (oil crushers), Doms (chamars and drummers), Bhuyans and Moiras (makers of puffed rice and beaten rice), Julaha (Muslim textile weavers), and the Paharias, the Maler.

This research, being a multidisciplinary study, references have been made to the customs and social systems of the people, their history, communication and behaviour pattern, environment, agriculture, constitutional rights and safeguards, political environment, and the impact of globalization on their life.

References have been made also to the concepts of social psychology, organizational development, management, systems theory, development studies, human development, agriculture, and rural development.

As a part of this study, the researcher also undertook one case study i) Start-up problems of SHGs in Income Generating Activities.

1.5.2 Beyond the scope of the study:

- i) Direct study of Macro-economics
- ii) Direct study of urban life

- iii) Politics, Culture and Religion (except what constitutes as inseparable from the current subject and what is incidental to the subject)
- iv) Heavy / large commercial development: Industrialization, dams, mines, and collieries (except its impact on the life of the people)
- v) Primary evaluation of Government development schemes: It was not the part of primary/empirical study. Nevertheless, some assessment has been made referring to the secondary sources wherever necessary and derivation from observations in the field, especially in comparison to sericulture in the area. Some empirical evaluation has been done in the case study.
- vi) Study of potentials of agriculture in the area: This study made only an empirical observation of the agricultural potentials based on indigenous traditional practices.
- vii) Although relevant, this study could not devote adequate time to study the behaviour dimension of the people (identifying progressive and faulty behaviour) vis-à-vis the proposed economic transformation.

1.6 Relevance and implications of the study:

- i) Government ministries, departments, and administrations: This study can give new dimension to the policy formation relating to poverty alleviation, livelihood, education and organizing rural communities. Administration (Block development) can derive insights for practising effective co-ordination among various bodies, Government, panchayat, banks, NGOs, and civil societies. They can focus on improving irrigation facilities by making effective efforts for water harvesting.

ii) Universities and research institutions: Research could be undertaken on ways and means to make the government schemes more effective. There is ample scope to do research on revival of organic farming, multi-cropping, biodiversity, etc.

iii) Schools and training institutions: Schools and training institutions can start teaching livelihood skills like agriculture, commercial farming, cash crops, agri-business, and animal husbandry. These skills will enable young people to take up agriculture-based self-employment activities. Training establishments can start 'extension education' with 'result-demonstration'.

iv) Department of Forest, Agriculture, and Irrigation: Rural and tribal development depend heavily on forest and water. Forest Department need to focus on watershed management/development and promoting biodiversity of fauna and flora.

v) Various Boards and Committees: The various Central Boards, such as, National Dairy Development Board of India (NDDB), Spice Board of India (Kochi), National Egg Coordination Committee-Poultry India, etc. can follow in the footsteps of Central Silk Board of India (CSBI), Bengaluru.

vi) Financial Institutions: Financial Institutions can take up financial literacy campaign with more determination, such as, thrift and savings, credit management and they could focus on credit nurturing and business intermediation. These shall enable people to take up (start-up) projects and prevent NPAs.

vii) Gram Sabha and village leadership: This study has given adequate thrust on improving and reorienting village administration and leadership. A vibrant village administration is the foundation for all other progressive initiatives including village

self-reliance, '*gram swaraj*'. With Good village leadership, self-help groups and cooperative societies, can operate more efficiently.

viii) Emergent and Political leaders: Very often, leaders and social workers desire to take up development initiatives. But they face lack of effective ways and models. They can take clues from the paradigm of sericulture practice in the area as well as from this study's proposed potential produce and products of the area.

ix) Voluntary Agencies, civil societies, and development actors: All the change agents could revisit their focus and approach to promote agriculture, local livelihood, and (self) employment opportunities. This study has reiterated the importance of nurturing, handholding, and confidence building of the farmers.

x) Entrepreneurial opportunities: All educated persons may not like to take up jobs and all may not get them. This study has unfolded ample scope for gainful self-employment in agriculture and agro-entrepreneurship for the educated as well as for not-so-educated youth.

xi) The farmers: The main aim of this study is to increase the income of the farmers. The solution proposed in this study can raise their confidence in agriculture as livelihood. They can revive the traditional best practices, such as, organic farming, multi-cropping, seed collection, biodiversity, tree plantation, and herbal medicines. The idea of commercial crops shall increase the productivity of their land. The farmers would be encouraged to put their underutilized land into productive use. They shall begin to realise their importance in the value chain of the world economy. Above all, they would actively liberate themselves from 'poverty trap'. They would become empowered partner to the government and the other agencies to end poverty. The implications have also been discussed in paragraph 5.7.

1.7 Organization of the Study / Thesis outline

This thesis consists of five chapters (ICFAI University Jharkhand format). The first chapter introduces the subject. It describes the background and research setting of the area (Kathikund) and gives rationale for selecting the three villages. It describes the ecosystem, economic profile, traditional system of self-reliance and village self-governance, socio-cultural setting, history of indebtedness, exploitation, and marginalisation of the tribes, motivation, and scope of the study. It states the relevance and implications of the study.

The second chapter is a review of literature. It presents theoretical foundations, a critical appraisal of previous literature, the research gap, conceptual framework, and illustrates the thrust areas of the study. It describes some policies and schemes for rural development, e.g., Panchsheel, Five-year plan, Tribal sub-plan, schemes for poverty alleviation and employment generation. It also explains some relevant concepts.

The third chapter describes the research methodology which is a mix of qualitative and quantitative method for data collection, data processing, methods, and application. It presents research design, methodological tools, research questions, data collection techniques, population, and sample. It also presents statement of the problem, objectives of the study, suggestions, problems in the field, and things to consider during research in the field, hypothesis formulation and research design. It also explains the difficulties faced in the field during the research.

The fourth chapter presents data analysis and interpretation. It includes scales assessment and results of regression analysis (hypothesis testing). It also presents a descriptive data analysis, through tables, graphs, and figures with interpretation.

The fifth chapter presents results, discussions, and conclusions. The main findings include the causes of poverty in tribal areas, factors of success of sericulture, and identification and repositioning of indigenous economic potentials. It discusses some indigenous economic potentials of the areas, agricultural produces, artisan products and traditional services which had the potential to transform into commercial produce and products at a reasonable scale. The major discussions include a few other attempts made in the area which did not achieve the desired success and the causes thereof, references to some successful initiatives made in self-reliance in other parts of Jharkhand and India, and some critical issues which emerged from the study. It adds some insights and interpretations. It also includes a case study, 'Start-up problems of SHGs in Income Generating Activities in Kathikund area'. Towards the conclusion it also presents validation of hypothesis, theoretical implications, implications for policies and actions, the significant contribution of the study, limitations and suggestions for future research, and the concluding statement.

1.8 Summary

'Indigenous self-reliance' as a phrase appeared to be new to the existing literature. Therefore, the researcher has made sincere efforts to explain the subject and put it in the context of the tribal economy in the past, present and the future. It was appropriate to describe the background and research setting of the area (Kathikund), its ecosystem, economic profile, Human Development Index (HDI), traditional system of self-reliance, village self-governance, socio-cultural setting, history of the tribes' indebtedness, exploitation, deprivation, and marginalisation. The relevance and implications of the study lay in revivifying the tribal economy with 'Indigenous self-reliance' as an approach.

CHAPTER - II

REVIEW OF LITERATURE

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REVIEW OF LITERATURE

2.1 Introduction

There is a large body of works and experiments on self-reliance and rural development across the world. In India, great statesmen in the likes of Gandhi, Tagore, Nehru, Binoba Bhave, Sardar Vallabh Bhai Patel, Dr. Spencer Hatch, Lal Bahadur Shastri, Jai Prakash Narayan, Dr. APJ Abdul Kalam, Verghese Kurien, et al, tried their best to experiment on development of the weakest section of the society and the rural areas. Some of their institutions might not be active now but their ideas and approaches had become the foundation for the present-day policies of the Government on poverty alleviation, employment generation, rural and tribal development.

The literature review is presented under classified sub-heads or subjects. However, it would be appropriate to start with some theoretical foundations, policies and approaches to self-reliance, rural reconstruction, and tribal development in this literature review.

2.2 Theoretical Foundations:

2.2.1 M.K. Gandhi – Swadeshi, gram swaraj, sarvodaya

In the context of rural development and village self-reliance, M.K. Gandhi has said it all, comprehensively. He had a deep understanding of the socio-economic structure of Indian society. His focus was the empowerment of the rural India.

“India lives in her villages and the terrible poverty can be removed only if local skills can be revived. Poverty is the worst form of violence” (Film Gandhi, 1980).

“A non-violent system of government is clearly an impossibility so long as the wide gulf between the rich and the hungry millions persist.” According to him *“Self-Reliance is the main aim of Education”*. He viewed education as *‘Insurance against unemployment’*. He advocated Nai Taleem / basic education, where classroom teaching was linked with vocational training (Joshi, 2002).

Development, as Gandhi viewed, need not be assessed only in terms of gross national product (GDP), per capita income and similar such material yardsticks. He propagated Gram Swaraj, a self-sufficient village unit (Singh & Shishodia, 2016). Every village must strive to emerge as a self-sufficient unit. The villages should produce their own needs. However, if necessary, the villages may secure from outside those goods and services which they did not produce. Such process should not disturb employment generation in rural areas (Bombay Sarvodaya Mandal & Gandhi Research Foundation, 2013). Depending upon the local resources and market resources, appropriate projects must be identified. It was based on the principle of decentralisation to pave the way for the participation of people in the development process and programmes. It later gave birth to the Panchayati raj.

Gandhi desired that every village must emerge as a self-sufficient Republic with village panchayat, well empowered with adequate resources and functions covering areas of legislative, executive, and judicial. He advocated effective cooperative system, such as, cooperative farming, credit cooperatives, weavers, spinners, and dairy cooperatives. He advocated trusteeship, i.e., land and other natural resources belong to God or community. Such resources should be collectively owned by the

community. Water being a crucial input in farming, Gandhi advocated collective efforts of the villagers in harvesting and conserving the rainwater (Bombay Sarvodaya Mandal, 2013).

He discouraged excessive use of machines that led to the concentration of wealth and power in few hands and turned the masses into mere machine minders. Machines or technology should facilitate human beings and not displace human labour.

2.2.2 Rabindranath Tagore: Sriniketan experiment on Rural reconstruction

Rabindranath Tagore set up rural reconstruction centres in eight villages in the Kalingram Pargana of West Bengal in 1908. Later he founded Shantiniketan in 1921 with a view to bring about an all-round transformation of rural life. This experiment was popularly known as Sriniketan Rural Construction Programme. It aimed at economic and social development of the rural community. The objectives of the programme were to study the rural problem and to help villages to develop agriculture, livestock, formation of cooperatives and improving village sanitation, etc. (Dasgupta, 1993).

He established schools for boys and girls with boarding facilities. Training facilities were arranged in native handicrafts, kitchen gardening, poultry, dairy, carpentry, and other crafts. Games and sports were encouraged so that children drawn from various social groups could mingle together forgetting their race or caste. He desired that the Government should provide infrastructure support and professional guidance. He planned the increase of material wealth through cooperative effort and increase of cultural wealth through music, drama, and dance at Shantiniketan. His path-breaking efforts opened new avenues.

Rural reconstruction as envisaged by Tagore was among the premier models of community development projects. Tagore cautioned that the results of service should make people stand on their own feet. He tried to develop their resources teaching them better methods of growing crops and vegetables and keeping livestock. In all these efforts the principle of cooperative was the keynote of the institute (Sen, 1943).

2.2.3 Marthandam (YMCA) experiment by Dr. Spencer Hatch

The rural reconstruction programme was initiated by Dr. Spencer Hatch of YMCA at Marthandam, south Travancore in 1921 (now part of Tamilnadu). The main objective of the programme was to improve the living conditions of the people. The experiment was based on principles known as “Pillars of Policy”; the fundamentals of the programme: i) Building on what the village and the people have, ii) Ensure that the people consider the programme as their own (Involve), iii) Help people help themselves and promote self-help with expert counselling, iv) While including all people, irrespective of caste and class, reach out to the poorest, v) Maintain a comprehensive programme with simplicity as its key note, vi) Develop spiritual basis of rural development (*value system, inclusive, happy and harmonious community-living*).

In this programme, ‘result demonstration’ centres were established at selected places to motivate people to take to beekeeping, poultry, basket-making, etc. Such developmental works were carried out through different clubs, eggs club, honey clubs, bull clubs, weavers’ club, etc. Through these clubs, villagers were trained to produce and sell vegetables, pickles, cashew-nuts, jaggery, peanuts, baskets, mats, etc. Experts were sent to the villages for guiding the people. But it was told to the

people that the responsibility of carrying out or executing the project or development activities was to be done by themselves. Cooperation in all activities was emphasized. Some social activities like sports, scouts, folk dances, and folk singing, etc. were also initiated. It is said that this experiment had emphasized cooperation in work, play and in all activities of life.

2.2.4 Gurgaon experiment by F. L. Brayne

F.L Brayne, a British civilian, initiated a village development programme in Gurgaon district in Punjab and the scheme was popularly known as “Gurgaon scheme” which had a strong thrust on self-help (Reddy, 2012). The villagers were motivated to take interest on their own betterment. The governmental agencies coordinated and guided the villagers in different developmental schemes. They tried to convince the people that improvement was possible and helped them to adopt better ways of farming and living. A school of rural economy was set up to train the villagers. The curriculum of the school covered cooperation, agriculture, public health, hygiene and sanitation, livestock breeding and elementary veterinary training, scouting, first aid, infant welfare, etc. The functions of the village guides were development of co-operatives, preparing people as vaccinators, cleaning of villages by digging manure pits, agricultural demonstration and sale of improved seeds and implements, etc.

The school of rural economy focused on upliftment of women, adult literacy, instruction in sewing and embroidery works, toy-making, hygiene, sanitation, first-aid, child welfare, etc. Agricultural development programmes included encouraging farmers to use improved seeds and implements, prevention against crop pests and consolidation of lands on co-operative basis. Brayne assigned a special importance

to the role of a village teacher who with his school library, his night school and his scouts should be the centre of upliftment. He should be so trained that he could solve all the simple problems of the village; agricultural, social, moral, health, etc. Under this experiment, an emphasis was laid on social reforms like prohibition of child marriages, development of co-education, abolition of 'purdah', etc. This experiment made a significant contribution to the cause of rural reconstruction.

2.2.5 Rural reconstruction in Baroda

It was a state-initiated rural reconstruction programme. It was started by Maharaja Sayaji Rao in 1890 in Baroda province. The programme took interest in the establishment of village panchayats, taluks, and district boards. Focus was laid on making education compulsory to all children in the age group of 6 to 11 years. Village libraries were set up and the people were encouraged to use it. Due to the missionary zeal of V.T. Krishnamachari this programme of rural reconstruction spread throughout Baroda. In 1932, the rural reconstruction centre was set up and the personnel of the programme were initially trained by YMCA volunteers of the Marthandam project. The main objective of this rural reconstruction movement was improvement in all aspects of rural life through changing the outlook of the agriculturalists towards higher standards of living and to develop the best type of village leadership (Reddy, 2012). In the economic field, the programme laid emphasis on agricultural production. Through the expansion of irrigation facilities, conservation of soils, setting up nucleus seed farms and multiplication and distribution of improved seeds, etc. Further, supplementary occupations like kitchen gardening, weaving, poultry farming, silk production, bee keeping (apiculture), etc. were also encouraged.

For improving infrastructure, local works, such as, construction of feeder roads, connecting villages with the nearest railway station, digging of village wells, formation of grazing fields, etc. were taken up for which 50% contributions were made by the villagers in the form of money or labour except in the most backward areas. Under this scheme, adult education was encouraged, and wide propaganda was made against the evils of child marriages and many other unreasonable customs and practices. The scout movement was encouraged. The Debt Regulation Act of 1935 and the Debt Conciliation Act of 1938 were some of the important steps taken up for the welfare of rural poor. In the Baroda experiment, the village panchayat, cooperatives, village schools and library served as centres for development activities. Through these institutions, the officials and non-officials worked together aiming at rural reconstruction.

2.2.6 Firka Development scheme, Madras (Chennai)

It was a pioneering Community Development programme. The Firka Development scheme (FDS) was first launched in 34 firkas (revenue blocks or patwar circles) in Madras State in 1946, by Tanguturi Prakasam and later extended to other Firkas from April 1, 1950. The scheme was primarily based on the Gandhian idea of “Village Swaraj” aiming at self-sufficiency of village through the collective efforts of the villages themselves.

The objective of the scheme was to address the different problems of the rural areas through short term as well as long term plans. The important short-term plans were development of rural water supply and communications, formation of panchayats, organization of cooperatives covering every village, improvement of sanitation, etc. The long-term schemes covered the attainment of village sufficiency through

agricultural, irrigational and livestock improvements and development of khadi and cottage industries. Rural water supply and health improvement schemes had priority, followed by better communications, and improved agricultural practices. The different development schemes were implemented with the close coordination of the different government departments like agriculture, irrigation, veterinary, medical, and public and communication, etc. This scheme was implemented through a Firka development committee under the direct supervision of a Firka development officer with a reputation as a distinguished social worker.

2.2.7 Etawah pilot project, Uttar Pradesh

In 1948, a development was started in 64 villages in Etawah district of Uttar Pradesh. It was conceived by M.R. Abert Mayer motivated by a spiritual sense of a mission and service of humanity. This project was sponsored by Pandit Jawaharlal Nehru. It had no external financial aid. It was financed and administered by the government of U.P. It was a special project to achieve self-confidence and cooperation in these villages which were not the beneficiaries of any external aid.

There were two important functionaries in the project: i) the rural life analyst and ii) the village participation officer who gave an applied social science orientation to the project. In this project, the training of workers received a very high priority. It provided in-service training to village level workers, outside job training, training to village leaders, social service cadets, adult literacy, literacy for panchayat secretaries and functionaries of other associated departments. The important thrust of the project was creating awareness in the villagers, communicating with them, helping them, listening to them, and exploring their needs. Activities, such as, adult literacy programmes, question, and answer sessions, kisan melas, fairs, camps, individual

and group approaches, helped workers to gain the villagers' confidence and ensure that their participation in several activities of socio-economic development.

Agricultural development activities covered the use of an improved variety of seeds, chemical fertilizers, irrigation, improved implements, plant protection measures, horticultural development, soil conservation, improvement of animal husbandry, provision of cooperative credit, marketing, etc. Other developmental schemes consisted of better sanitation and health services, maternity, and child welfare services; improvement of roads, water supply, drainage, and other public utility works; improvement of housing; field demonstrations, provision of reading room and library service.

The important achievements of the project were the growth of village organizations and institutions such as panchayats, schools, and cooperatives. This project attracted the attention of the world, besides other parts of India. Many visited the project area. Its success paved the way for the establishment of community development projects on a large scale.

2.2.8 Nilokheri experiment, Karnal, Haryana

In 1948 some steps were taken by S.K. Dey to rehabilitate the displaced persons coming from Pakistan due to partition of the country, by developing a new township at Nilokheri. He wanted the refugees to be actively engaged in constructive programmes assuring them the right to live, the right to work for a living and the right to receive what is earned. These three rights formed the basis of a new scheme known as Mazdoor Manzil. It aimed not only preventing one-way traffic of labour material, skill, and culture from villages to town, but also to develop a decentralised, agro-based economy, forming a nucleus township with a population of about 5,000.

The township was intended to include institution for medical relief and sanitation, middle and high school education, technical and vocational training, agricultural extension covering crop production, horticulture, poultry, piggery, fishery, sheep-breeding, etc.

The township provided recreation facilities through reading rooms, drama, music, and other cultural activities. Vocational centres and work centres for different crafts were started. Weaving, calico printing, soap making, tin and blacksmith, leather tannery and many other crafts and trades began to flourish at Nilokheri. Cooperatives were also started to look after the problems of marketing. Efforts made under this scheme greatly influenced the future course of formulating community development programme in India.

2.2.9 Area approach to rural development

Area approach to rural development was adopted with a view to implement strategy specific to the area instead of 'one size fits all' approach, such as, i) Backward Area development Programme, ii) Hill Area development Programme, iii) Tribal Area development Programme, iv) Drought Prone Area Development Programme, v) Desert Area Development Programme, vi) Command Area Development Programme, vii) Intensive Agricultural Development Programme.

Although this approach helped in development of the specified areas, it was observed that it benefited mostly the persons with existing riches, lands, and assets but not the rural poor. Therefore, in course of time these different schemes were either merged with other programmes or separate programmes aiming at development of less developed areas were designed, particularly to reach out to the rural poor, such as, Integrated Rural Development Programme (IRDP, 1978).

2.2.10 Community Development (CD) Programme

To ensure active participation of people in rural reconstruction, a scheme known as Community Development Programme was designed and launched on October 2, 1952. This scheme aimed at building up community assets like village roads, school building, wells, etc. by involving rural people. It was based on Nurkse's theory of capital formation with surplus labour in the agricultural sector of underdeveloped countries. It is reflected in today's NREGA.

Basing on the recommendations of Balwantrai Mehta Committee (1957), the three-tier system of panchayat raj was introduced in 1959; Zilla Parishad at district level, Panchayat Samiti at block/taluk level and Gram Panchayat at village level. Later Ashok Mehta Committee (1978) and 73rd Amendment Act (1992) of the Constitution suggested more empowerment. These bodies under panchayat raj have the responsibilities to implement the different development programmes; particularly the BDOs with the assistance of different extension officers implement the different schemes.

However, CD programme did not make much headway due to neglect of development schemes and greater stress on welfare programmes, absence of clearly defined priorities, lack of required technical knowledge for agricultural development, and it could not become people's programme but only government programme. Eventually, it was subsumed with the Integrated Rural Development Programme (IRDP, 1978) as well as it underwent changes in different states with different nomenclature.

2.2.11 Antyodaya

It means uplifting of the weakest section of the society. M.K. Gandhi's idea of development was "Sarvodaya through Antyodaya", an idea inspired from John Ruskin's book "Unto This Last". Phoenix farm was established in South Africa during Gandhi's stint for the upliftment of weak Indian minorities. This philosophy was propounded by M.K. Gandhi, and later Vinoba Bhave and Jayprakash Narayan dedicated their life to translate it into action (Narula & Kiran, 1989).

2.2.12 Don Bosco Vocational Training Centres & RRTC

Society of Don Bosco, also known as the Salesians, have a reputation of educating youth in India since 1926, mainly in Eastern and Northeastern regions of India with their head quarter at Kolkata (Don Bosco school diary, Park Circus, Kolkata, 2018). They have over 323 schools and vocational training centres across India, including one in Dudhani, Dumka.

Don Bosco Tech was established in 2006. It had grown into a prominent NGO with a network of over 300 institutions in more than 200 districts across India, imparting skill training. Its primary mission was empowerment of underprivileged youth through vocational training and placement assistance. It was one of the largest NGO partners in skill development to many public and private organizations. It imparted employability skills to the needy youth in areas, such as, AC & refrigeration, electrical mechanics, auto-mobile, driving, welding, carpentry, plumbing, tailoring, agri-technicians, horticulture, computer, mobile repair, secretarial practices, security guards, videography & photography, etc. Rural Resource and Training Centre (RRTC) at Umran, Meghalaya provides skill training in organic farming, livestock management, low-cost technology, and entrepreneurship in agriculture.

2.2.13 Mohammed Yunus, Micro Finance, Bangladesh

Muhammad Yunus started pioneering the concept of microfinance through SHGs in 1970 in Bangladesh. He eventually founded Grameen Bank of Bangladesh. He is an economist of repute with great vision and commitment. He formed SHGs, guided and trained them, nurtured them, and continues to guide them (Esty, 2011). He made an indelible impact on poverty alleviation and organizing the poor in Bangladesh. This achievement won him and Grameen Bank of Bangladesh, Nobel Prize in 2006.

2.2.14 Millenium Development Goals (MDG) and Sustainable Development Goals (SDG)

Millenium Development Goals: In 2000, Millennium Summit of the United Nations in New York, adopted eight international development goals for the year 2015. In the context of the current study, it is pertinent to mention that its first goal was eradication of extreme poverty and hunger. Its other goals included primary education for all, gender equality or empowerment of women, reduce child mortality, improve maternal health, combat HIV/AIDS, Malaria, and other diseases, ensure environmental sustainability and global partnership for development.

By 2015 appreciable achievements had been recorded: number of people living in extreme poverty declined by more than half; undernourishment halved; primary school enrolment rate reached 91%; fight against HIV/AIDS, malaria and tuberculosis improved; child mortality halved; target for access to improved sources of water was met. However, job had not finished for ending hunger, achieving full gender equality, improving health services, and getting every child into school. Therefore, a historical pledge was taken on September 25, 2015, in the form of

Sustainable Development Goals with the primary goal to end poverty, everywhere, permanently.

Sustainable Development Goals: UNDP (2015) set 17 goals to be achieved by 2030. The basic goals continue; no poverty, zero hunger, good health, quality education, gender equality, care for the earth, climate, and the environment. Among others, it added responsible production and consumption and to promote peace, justice, and inclusive institutions at all levels.

2.2.15 Co-operative societies in India: Dr. Verghese Kurien & AMUL; some examples from the western states of India: A cooperative society is “an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned enterprise” (en.m.wikipedia.org). It works on the principles of mutual help and welfare. Generally, around 10 members are required to start a cooperative. It ushers in advantages of economies of scale, better bargaining power, cost efficiency, market linkage, professional management, organizing of economic activities and social entrepreneurship.

Dr. Verghese Kurien, the milkman of India, was the architect of India’s White Revolution. He founded the National Dairy Development Board (NDDB, 1965) and the Gujarat Co-operative Milk Marketing Federation Ltd. He built one of the most popular household dairy brands, AMUL (Anand Milk Union Limited). It is a co-operative society of milk producers based in Anand, Gujarat. It has provided stable livelihood to over 1 million households. It has also created employment in supply chain, transporters, and vendors of milk products. It has distribution centres across India, especially for Amul milk, butter, and yogurt (Kurien, 2012). Gokul Co-

operative society, Kolhapur has successfully imitated the Amul model. Shirpur cotton textile co-operatives and textile-park have also transformed the local economy, organized the cotton growers, and enhanced the income of the local people. Maharashtra Industrial Development Corporation (MIDC), Maharashtra promoted small and medium scale enterprises.

2.3 Policy Approach to Rural and Tribal Development: While doing literature review it was considered appropriate to refer to some relevant policies, approaches, programmes of the Government for poverty alleviation, employment generation, rural and tribal development. Over 90% tribal communities live in rural areas. Therefore, they get covered also under all the programmes and schemes of rural development. Some related Constitutional provisions and safeguards have also been mentioned in the context.

2.3.1 Policies, Plans and Schemes:

At the outset it is important to mention India's continuous commitment to set up a "socialist pattern of society"; that the line of development must not be private profit but social gain; not only appreciable increase in national income and employment but also in greater equality in incomes and wealth (Singh & Shishodia, 2016). Evidently, growth with social justice has been rooted in India's public policies.

Tribal Panchsheel: The basic approach to tribal development can be traced back to Tribal Panchsheel, "Five principles" formulated under the Chairmanship of Jawaharlal Nehru in 1950s: i) People should develop along the lines of their own genius, and the imposition of alien values should be avoided, ii) Tribal rights in land and forest should be respected, iii) Teams of tribals should be trained in the work of administration and development, iv) Tribal areas should not be over administered or

overwhelmed with a multiplicity of schemes, v) Results should be judged not by statistics of the amount of money spent, but by the human character that is evolved.

Five Year Plans: Ever since 1951 the major objectives of the plans have been: i) to increase national income and per capita income, ii) to raise agricultural production, iii) to industrialise the economy, iv) to achieve balanced regional development, v) to expand employment opportunities, vi) to reduce inequalities of income and wealth, vii) to remove poverty, and viii) to achieve self-reliance. (INDIA, 2017 & 2020)

Tribal sub-plan: Under the planned development, a Tribal sub-plan was envisaged. TSP is a strategy for the accelerated socio-economic development of tribal people. It forms a part of annual Plan of the state. The benefits under TSP are in addition to overall Plan of the state.

Inclusive growth: Since 11th Five-year planning (2007-12), inclusive growth has assumed a priority of the government. It is a broad-based approach to economic growth. It is essentially a human development encompassing dimensions like, poverty reduction, employment generation, access to essential services in health and education by the poor, equality of opportunity, skill development, environmental sustainability, financial inclusion, women empowerment, and good governance.

‘Kudumbashree’: State Poverty Eradication Mission (SPEM) of Government of Kerala: Kudumbashree means prosperity of the family. It was launched in May 1998. Its major objectives are, i) poverty eradication, ii) women empowerment, and iii) achieving self-sufficiency. Implementation is carried out involving Local Self Governments (Panchayats), Neighbourhood Groups (NHGs), and SHGs.

Jharkhand State Livelihood Promotion Society (JSLPS): The Rural Development Department of Government of Jharkhand established JSLPS for effective implementation of livelihood promotion in the state in 2009. It is also the nodal agency for implementation of NRLM. It aims to reach out to poor households and link them to sustainable livelihood opportunities. Its major projects include Jharkhand Opportunities for Harnessing Rural Growth (JOHAR) whose aim is to enhance and diversify household income in select farm and non-farm sectors for targeted beneficiaries.

Schemes launched by Ministry of Tribal Affairs (MoTA) for scheduled tribes:

i) Special Central Assistance to Tribal Sub-Scheme (SCA to TSS); 100% grant (since 1977-78) is utilized for ITDP, ITDA, MADA, PVTG, ii) Grants in aid under Article 275(1) of the Constitution, iii) Development of Particularly Vulnerable Tribal Groups (PVTGs), iv) Institutional Support for Development & Marketing of Tribal Products/Produce; Tribal Cooperative Marketing Development Federation of India Ltd (TRIFED), v) Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP gatherers, vi) Support to National/State Scheduled Tribes Finance and Development Corporation, vii) Various scholarships to ST students, viii) Scheme for Grant-in-aid to voluntary organizations working for the welfare of Scheduled Tribes, ix) Vocational Training in Tribal Areas, and x) Support to Tribal Research Institutes (TRIs) and Tribal Festivals, Research Information and Mass Education.

2.3.2 Constitutional safeguards and Acts

Santal Pargana Tenancy Act, 1949: It continues with the major principles of the Santal Pargana as a revenue non regulation district. It extends to the whole of Santal

Pargana division including *Damin-i-koh*; Presently it is divided into six districts; Dumka, Godda, Pakur, Sahibganj, Deoghar & Jamtara. It essentially describes non-transferability of tribes' land to non-tribes. It describes appointment of village heads (*manjhi*) and their functions and the roles and responsibilities of Deputy Commissioners and Deputy Collectors. Similar two other acts were enacted: Chotanagpur Tenancy Act (CNTA) 1908, applicable to the entire Chotanagpur region of Jharkhand and Wilkinson's Rules 1837 in Kolhan Government Estate (presently the entire West Singhbhum district). The provisions and the spirit of these Acts have been incorporated in PESA Act, 1996.

PESA Act, 1996: The provisions of Part IX of the Constitution of India, relating to Panchayats have been extended to scheduled areas through Provision of the Panchayats (Extension to the Scheduled Areas) Act, 1996. It primarily reaffirms and empowers the Panchayat and the Gram Sabha in conformity with the principle of village republic, recognizing its traditions and customs. It provides that every village shall have a Gram Sabha consisting of persons whose names are included in the electoral roles for the Panchayat at the village level. Section (4) of the Act, inter alia, provides that the Gram Sabha shall approve the plans, programmes and projects for social and economic development; Gram Sabha shall ensure non-transfer of ST land to non-ST; 1/3 of quorum of gram sabha shall be women; panchayats shall be responsible for the identification or selection of persons as beneficiaries under the poverty alleviation and other programmes; prevent and restore unlawfully alienated land; manage village markets; regulate the sale and consumption of intoxicants. PESA enables panchayats to function as institutions of self-government.

Samata Judgement, 1997: It is an affirmation of the provisions of PESA Act, 1996; particularly the power of Gram Sabha in preventing alienation of land in Scheduled Areas. This case (SLP) was filed in the Supreme Court of India by SAMATA, an NGO, against the Government of Andhra Pradesh for leasing out tribal lands to private mining companies in the scheduled areas. It was a landmark judgement in favour of tribal rights. It permitted mining activities to continue if they were undertaken by the government or an instrumentality of the state or a cooperative society of the scheduled tribes. (http://mmpindia.in/Samata_Judgement.htm)

Forest Act: India has a forest policy since 1894. A new forest policy was enunciated in 1952. It was further revised in 1988 with the main idea of protection, conservation, and development of forests. It envisaged a minimum of 1/3rd of the total area of the country to be brought under forest or tree cover and the involvement of tribes/forest dwellers in protection, regeneration, and development of forests. The tribes have had a symbiotic relationship with forest based on mutual sustenance; they have been dependent on the forest resources for livelihood and existence. They have usufruct right and not ownership rights.

But some intermediary Forest Acts, Wildlife (Protection) Act, etc. restricted the rights of the tribes in the use of the forest. Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Acts, 2006 was enacted to redress the “historical injustice”. In this way Forest Rights Act, 2006 restored the rights of the forest-dwelling communities to land and other resources. However, there have been complaints about the implementation of this Act (Gadgil and Guha, 1995).

Council for social development (2010) released a “Summary Report on Implementation of Forest Rights Act” stating that the rights of majority of tribes and

other traditional forest dwellers were being denied and the purpose of the legislation was being defeated (Singh and Shishodia, 2016). Dungdung (2019), a tribal activist observed that although Forest Right Act gave usufruct rights to the tribes, over the years the tribes' right to forest had been encroached upon. According to Padma Shri Simon Oraon, the adivasis had been the protectors of forests. Under his leadership and guidance, the people of Bero area (Ranchi) comprising 51 villages, had revived the forest: fauna and flora, fountains, and streams.

Food Security Act: The National Food Security Act, 2013 aims to provide subsidized food grains under Targeted Public Distribution System, 1997 (TPDS), to approximately 75% of the rural population and 50% of urban population with 5 kg cereals per person per month.

2.3.3 Poverty and Unemployment Alleviation Programmes

Government's approach to poverty and unemployment can be described under four categories: i) Public Distribution System (PDS), ii) Self-employment programmes, iii) Wage employment programmes and iv) Social welfare schemes.

i) Public Distribution System: PDS is among the largest scheme in the world. It was conceived to ensure food security in India where BPL is still 22%. Until 2004-05 among social groups, SC, ST, and backward castes accounted for 80% of the rural poor. In 1992 the PDS was revamped as (Targeted) TPDS in 1997 and extended to tribal areas, arid, hilly, drought prone and to remotely located areas. In the 10th 5-year plan crucial role was given to Panchayati Raj Institutions (PRIs) in the delivery of TPDS. It reportedly had made an impact in raising the consumption level of the people, especially in rural areas. In 2013, National Food Security Act was enacted

making provision of 5 kg cereals per person per month; rice at the rate of Rs.3/- per kg, wheat at Rs.2/- per kg and millet at Rs.1/- per kg.

ii) Self-employment programmes: In 1980, IRDP, a comprehensive self-employment programme was launched by MoRD comprising TRYSEM, DWRCA, SITRA, GKY and MWS. It was consolidated as SGSY in 1999. In 2011, it was restructured as NRLM, Aajeevika, livelihood project. Now DAY-NRLM works with focus on; a) expanding livelihood options of the poor, b) building skills for the job market, and c) nurturing self-employment and entrepreneurship.

iii) Wage employment programmes: MoRD started Wage Employment Generating Schemes (WEGS); JRY, SGRY, FFW. In 2006, it was consolidated as Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) for unskilled manual workers with short-term employment on public works – irrigation, infrastructure, reforestation, soil conservation and road construction; to provide income transfers. The concurrent idea under these programs was to create durable assets, which had the potential to generate sustainable livelihood. MGNREGS' major objectives are a) to provide at least 100 days of guaranteed wage employment in a financial year, b) to achieve at least 33% women participation, and c) financial inclusion of the poor.

iv) Social Welfare Oriented Programmes (SWOP): In 1995-96 National Assistance Programme was launched. Annapurna Scheme, a food security to senior citizens, was launched in 2000 and widow pension and disability pension in 2009.

Integrated Child Development Scheme (ICDS) or Anganwadi: It was launched in 1975. It provides food, preschool education, primary healthcare, and immunization to children under 6 years mainly in rural areas.

Mid-day Meal Scheme (MDM): The scheme was introduced in 1995. Now it is covered by the National Food Security Act, 2013. The school children are provided meals in the school to promote literacy and to improve nutritional standard of the children nation-wide.

Start-up India Stand up India: This initiative aims at fostering entrepreneurship and innovations by creating an ecosystem that is conducive for growth of start-ups. The objective is that India should become a country of job creators instead of job seekers. It talks of innovations.

Skill India mission – Kaushal Bharat, Kushal Bharat: It has set a target of training over 40 crore people in various skills by 2022. It includes initiatives like National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme and the Skill Loan scheme. With the tagline 'Kaushal Bharat, Kushal Bharat', it aims to promote traditional skills and resources

2.3.4 Priority Sector Lending (PSL): Credit flow to MSMEs and Agriculture:

The aim of PSL is to enhance credit flow from banks to the vulnerable sections of the society; agriculture and allied activities, MSMEs, housing, education, low-income groups, and weaker sections with minimum stipulations of 40% (agriculture 18%) of banks' total loans. The ministry of Micro, Small and Medium Enterprises (MSME), GOI has adopted the cluster development programme (MSE-CDP) as a key strategy for enhancing the productivity and competitiveness as well as capacity building of Micro and Small Enterprises (MSEs).

MUDRA: Micro Units Development and Refinance Agency Bank (MUDRA Bank): Under this scheme loans are provided at low rates to micro finance institutions and

non-banking financial institutions (NBFCs) which provide credit to MSMEs. It was launched by the Prime Minister on April 8, 2015.

2.3.5 Financial Inclusion: National Financial Inclusion Strategy (NFIS) envisaged “to make formal financial services available, accessible and affordable to all the citizens” ... especially “to the hitherto excluded sections of society” (RBI Annual Report, 2018-19, p.96. Box IV.2). Deposit penetration was the key driver of financial inclusion. It made provision for no-frills account.

In 2014, PM Jan DhanYojna with a view to comprehensive financial inclusion was launched with features of zero balance, Rs.1.0 lakh insurance coverage, RuPay Debit card and RuPay Kisan Credit Card. Atal Pension Yojna (APY) was launched in 2015-16 to ensure old age income security for workers in unorganised sector and to enable them to join National Pension Scheme (NPS).

2.3.6 Direct Benefit Transfer (DBT), Planning Commission

National Committee on DBT decided to start DBT rollout in 26 identified schemes in 43 districts from January 01, 2013. It is a significant governance reform to improve public service delivery, ensuring efficiency, transparency, with an aim to eliminate leakages by cutting out intermediaries and transfer benefits/subsidies directly to the beneficiary's bank account, targeted delivery of government subsidies, benefits (scholarships, pensions, maternity benefits), and services, assuming that there is a need to redistribute income as a public policy objective. It would not be a substitute for public services. It would be complementary to the public distribution system. Conceptually, DBT System involves a few simple steps – digitizing data, enrolling in Aadhaar, opening bank accounts, and seeding (linking) these accounts to Aadhaar. DBT require process re-engineering, i.e., to change the

way to transact business, to release funds, to track funds, and to have information on beneficiaries. Successful implementation of DBT rests on twin pillars of Aadhaar generation and financial inclusion, to ensure “Aapka paisa aapke haath”.

Cabinet Secretariat, DBT Mission (2019), reported that DBT system had gradually onboarded all 439 Central schemes and 3486 schemes listed by States / UTs in all districts, since inception till August 2019. It had transferred Rs.7,68,931 crore through 968.8 crore transactions to 59.6 crore beneficiaries under DBT (non-unique). It had removed 8.31 crore duplicate and fake accounts.

2.3.7 Educational and training institutes for rural self-employment & rural development

Training Institutes, such as, CAB, NIRD and BIRD are supported under R&D Fund. College of Agricultural banking (CAB), Pune is a premier Centre for Capacity Building in Development Banking and Finance. It is promoted and managed by the Reserve Bank of India. It conducts programmes on agricultural banking, cooperative banking, human resources, and leadership, MSME and inclusive finance.

National Institute of Rural Development and Panchayati Raj, NIRD (NIRDPR), Hyderabad, is an autonomous Indian Institute for research in rural development under the Department of Rural Development. It offers a two-year PGDM (RM) course. The selection process is through valid score in CAT / XAT / MAT / ATMA. This course assures 100% placement and provides a basic understanding of the rural sector. It has a NE-Regional Centre at Guwahati, Assam.

BIRD, NABARD: Bankers Institute of Rural Development, Lucknow is a premier training institute promoted by NABARD. It offers training, research and consultancy and other related activities in the field of Agriculture and Rural Development.

RSETI (RUDSETI): Rural Self Employment Training Institutes are managed by banks with active co-operation from the Government of India and State Government. It is designed to ensure necessary skill training and skill upgradation of the rural BPL youth to mitigate the unemployment problem. RSETI concept is based on RUDSETI (Rural Development and Self Employment Training Institute), a society established jointly by three agencies i.e., Syndicate Bank, Canara Bank and Sri Manjunatheswara Trust based at Ujire in Karnataka.

One RSETI is established in every district in the country. It conducts programmes of short duration ranging from 1 to 6 weeks on subjects, such as, i) Agricultural programmes – agriculture and allied activities like dairy, poultry, apiculture, horticulture, sericulture, mushroom cultivation, floriculture, fisheries, etc. ii) Product programme – dress designing for men and women, rexine articles, incense sticks manufacturing, football making, bag, bakery products, leaf cup making, recycled paper manufacturing, etc. iii) Process programme – two wheeler repairs, radio/TV repairs, motor rewinding, electrical transformer repairs, irrigation pumpset repairs, tractor and power tillers repairs, cell phone, beautician course, photography and videography, screen printing, domestic electrical appliances repair, computer hardware and DTP, iv) General programme – skill development for women, and v) Other programmes – leather, construction, hospitality and any other sector based on local requirements. Soft skill training is an integral part of all training programmes.

After successful completion of the training, the candidates are provided with credit linkage assistance by the banks to start their own entrepreneurial ventures. At least 70% of the trainees are admitted from the rural BPL category certified by DRDA. Proper weightage is given to SC/STs, minorities, physically challenged and women. Certificates issued by an RSETI are recognised by all banks for extending credit to the trained. Credit needs of trainees are appraised by RSETI under SGSY/NRLM or any other government sponsored programmes.

2.3.8 Village adoption scheme by banks, 1960: A village adoption scheme was introduced by banks in 1960s in India with a view to enhancing their visibility besides encouraging agri-lending in a cost-effective manner. For some time, the scheme looked fading away. But, now SBI has taken a new initiative under its CSR programme to revive the scheme, rechristening it as “SBI ka Apna Gaon”. For this purpose, SBI actively involves the village panchayats.

The main purpose of the scheme is to achieve 100% financial inclusion for all BPL families. The scheme would seek to promote SHGs, farm clubs with the participation of NGOs and other development agencies. The scheme would also focus on credit requirements of all eligible rural households and link community services with SBI banking services. The bank’s staff members would act as bridge between the villages and the SBI. The bank works in tandem with the state government, e.g., with “Atal Adarsh Gram Yojna” in Uttarakhand. Under this scheme, the thrust is on development of social and infrastructure facilities in rural areas to remove regional imbalances.

2.4 Critical Appraisal of the Previous Literature

This research, being a multi-disciplinary study, it was appropriate to review books, research papers, reports and articles from the field of economics, development studies, rural development, tribal development, agriculture, sociology, education, environment, social psychology, communication, and management. The literature review is presented in the following classified sub-heads.

2.4.1 Self-reliance, ‘Development from within’

Many studies advocated self-reliance as the most sustainable model of development. These studies gave adequate thrust on village self-reliance, reiterating that 67% Indians lived in rural areas. The film ‘Gandhi’ (1980), directed by R. Attenborough, pointed up improving local skills exploiting local resources. Kalam and Singh (2011) spoke of sustainable development in rural areas by using core potential of rural sector while Providing Urban Amenities in Rural Areas (PURA).

Kim & Isma’il (2013) said that development by self-reliance was a more viable alternative to ‘dependent development’. It allowed people to participate in the process of development, built trust in their own capabilities; it empowered them. Kumar (1998) talked about how the Voluntary Organizations could facilitate rural development.

George (1880), in “Progress and Poverty”, presented a critique on the present (dis)order of economy, i.e., injudicious distribution of wealth. The current study raised similar questions which George had raised, “Why in a land so bountiful blest... amid such super-abundance, should strong men vainly look for work?”

Sen (1943) in “Rabindranath Tagore on Rural Reconstruction” recounted the fundamental aim of Sriniketan experiments that local people should take initiatives rather than turn to Government for help in everything: “... It is a matter of disgrace that we are in the habit of turning to Government for help in everything. To spread and strengthen the spirit of self-help is one of the fundamental aims of this institution.” Although the book was pre-independence, the rural scenario still appeared much the same.

Verma (2017) while talking of rural reconstruction through self-help presented a critical appraisal and review of the policy adopted for tribal development. Panangatt (2012) undertook a phenomenological and an analytical study of social and cultural life of the Santals in Godda district of Jharkhand. This study gave an in-depth insight into indigenous leadership and tribal development. His research pointed out the importance of the role of village leadership in solving their own problems of the tribal society.

Shende (2010) in his Ph.D. dissertation (IIT, Mumbai) “Poverty, food insecurity and coping mechanism among tribes in Maharashtra”, showed that livestock rearing could become an alternative source of gainful livelihood for tribal households. His field experiments through his NGO (EAGL) had been promoting goat farming as livelihood initiative in tribal areas of Maharashtra (Bhandara district). EAGL helped people to build capacity for social entrepreneurship, monitored them closely, provided essential training and executed risk mitigation plan.

Helin (2008) in “Dance with Dependency”, presented a strong critique of the long-term welfare policy for the indigenous people of Canada where it had resulted in ‘social pathologies’. He quoted singer Felix Leclerc, “The best way to kill a man is

to pay him to do nothing” (Helin,2008). According to him the psychological effect on people from long term dependence on transfer income was damaging. The people had fallen into “welfare trap”. He has made a comparative reference to Maori tribe of New Zealand who had followed greater self-sufficiency and reduced their dependency on state, “tribal re-development and service delivery to Maori by Maori”. Maori tribe eventually became a net positive contributor to the country’s economy. He has cited Te Taru White, the Maori leader, “*e tipu e rea ... Hold fast to your cultural heritage and identity and develop the skills and capability of the Pakeha (European) to sustain yourself and claim what is rightfully yours*”. By doing both, the Maori of New Zealand had achieved consolidation of the indigenous community as well as a systematic integration of their economy with the mainstream.

Banerjee & Duflo (2012) presented a few perspectives on aid-oriented development, referring to William Easterly and Dambisa Moyo, the anti-aid public figures, who argued that “aid does more harm than good: it prevents people from searching for their own solutions, while corrupting and undermining local institutions and creating a self-perpetuating lobby of aid agencies”. Lewis (2001) in his essay, “Human Empowerment and Development”, reiterated that anything which encouraged dependency without self-determination debilitated against empowerment.

2.4.2 Critique on Schemes for poverty and unemployment alleviation

Upadhyay and Pandey (2003) made a critical appraisal and review of the policy adopted for tribal development in “Tribal Development in India: A critical Appraisal”. Singh (2009) found lack of rural infrastructure, ill governance, political

instability, and corruption as the main detriment to rural development. Dreze with Khera and Siddhartha (2017) reported leakages in NREGA works in Ranchi District.

Dreze (2017), in “Sense and Solidarity”, dwelt upon the evolution of social policy in India over time, particularly, between 2000 and 2017; MDM and NREGA being the major initiatives of the Government. This collection of essays described that India continued to grapple with hunger, poverty, inequality, corruption, conflict, and related issues. He talked of social development which he described as ‘the endeavour to create a good society’ and its intricate connection with right to work and right to food.

Panangatt (2012) pointed out that tribal development literature described several instances of failed and incomplete projects but there was no mention of social auditing. There was a neglect of social audit (Government of Jharkhand CAG Report, 2017). He observed that development ethics and social justice received subdued consideration in development literature. Mallik (2004) in his survey of tribals’ response to government’s schemes at panchayat and gram sabha level, described that the tribes had little say in administration and their leadership was influenced by political ideology.

Gaekwad (1986), Kochar (2008), Rath (2006), Putthumattathil (2018), and a few others, have presented critical dimensions of ineffectiveness in the implementation of the schemes for poverty and unemployment alleviation, of their ground realities, and ill-governance. Sanjay, Meena, and Alam (2018) assessed that institutional inhibitions were the core problem relating to the implementation and execution of MGNREGA in Jharkhand, such as, lack of proper planning, supervision, capacity building, people’s participation in decision making, absence of social audit, and

persistence of venality and corruption. They had caused resentment, disappointment, and dissatisfaction among the rural beneficiaries. Government of Jharkhand (2017) also reports about ineffective social audit in a “*Report on the Comptroller and Auditor General of India on General, Social and Economic Sectors for the year ended March 2016*”.

Sen and Dreze (1989) in “Hunger and Public Action”, described and ascribed the success of Kerala (India) and China to ‘support-led security’ especially when economy was ailing. Such success can be achieved through careful and wide coverage of public support. It showed how much can be achieved even at low level of income if public action was aimed at promoting people’s basic entitlement and capabilities. “People’s capability to conquer preventable illness and to escape premature mortality depends crucially on their command over necessities and their ability to use these with skill. Public support of education, health, employment, etc. can contribute both to that command and to the necessary abilities” (Sen & Dreze, 1989).

The voluminous works of Sen & Dreze (1999) revolve around the central roles of social and economic opportunities, especially in “India: Economic Development and Social Opportunity” (1995). Observing ‘the nature of public discussion’ in India, they write, “So much wrath and energy have been spent on attacking or defending liberalization and deregulation that the monumental neglect of social inequalities and deprivations in public policy has received astonishingly little attention in these debates”. Such engagements “cannot justify the conformist tranquillity on the neglected provisions of public education, health care, and other direct means of promoting basic human capabilities”. These foundational concerns are directly related to the well-being and freedom of the mass.

2.4.3 Rural Development, Agriculture & Farmers, and Infrastructure

After the Independence, 1947, there was adequate thrust on agriculture. In 1965, Lal Bahadur Shastri introduced intensive agriculture development programme with a slogan of “Jai Jawan Jai Kisan”. Shastri promoted White Revolution. He supported AMUL and created National Dairy Development Board (NDDB) (GoI, 2020).

The main findings of M.S. Swaminathan Committee Report (2006) on farmers discussed causes of farmers’ distress, land reforms, irrigation, productivity of agriculture, food security, bio-resources, and employment through agriculture. Mukherjee (1952), in ‘Sriniketan Experiment in Rural Development’ described Tagore’s vision of rural reconstruction, underscoring that Tagore’s initiative was not only removal of poverty but also bringing creative joy.

Reddy (2012), Singh & Shishodia (2016) have written elaborately on agriculture and rural development in India. Singh & Shishodia (2016) have mentioned some paradigms for Rural Development. Emphasizing upon the importance of infrastructure, they cited Fan, Hazel, and Haque (1998), “There is an inverse relationship between poverty and Infrastructure Development Index”. Reddy (2012) reiterated that exploitation of resources at the cost of ecological equilibrium and lives of primitive tribes denying social justice, was only economic ‘growth’ and not ‘development’. He also observed that ‘social capital’, as a resource, had a critical role to play in rural circumstances. Thinkers, like Arthur Lewis took cognizance of the existence of dual economy (industry and agriculture). Reddy (2012) underscored that these two sectors need not be in conflict, but both were essential to develop side by side, “an agrarian revolution, preceding and running parallel with industrial revolution, is a sound strategy that could take a country along the golden path of

economic development”. He also referred to World Bank publication on rural development which emphasized upon making the process of rural development self-sustaining.

Singh and Shishodia (2016) analysed principles, policies and management of Rural Development and stated that no strategy of socio-economic development for India could be successful, which neglected rural people and agriculture which contributed to about 18% of its GDP at current prices 2013-14. While pointing out conflicts in development approaches in various sectors, they held that it was essential to take a balanced and a practical view, recognizing the complementarity between rural and urban, agriculture and industry, capital and labour, natural and planned dimensions of development. “Development should, therefore, be perceived as a multidimensional process involving the reorganization and reorientation of both economic and social systems” (Singh & Shishodia, 2016).

Hagen (1984), an American Doctor who worked in Dumka district between 1946-62, emphasized upon the need for good education, health services, and sanitation besides an improved economy, employment, and better agriculture. National Commission on Farmers; serving farmers and saving farmers, Swaminathan (2006), spoke of increasing farmers’ income, ensuring agriculture risk fund, remunerative price for agricultural produce, and problems faced by the farmers and agriculture.

Prahalad and Hart (2002) revealed a possibility and opportunity to transform the bottom of the pyramid market into a profitable market. Speaking of ‘inclusive capitalism’ they presented potential for business in the tier-4 area of consumers and thereby “linking the poor and the rich across the world in a seamless market organized around the concept of sustainable development”. Tier-4 area as they

describe, accounts for 4 billion people thus far engaged in informal economy, i.e., 40-60% of economic activities in developing countries, especially in rural areas and urban slums.

Ansari (2016) reported of an exemplary investment in agriculture and human resource (farmers' skills) in Bolivia, which set a mission to become completely food independent by 2020. Its main strategy was to invest in small farmers to build on existing local capabilities and enhancing them. The agriculture minister announced over 20 food security projects investing \$40 million, which included financial support to breeding livestock, fish farming, growing potatoes, tomatoes, wheat, vegetables, etc. Their objective was to reduce imports, support local farmers and business in addition to addressing the overarching global issues like unemployment, hunger, and poverty. Reddy (2012), referring to Paul Streeten stated that human development and reduced poverty would contribute to a healthy civil society, orderly democracy, and greater social stability.

Aziiza & Susanto (2011) and Vishwanadham & Vedula (2010) described 'Smart village' as a solution to improve people's quality of life in rural areas. 'Smart rural' meant thrust on technology and access to information, enabling education and local business opportunities, improving health and welfare, enhancing democratic engagement and overall improvement of rural village dwellers.

Maxwell & Fernando (1989) reviewed issues connected with cash crops and growth, distribution, food security, dependency, and environment. Rural Development Report (2019) emphasised upon creating opportunities for Rural Youth. The motto of International Fund for Agricultural Development (IFAD) is investing in rural people.

2.4.4 Environment (Nature) and Indigenous Biodiversity

Tribes have been living amidst forest indigenously for centuries. Therefore, tribes are also addressed as “Vanwasi”, “Jangalwasi” “Paharia”, etc. Jharkhand derives its name from “Jhar” which means forest or bush. Forest is a source of food and life for the tribes. Recent struggles of the tribes had acquired a phrase “*Jal, Jangal, Jamin*”.

Singh & Shishodia (2016) described that agriculture and tribal economy heavily depended on environment, forest, weather, and climatic factors. Agriculture in the area depended on rain or Monsoon. Therefore, it was highly susceptible to natural calamities, such as, droughts, hailstorms, cyclones, and untimely rain. Sasmitha & Arunachalam (2019) also made similar observations in their study in Nilgiri district and added that degradation and alteration of natural environment disproportionately affected tribal life; their culture, food supply, health hazards, etc.

Vandana Shiva, Medha Patkar, Sunita Narayan, et al were actively working for protection of the environment, life and food, biodiversity, and usufruct rights of the native people over nature or forest and non-privatisation of nature and its resources. Shiva (2010), in her book, “Making Peace with the Earth”, described issues concerning earth, environment, biodiversity, organic agriculture, food, and health as wealth. She promoted a way of farming which was non-violent with nature. Indiscriminate use of fertilisers, pesticides, and herbicides (Bhopal gas tragedy, 1984) and green revolution, according to her, were at war with nature. They had killed biodiversity and burned the soil. They had further increased the demand for water by crops by 10 times, forced farmers to use costly fertilizers and pesticides, and above all, they had ushered in an irreversible health hazard. She established

Grandmothers' University to reiterate traditional knowledge, biodiversity, and sustenance living. Small farmers accounted for 70% of food supply India ate.

She opposed industrial agriculture (chemical agriculture) which promoted genetic engineering, increasing the size and volume of production at the cost of valuable nutrients of food products. She talked of a living economy in place of industrial economy and opposed patenting of plants and animals because they were not inventions. She urgently pleaded to change the method of agriculture before the destruction of the earth and its biodiversity became irreversible.

She reiterated development in place of growth. She pointed out the ugly contradiction of industrial growth-oriented economy. In 2008-09 when the world experienced slow down, India recorded a growth of 9% which was among the highest in the world. During the same period there were 20 Indian billionaires in the list of top 100 billionaires in the world. But during the same period, India recorded highest number of hunger and malnutrition in the world. This was abominable. This was not development of the people but usurpation of natural resources and wealth by a few corporate houses. According to CIA, India's Gini coefficient in 2011 was reported at 0.352, ranking 95th out of 157 countries (CIA World Factbook, 2011). She lamented that India had become a corporate state (business + government) and not a people's state. She reminded that the villages were not a place of curse but a place of resurgence, innovation, life, and excitement, regenerating power of the mother earth. She underscored that civil societies had a great role to play in reviving life on earth. India should be a country of people and not of politicians and businessmen.

Rao (2018), an agriculturalist and seed keeper farmer, Bangalore, worked to save and protect endangered vegetables. In TEDxNayapura lecture (2018), he reported that 99% of biodiversity of indigenous vegetables had been lost in just 100 years. He had started keeping and preserving seeds, such as, brinjal, tomato, squash, okras (ladyfingers), peas, karela (bitter gourd), pumpkin, kaddu, chilli, corn, etc. He reminded that seed keeping among Indian farmers was a tradition which existed for thousands of years, but now they bought seeds from the market, from the commercial companies who promoted exotic high yielding seeds and not the desi native seeds. Introduction of industrial agriculture had killed the habit of the farmers to keep seeds. The farmers were producers as well as keepers of seed. Variety of desi vegetables faced extinction. “Genetic biodiversity is essential for the survival of the entire planet” (Rao, 2018). Covid-19 should have reminded us the value of immunity enhancing food. In the trend of high yielding or hybrid seed, unfortunately, seed maker (farmers) had become seed buyers.

In the aftermath of World Wars (WW1&WW2) and Bengal famine 1914 &1943, Dr. M. S. Swaminathan who is recognized as the father of India’s green revolution, developed high yielding varieties of wheat and rice to achieve food sufficiency in India. It did achieve a substantial increase (nearly three times) in productivity. Norman Borlaug, the “Father of the Green Revolution” received Nobel Peace prize in 1970. He is recognized for saving over a billion people from starvation and for engineering disease resistant high yielding variety of seeds.

Nevertheless, quite a few criticisms described disadvantages of green revolution which were acknowledged by the Rio treaty (1992), namely, i) it killed indigenous bio-diversity and created inter-crop imbalance, ii) it promoted mono-cropping which

resulted in depletion of soil nutrients, iii) it necessitated use of chemical fertilizers, pesticides and greater need of water, iv) use of chemical inputs further resulted in loss of natural soil fertility and nutrients, water pollution, killing of life, bacteria, micro-organisms and helpful fossils, v) it brought health hazards, particularly cancer for human beings (cancer train between Bhatinda and Bikaner), vi) cost of farming increased; farmers were conditioned to buy seeds because HYV seeds were sterile and patented by Monsanto, vii) it caused deforestation and ecological imbalance. According to Shiva (2010), there was increasing evidence that the indigenous crop varieties could also be high yielding if given the required doses of inputs.

Sunita Narayan, an environmentalist also propagated the green concept of sustainable development. Medha Patkar, another environmental and a socio-economic activist also raised issues of injustice faced by the tribes, dalits, farmers, labourers, and women. Padma Shri Jamuna Tudu and Smt. Chami Murmu dedicated their life to protection and revitalization of forests.

These works and experiments underscored the indispensability of care for the environment and the mother earth while considering economic transformation. It is critical to examine whether development is at war with nature: survival versus nature or survival with nature?

2.4.5 Human Resource Development: Education and Training

Lewis (2001) talked of promoting traditional skills, leadership, human empowerment, and development. He observed that anything that encouraged dependency without self-determination debilitated against empowerment.

Dreze and De (1999) in “Public Report on Basic Education in India”, also known as the PROBE report, found that formal education for rural people was far from the realities of life. They called it a meaningless level of learning (MLL). Formal education system had been viewed from the perspectives of urban middle-class. In a cartoon, a farmer was shown telling a teacher, “Master Saab! If Babua goes to school, then who will help me with my farm!” (Dreze and De, 1999). It was a real situation which deserved a judicious understanding. “Lack of parental support” was generally treated as irresponsible and obstructive behaviour without considering the farmers’ circumstances. In the same report, there was a reference to R.K. Narayan’s description of the ‘average child’ which was heavily influenced by the middle-class view. A similar bias ran through the school curriculum, alienating children of deprived backgrounds.

Banerjee & Duflo (2012), in “Poor Economics”, explained that the schools failed in many developing countries because the curriculum and the education system were designed in favour of the elite rather than the regular children. They suggested change in the pedagogy. Helin (2008), in “Dance with Dependency”, reported about Maori education system of the indigenous people of New Zealand, which was an example of an effective balance between adherence to traditional heritage and identity and adoption of the mainstream knowledge, skills, and technology.

Kamath (1998), in his book “Tribal Education in India” showed a complex interaction between education, tribal development and empowerment of the tribes. He mentioned that tribes valued education. The tribal children walked miles to attend schools after contributing to works of the family: tending domestic animals, collecting water, household chores, etc. This multi-tasking put them at disadvantage

when excellence in studies mattered. Therefore, it is important to consider their circumstances while comparing them with their urban counterparts.

In “Tribal Education and Fading Tribal Identity”, Ambasht (1999) has cited from ‘Education and the Deprivileged’ (Bhattacharya, 2002) “... education has, undesirably, played the role of a steamroller. It has adopted the values of the dominant culture in its basic fabric of curriculum content and curriculum process, and unwittingly imposed them on smaller (or tribal) cultures, ... This is mainly because of the unintentional biases of curriculum planners, due more to ignorance than design ...”. “The emancipation of the mind from the shackles of Intellectual Imperialism is the major condition for the development of a creative and autonomous social science tradition in developing societies” (Alatas, 2000).

In the context of medical education Dr. Devi Shetty, Founder of Narayana Health, observed, “We have made medical education as an elitist affair”; it is too expensive for students from deprived background to afford (Footage: IndianExpress.com, 2017). India required liberating medical, nursing, and paramedical education. The same looked true for the regular formal school education. In IUJ Journal, ‘Integrated approach to skill development’, Kritika (2016) emphasized upon reviving traditional skills: rural development through skill development.

“In the rural schools, where most students are drawn from the farming community, basic agricultural education must be made compulsory. Even if some discontinue with the X class, what they learnt about agricultural services must be useful in their farm operations” (Reddy, 2012). Reddy concluded that human resources development among farmers in terms of necessary skills, knowledge and information, health services and various inputs, were prerequisites for an integrated

rural and tribal development. Baskey (2011) in his research among rural and tribal students of Birbhum district (W.B.) observed that rural tribal children found the environment in formal schools, alien. They could not relate it with their rural and tribal life. It is worth noting that the Right to Education Act RTE, 2009 spoke of right to education, but it was not specific on what (content) and how to educate.

2.4.6 Forest, Tribal life, and Development

Some scholars have written about and reviewed indigenous rights, Constitutional safeguards, Acts and policies, and tribal self-governance. Prakash (2012) elaborated upon the efforts of the Indian Constitution, various acts, UNO, etc. to protect the rights of the tribes. Bose (2004), in “Tribal Life in India”, gave an anthropological account of tribal economy as hunting, fishing, gathering, jhum, etc. Nathan and Xaxa (2012) in “... Adverse inclusion” located the deprivation of adivasis in a larger context; regional, national, and global. They emphasized upon an active involvement of people in the development process and in political governance.

Gadgil and Guha (1995) in “Ecology and Equity”, critically discussed ecological crisis in India, its policies, and proposals for ecological reform. Munshi (2015), in a collection of articles of almost four decades, discussed questions of community rights and ownership, management of forests, the state’s rehabilitation policies, and forest rights acts and its implications, emphasizing rights of the tribes and analysed the causes of their plights. It explicated how opportunities had deluded tribes and had deprived them of their rights in India. Setty, Gopal & Chinnaswamy (2019) wrote on empowerment of tribal communities through sericulture. Kannan & Pillai (2005) explained success of public action and participatory development in Kerela.

Bagaicha research team (2015), in “Deprived of rights over natural resources, impoverished Adivasis get prison: a study of undertrials in Jharkhand”, as the title suggested, disclosed striking realities about alleged “Naxalite” under-trials in Jharkhand, most of whom were tribes and Dalits who had tried to assert their constitutional and human rights to protect their land and forest (livelihood resources). Their findings revealed that 97% of the 102 respondents were accused of as being Maoists or ‘helpers of Maoists’ based on misinformation. These accused reportedly had opposed transfer of tribal land to the private businessmen. The authors had drawn a genealogy of the ideological and schismatic differences that exist between adivasis and the so-called “mainstream” or “capitalist”. This Team, reiterating egalitarianism, cooperation, collectivism, sustainable use of resources, socialist approach, and “Living in harmony with Nature” life-view of the tribes, observed: “Land does not belong to the human community. Rather human community belong to the land.” (Bagaicha research team, 2015)

Further, Bagaicha research team revealed exclusion of the local people from the benefits of ‘development’. It spoke of marginalization, deprivation, and alienation of the local people, especially the tribes from natural resources. The administration treated their struggles for justice as extremism against the Government. United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007) reiterated the rights of indigenous peoples “to maintain and strengthen their own institutions, cultures and traditions, and to pursue their development in keeping with their own needs and aspirations”.

Verma (2002) had a long experience in planning and implementation of various tribal development programmes explained problems and challenges of tribal

development. Husnain (1991), “Tribal India Today”, enumerated and analysed the problems of the tribes in India. By and large, they still looked relevant. Dungdung (2019), in “Adivasi aur Vanadhikar”, pointed out that Forest Act had not been implemented in right spirit. As a tribal activist, he observed that although Forest Right Act gave usufruct rights to the tribes, over the years the tribes’ right to forest had been encroached upon and they had been increasingly alienated from the forest land and resources.

Kumar & Puthumattathil (2018) with special reference to the Hos of Jharkhand, described extraction of natural resources and minerals in adivasi regions at the neglect of the local population. In the process, there resulted deprivation and alienation of adivasis in their own land, environmental degradation, reduction of arable land and water resources, the main sources of their agricultural livelihood. There were quite a few reports on the hazardous impact of radioactive waste from uranium mines (UCIL) in Jaduguda, Jharkhand. Pallavi (DownToEarth, 2015) reported that over 50,000 people, mostly tribal communities, continued to suffer from serious radiation related health hazards. Such cases reminded of the fundamental challenges of economic organization, “*what to produce, how to produce and for whom to produce*” (Samuelson and Nordhaus, 2009, 18th ed.).

2.4.7 Theoretical Framework: The approach of this study is very close to that of Development studies with a special thrust on indigenous self-reliance. “Development is about expanding the choices, people have, to lead lives that they value” (UNDP, 1997). Development Studies is a multi-disciplinary field of study that seeks to understand social, economic, political, technological, and cultural aspects of societal change, particularly in developing countries (www.eadi.org). The other related key theories are rural development and agriculture, environment,

traditional indigenous leadership, education in tribal and rural areas, tribals' right to forest and common properties, and rural livelihood. References have been made to the theories of economics, development economics, sociology, social psychology, agriculture, rural development, management, and ecology. Review of literature comprised books, e-books, journals, thesis, reports, website references, and other references related to the above-mentioned subjects and near subjects.

Experiments done and theories propagated by some great men in the likes of M.K. Gandhi, R.N. Tagore, J. Nehru, Dr. S. Hatch, Binova Bhave, J.P. Narayan, Verghese Kurien, APJ Abdul Kalam and the recent experiments by Simon Oraon, Anna Hazare, Babu Popat Rao, and Dr. N. Shende provide a foundation or a "blueprint" for this study. The salient features of some of the prominent approaches to tribal and rural development, which are upheld by this study, have been listed below:

- i) Building on what the village and the people have, i.e., existing indigenous resources and forces
- ii) Ensure that the people consider the programme as their own: people's involvement and participation are essential.
- iii) Help people help themselves and promote self-help with expert counselling, training, hand holding, and extension education with 'result demonstration'
- iv) While including all people, irrespective of caste and class, reach out to the poorest
- v) Maintain a comprehensive programme with simplicity as its keynote

vi) Develop spiritual basis of rural development (*value system, inclusive, happy, and harmonious community-living*). Emphasis on sports, fair (*mela*) and entertainment through cultural activities; dance, music, drama, etc.

vii) Education, village library, vocational training

viii) Health and sanitation

ix) Empowerment and participation of native and traditional leadership

x) Emphasis on Public action (The Kerela model), and civil society leadership.

xi) Principle of cooperative

xii) Relevance of ‘Smart Village’ or ‘Smart Rural’

The problem and the research questions can be correspondingly aligned with the objectives of the study as follows:

	The major research questions	Objectives
i	What are the factors leading to persistence of poverty in Dumka district in general and the villages under the study in particular?	Evaluate the causes of poverty in Tribal areas of Dumka district, Jharkhand.
ii	What are the factors leading to success of sericulture in Kathikund, Dumka district?	Examine the factors of success of sericulture in Kathikund, Dumka district, in supplementing the income of the farmers.
iii	What is the status of performance of SHGs in Jharkhand in general and that of the villages under the study in particular?	Investigate the start-up problems of the Self-help Groups (SHGs) in income generating activities.

A few minor research questions deal with education and rural livelihood, native leadership, environment, indigenous potential, and Human Development Index. The research design has followed mixed method, i.e, descriptive research design and

causal research design. Accordingly, this study has followed a judicious mix of qualitative and quantitative methods for data collection, analysis, and interpretation.

Table 2.1: Summary of literature reviewed with citation on topic

Documentation of Literature Reviewed					
Sl.	Literature Reviewed	Literature Type	Author/s	Gist of points	Linkage to this research
1	Gandhi	Film	Richard Attenborough 1982	“India lives in her villages and the terrible poverty can be removed only if local skills can be revived. Poverty is the worst form of violence.” Gram swaraj.	Thrust on village self-reliance, local skills, and resources.
2	Gandhi on villages	Selected and compiled	Divya Joshi	A deep understanding of Gandhi on villages, gram swaraj, swadeshi and rural economy.	Rural development is the central focus
3	I too had a Dream: An Autobiography	Book: An Autobiography	Verghese Kuri en 2012	Co-operative society as a powerful tool for rural development with people’s indigenous resources and skills.	Co-operative societies facilitate self-reliance.
4	Swadeshi, Self-reliance, and Globalisation	Article	http://www.mkgandhi.org/articles/swadeshi_selfreliance_globalization.html - (Gandhi Institutions – Bombay Sarvodaya Mandal & Gandhi Research Foundation) 2013	It tries to strike a balance between the seemingly two opposite forces, Swadeshi and Globalism. It asserts that (i) the things which can be produced locally, outside productive forces should not be allowed and (ii) collaboration or cooperation should proceed on terms of equality.	Assert competitive advantage. Emphasizes Integration of rural and tribal economy with larger economy, not assimilation
5	Target 3 Billion: PURA (Providing Urban Amenities in Rural Areas)	Book	APJ Abdul Kalam & Srijan Singh 2011	The objective is sustainable development, using the core potential of the rural sector.	Sustainable development by using the core potential of the rural sector.
6	<i>Self-Reliance: Key to Sustainable Rural Development in Nigeria.</i> http://www.ejou	Article e-journal of science (Vol. 3 No. 6, June 2013).	Kim Idoma & Isma’i l Muhammad 2013	Self-reliance is the viable alternative to ‘dependent development’, and it is more sustainable. It allows people to participate in the	Self-reliance is the viable alternative to ‘dependent development’ and it is more sustainable.

	malofscience.org -			process of development, builds trust in their own capabilities; it empowers them.	
7	Indigenous Leadership and Tribal Development	Research Thesis Now a Book	Dr. Varghese Panangatt 2012	It is an empirical analytical study of social and cultural life of Santals in Godda district of Jharkhand.	Organized village level leadership is important to solve their basic problems by self-help
8	The Amartya Sen & Jean Dreze Omnibus	Collection of three books	Oxford University Press, 1999	Poverty and Famines, Hunger and Public Action, India: Economic Development and Social opportunity	Poverty eradication through enhancing the income of the farmers.
9	Indigenous People's Struggles for Self-Determination	Book	Prakash Louis 2012	Rights conferred in the Indian Constitution, various acts, UNO, etc. to protect the rights of the tribal people.	Constitutional safeguards and rights of the indigenous people
10	Organization Development	Book	Wendell L. French, Cecil H. Bell Jr. & Veena Vohra 2006	... the applied behavioral science dedicated to improving organizations.	Relevance of organization development principles and OD intervention in tribal society.
11	Economics	Book	Samuelson, P.A. & Nordhaus, W.D. 2009 18 th Edition	One of the best definitions of Economics and it states the basic principles of economics.	Definition of economics and the basic principles of economics concurs with the idea of self-reliance.
12	Progress and Poverty	Book	Henry George 1880 1905 2016	A critique of present order of economy – injudicious distribution of wealth	We are asking similar questions – why in a land so bountiful blest ... should there be unemployment?
13	Rabindranath Tagore on Rural Reconstruction	Book	Sudhir Sen, Ph.D. 1943	"... It is a matter of disgrace that we are in the habit of turning to Government officials for help in everything. To spread and strengthen the spirit of self-help is one of the fundamental aims of this institution".	Talks of rural reconstruction through self-help. Taking initiative by local people for self reliance.
14	Indian Tribals through the ages	Book	R C Verma 1990 2002	A detailed account of tribal life and development with critical appraisal on the plans and policies.	Critical appraisal and review of the policy adopted for tribal development.
15	Tribal India Today	Book	Nadeem Hasnain	A study of the problems of the	Major problems faced by the tribals in India

			1883 1988 1991	tribals in India	
16	Tribal Development in India (A Critical Appraisal)	Book	Prof. V S Upadhyay Dr. Gaya Pandey 2003	It describes different government approaches and model of tribal development.	Tribal development and Tribal administration.
17	Tribal Life in India	Book	Nirmal Kumar Bose 1971 1979 2004	It is an anthropological account describing tribals' economy as hunting, fishing, gathering, jhum, etc.	Tribes' native skills for survival under great hardships.
18	Village Uplift and Social Training From the Book Social Thought of Rabindranath Tagore: A Historical Analysis	Book Abhinav Publication New Delhi	Tapati Dasgupta 1993	Reproduces central thoughts of Rabindranath Tagore on experiments in rural reconstruction and basic education for the rural people.	Rural reconstruction and basic education for the rural people.
19	Social Exclusion and Adverse Inclusion: Development and Deprivation of Adivasis in India	Book: A collection of articles	Edited by Dev Nathan and Virginus Xaxa 2012	It locates the deprivation of adivasis in a larger regional, national, and global context.	Emphasis on active involvement of people in development process and in political governance.
20	The Adivasi Question: Issues of Land, Forest, and Livelihood	Book: Collection of Essays EPW	Edited by Indra Munshi 2012 2013 2015	These articles, drawn from writings of almost four decades, discuss questions of community rights and ownership, management of forests, the state's rehabilitation policies, and forest rights acts and its implications.	This book explicates how opportunities have deluded tribals and deprived them of their rights in India.
21	INDIA 2017 61 st Edition & 64 th Edition, 2020	A Reference Annual GOI	Publications Division Ministry of Information & Broadcasting 2017	Rural development, 5-year planning, tribal sub-plan	Rural development
22	Agriculture and Rural Development	Book	Reddy, K. Venkata 2012	It brings out emerging challenges and discusses policies and programmes for holistic and sustainable development of rural India, decentralized administration and planning with villages as the growth	Policies and programmes for holistic and sustainable development of rural India. Thrust on villages as growth centres. Inclusive growth.

				centres. Inclusive growth approach.	
23	Rural Development: Principles, Policies and Management	Book	Singh, Kartar & Shishodia, Anil 2016	Rural development	Rural and Tribal development
24	<i>Empowerment of tribal communities through sericulture programmes in Jharkhand State.</i>	Volume 4, Issue 2, Feb, 2019. p.23-30	Setty, H.H.N., Gopal, L. & Chinnaswamy, K.P. (2019).	Jharkhand is the leading producer of Tasar silk in India. It has developed many sericulture clusters in Jharkhand	This study has taken sericulture in Kathikund cluster, which is managed by Central Sericulture Board of India, as the success story.
25	Start-up India Stand-up India	GOI Scheme	GOI 2015	This initiative aims at fostering entrepreneurship and innovations by creating an ecosystem that is conducive for growth of start-ups. The objective is that India should become a country of job creators instead of job seekers.	Self-reliance and self-employment are the focus of the present study.
26	<i>Pradhan Mantri Kaushal Vikas Yojna (Skill India Mission) – Kaushal Bharat Kushal Bharat</i>	GOI Scheme	GOI 2016	It has set a target of training over 40 crore people in various skills by 2022. It includes initiatives like National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015, Pradhan Mantri Kaushal Vikas Yojana (PMKVY) scheme and the Skill Loan scheme.	Importance given to promoting traditional skills and resources.
27	United Nations Development Plan (UNDP)	UNO Scheme	UNO 1965	It works in 177 countries with local govt. to meet development challenges and develop local capacity; helps to achieve Millenium Development Goals.	A thrust on development through indigenous skills and resources
28	Deprived of rights over material resources, impoverished Adivasis get prison: A study of under-trials in	A study	Bagaicha Research Team – ATC Campus, Namkum, Ranchi, Jharkhand 2015	Talks of deprivation of local people, especially the tribals from natural resources. Their struggles for justice being treated as extremism against the	Thrust on the rights and ownership of tribals over the natural resources.

	Jharkhand			Govt. by the administration	
29	Human Empowerment & Development	Essay	Hugh M. Lewis 2001	Anything that encourages dependency without self-determination debilitates against empowerment.	Human empowerment and development
30	Sriniketan Experiment in Rural Development	Article The Economic Weekly	Usha Mukherjee 1952	Describes Tagore's vision of rural reconstruction; not only as removal of poverty but also bringing creative joy.	Rural reconstruction and empowerment.
31	Why Poor People Don't Co-operate: Learning from Traditional Systems	Article	Anil K. Gupta CMA IIM, Ahmedabad 1987	Examines why co-operative organizations set up to serve the rural poor fail to elicit their co-operation.	The importance of involving the poor in generating alternatives for their own development is emphasized.
32	Development Programmes and Tribal Scenario (A study of Santal, Kora and Oraon)	Post-doctoral in-depth field investigation. Now a Book	Md. Ayub Mallick 2004	It is a survey of tribals' response to Government's schemes at panchayat and gram sabha level. Tribals have a little say in administration. Their leadership is influenced by political ideology.	Issues of participation of the tribals in the development programmes. Empowerment of tribals.
33	Rural Employment through Skill Development: A case study of Divyayan	Article IUJ Journal Vol-4, May 2016	Krittika Roy 2016	Integrated approach to skill development	Rural development through skill development
34	ANTYODAYA: Rise of the Last	Book UNESCO	DD Narula & Jyoti Kiran 1989	Rural development of the target group, the rock bottom poor people	An alternative endogenous strategy for poverty removal.
35	Rural development Strategies: Evaluation of some early experiments in India	Book	V R Gaikwad 1986	In Gandhi's plan of rural reconstruction, the ancient republican village without any kind of exploitation, served as a model unit	Traditional republican village as a model unit
36	<i>Making Peace with the Earth</i>	Peace Prize Lecture, Book	Dr. Vandana Shiva 2012	Organic agriculture and biodiversity	Indigenous agricultural potential
37	<i>Seed protection</i>	TEDxNaya pura lecture	Dr. Prabhakar Rao 2018	Seed keeper and agriculturalist. Save vegetables and biodiversity.	Biodiversity and promoting local vegetables.
38	Ethnobotany in relation to health and livelihood security in	Pt. Ravishankar Shukla University, Shodhgang	Mithilesh Kumar Sinha 2011	Man-nature relationship: plants and human health since aboriginal people. Their	Forest as source of food and medicine.

	district of Bastar of Chattisgarh state	a		livelihood.	
39	Foreign Aid, Self-reliance, and Economic Development in West Africa	Article	R Omotayo Olaniyan 1996	Speaks of the grey areas in development and emphasizes development by self reliance	Aids and help for a long time can be detrimental.
40	Dances with Dependency; Out of Poverty through Self-reliance	Book	Calvin Helin 2008	Follow the tradition, heritage, identity and simultaneously learn from external world to improve the economy.	Economic integration of tribal economy with the larger economy.
41	Self-reliance for Have-nots and Want-nots	Book	Jefry Nathan 2011	The real alternative to corporate reliance or government reliance	Consolidation of village governance
42	Self-Reliance	Essay	Ralph Waldo Emerson 1841	Among the first to define self-reliance	Indigenous self-reliance
43	Poor Economics	Book	Banerjee Abhijit and Duflo Esther 2012	A radical rethinking of the way to fight global poverty.	Elimination of poverty as priority
44	Sense and Sensibility: Jholawala economics for everyone	Book	Jean Dreze 2017	Issues in rural development	Poverty and unemployment.
45	Poverty, food insecurity and coping mechanism among tribes in Maharashtra	Ph.D. Research work, IIT Bombay	Dr. Nilratan Rambhau Shende 2010	“Poverty, food insecurity and coping mechanism among tribes in Maharashtra”	How to break ‘poverty trap’ and ‘low level equilibrium trap’.
46	<i>Bengal District Gazetteers: Santal Parganas</i>	Gazetteer report	O’Malley, L.S.S. 1910	An authentic and an elaborate report on history, geography, social systems, agriculture, forests, local self governance and education in Santal Parganas.	This study draws reference from the history, social systems, economy, local self governance and education of the tribes.
47	Adivasi aur Vanadhi kar	Book	Gladson Dungdung 2019	Adivasi and their forest rights	Forest as a source of food and other needs. Usufruct right of the tribes in forest.
48	Frontier Existence: A Saga of the Maler Tribe of the Rajmahal Hill Range in Jharkhand, India	Book	Chacko, P A 2011	History, life, and conditions of the Maler Paharia tribe.	There is a sizable population of Paharias in Kathikund Block
49	Tribal Law and Justice	Book	Archer, W.G. 1946 1983 2013	History, culture, and traditions of the Santals	Life-view of the Santals
50	<i>Tribal Religion:</i>	Book, An	Troisi, Joseph	Beliefs, culture,	Relatedness with

	<i>Religious Beliefs and Practices among the Santals.</i>	Ethnological study	1979	tradition of the Santals	nature.
51	Tribal Education in India	Book	Kamath, V A 1998	Tribes valued education. They walked miles after contributing to works of their families. This multi-tasking and rural background put them at disadvantages when compared with their urban counterparts when excellence in studies mattered.	Talks of appropriateness of the education system.
52	<i>Tribal Education and Fading Tribal Identity.</i>	Book	Ambasht, N.K. 1999	Neglect of tribal aspirations and identity by prevalent formal education system.	Aligning formal education with rural livelihood
53	<i>Public Report on Basic Education in India.</i>	Book Report PROBE	Dreze, J. & De, A. 1999	A critique of education system on North India	Reform in prevalent formal education system
54	<i>Towards a Self-reliant Economy: India's Third Plan, 1961-66.</i>	Planning Commission, Government of India.	Government of India 1961	Thrust on self reliance	Self reliance
55	Dynamics of Income in Jharkhand: Evidences from Village Studies	SSRN Electronic Journal	M.S. Meena et al. 2013	Livestock system is an integral part of livelihood of rural poor. Thrust on Livestock sector. Education is an instrument for change. It brings changes in thinking process, knowledge, skills, and attitude. It helps in reducing inequality among the rural poor.	Raising livestock to enhance farmers' income. Reforms in formal education system.
56	<i>Self-reliance as a Development Strategy for Low-Income Countries</i>	Book	Emmanuel Jean Prinnet 1997 2000	Thrust on self-reliance as a Development Strategy for Low-Income Countries	Self-reliance is the basic approach to tribal development
57	<i>Anti-British Plots and Movements before 1857</i>	Research Book	Datta, K.K. (1970). 1970	There was a practice of commercial crops	Latent indigenous economic potential
58	<i>National Action Plan for Egg & Poultry-2022 for Doubling</i>	Plan Report	Department of Animal Husbandry, Dairying &	Creating opportunities for farmers in rural areas.	Promoting indigenous economic potential.

	<i>Farmers' Income by 2022.</i>		Fisheries. Ministry of Agriculture & Farmers Welfare. 2015		
59	<i>Serving Farmers and Saving Farming; Jai Kisan: Revised Draft National Policy for Farmers</i>	A report <i>The National Committee on Farmers (NCF)</i>	M. S. Swaminathan. Ministry of Agriculture 2006	Increasing income of the farmers	Increasing income of the farmers
60	<i>Urgent need to prevent environmental degradation in tribal region of India: A case study</i>	Case study	Barla, M. (2010). Hindustan. 2010	Preservation of environment and tribal heritage to ensure sustainable tribal development and to maintain ecological balance.	Tribal economy depends largely on forest.
61	<i>The Fortune at the Bottom of the Pyramid</i>	Article in Revista Electronica de estrategia & Negocios.	C. K. Prahalad & Stuart L. Hart. January 2002	Revealed a possibility and opportunity to transform the bottom of the pyramid market into a profitable market; thereby "linking the poor and the rich across the world in a seamless market".	Unleashing rural potential by developing agricultural marketing in rural areas.
62	<i>Agricultural Economy of Jharkhand.</i>	Journal Article	Singh, M.L. 2009	Ailing economic condition of the rural people is due to ill-governance, political instability and corruption.	Apathy of administration and political leadership.
63	The effectiveness of India's Anti-poverty Programmes	The Journal of Development Studies	Anjini Kochar 2008	Decentralisation of administration: vesting village governments with greater responsibility for their monitoring and oversight	Thrust on reforming village leadership important for rural development
64	<i>Ground Realities and Inhibitions in Execution of MGNREGA in Jharkhand, India</i>	Asian Research Consortium	K. Sanjay, K. Meena, Alam, S. 2018	This study in Jharkhand, attempts to assess the institutional and non-institutional impediments which are encumbering the desired accomplishment of the scheme at the grass-root level.	It examines the causes of poverty in tribal areas of Jharkhand and solution thereof.
65	<i>Lessons from Muhammad Yunus and Grameen Bank</i>	Article, OD Practitioner, Vol. 43 No.1.	Esty, Katharine 2011	Stimulating income generating activities through SHGs.	Self-reliance through SHGs
66	<i>Oko Sona</i>	Document-	Vernard	SHGs promoted by	Self-reliance through

	(Hidden Gold)	ary	Antony 2007	Sona Santal Somaj Samiti, Kodma, Borio, Jharkhand.	SHGs
67	World Commission on Environment and Development.	Report	WCED 1987	Thrust on care for environment and sustainable development and to unite countries for this cause.	Nature relatedness
68	<i>Panchayat Raj (Extension to Scheduled Areas) Act, 1996: The Travails of a Governance Law.</i>	Article, Kurukshetra	Bijoy, C.R. 2015	<i>Significance of PESA Act. The Travails of a Governance Law.</i>	Tribal self government
69	Beyond Development Impasse: Role of Local Economic Development and Community Self-Reliance in Rural S. Africa	The Journal of Modern African Studies. Vol.37,No. 3(Sep.,199 9)	Binns, Tony and Nel, Etienne 1999	Questions western concepts and methodologies of development. Focus on strategies which build upon local knowledge, skills and resources, 'self- reliance'.	Indigenous self reliance focuses on native forces and resources to enhance the income of the farmers.
70	The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Bill, 2020	Bill No. 112 of 2020 Now an Act.	Government of India 2020	Empowerment and Protection; Agreement on Price Assurance and Farm Services.	Increasing farmers' income. Establishing agricultural market.
71	Potential Linked Credit Plan for 2020-21, Dumka District	NABARD	NABARD, Ranchi 2020	Identifies potentials in livestock raising, horticulture, fruit- bearing trees, dairy, poultry, etc.	The potential identified are very similar.
72	Role of Voluntary organization	Research Thesis JNU	Kumar Devandra 1998	It talks of how the Voluntary Organization can facilitate rural development	Role of VOs and social entrepreneurship in rural development
73	Ecology and Equity	Book	Mahadev Gadgil and Rachandra Guha	Analysis and an empirically grounded study of environmental conflict in India	Relevance of forest in the life and development of the tribes.
74	Rural Manifesto	Book	Feroz Varun Gandhi	Realizing India's future through her villages.	Rural Development
75	UNDP. (2020). Human Development Report 2020	Report	UNDP, 2020	The next frontier, Human development and the Anthropocene.	Human Development
76	Public Action as Participatory development: The Kerala	A Report Paper DOI: 10.3145/97	Kannan, K.P. & Pillai, V.N. (2005).	Success of Public action and participatory development in	This study gives a thrust on public action, participation people in

	Experience re-interpreted.	881321021 44.n6. Sage Publication		kerela.	development process, and civil society leadership.
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Source: Compilation from Literature Review

2.5 The Research Gap: The literature reviewed on the topic and near topic mostly dwelt upon enumerating rights and plights of the tribes, the Constitutional provisions and the Acts, deprivation, marginalisation, displacement, and alienation of tribes from their land. Some works depicted tribes as helpless creatures at the mercy of government and the outsiders. There were reviews and critiques on prevalent education system and on the development schemes and programmes of the Government. Some studies and reports acknowledged ill governance and apathy of the local administration and political leadership, including dysfunctional traditional leadership. However, the reviewed literature had either not given adequate thrust on or had given a subdued treatment to the following issues and areas, especially to identifying effective ‘self-help’ solutions to low income or poverty of the farmers:

- i) There were limited books or research works vis-à-vis economic transformation in tribal areas with adequate thrust on indigenous self-reliance.
- ii) The indigenous economic potentials, resources and skills appeared to be either underestimated or not viewed as means of economic transformation of tribal areas.
- iii) Very little discussions were found on the importance of reorganizing village leadership and the gram sabhas to achieve economic transformation.
- iv) There was a lack of emphasis upon alignment of the formal education system with agriculture, the perspective, aspirations, and livelihood of rural tribal life.

- v) There was a dearth of adequate critique on whether the development schemes were aligned with the nature and size of the land, the people's skills and capabilities, and tribal perspective of development.
- vi) The tribes' pace and perspectives of development and wellbeing were different from those of the mainstream population. Little studies had been done to understand them and the tribes' problem of social dualism.
- vii) Establishing organized market linkage for the indigenous agricultural produce and their marketing had not received a resolute attention in the tribal areas.
- viii) There has not been much study covering advantages and effectiveness of cooperative culture or practices in Dumka district.
- ix) Organizational Development Intervention (ODI), i.e., importance of initial hand holding, extension education, capacity building, reorientation of agriculture and reorganization of the village community for enhancing productivity and supplementing farmers' income had received inadequate thrust.
- x) Discussion on effective conservation of environment and water harvesting to promote agriculture and facilitate rural livelihood, received subdued attention.
- xi) Discussion on empowering the tribes to utilize their land and resources – '*jal, jangal, and jamin*' to appropriate and gainful economic use, was insignificant. Quite a few SHGs had been formed in the area. But the reasons for their ineffective functioning had not been examined.
- xii) Sericulture in the area and its positive impact on the income of the farmers was yet to be projected as a paradigm for promoting the other indigenous produce, services, and artisan products.

xiii) While understanding ‘vicious circle’ in tribal areas, the prevailing approaches to ‘alcohol abuse’ or ‘faulty’ behaviour, had skewed to treating the symptoms than to eliminating the causes. In this context, the researcher has revealed a contrarian view to a few generally held notions.

2.6 Conceptual Framework and Methodological steps: Primary methodological steps (Figure 2.3) included noting research questions, pilot study, literature review, identifying core concepts, and identification of research gap. Developing conceptual framework was the process of identifying the constructs that was to be measured. The main question which helped in isolating the variables was: How and why had sericulture been effective in augmenting the income of the farmers? The other steps included data collection, instrument development, data processing, and application or hypothesis testing. The methodological tools or instruments included interview questionnaire, participant observation, eye of insight and naturalistic inquiry (3.3).

The research area was selected based on the research questions and triggered ideas. After the pilot survey, sericulture in the area was identified as a development paradigm and accordingly the variables were isolated. Simultaneously, literature review was taken up, which included books, e-books, reports, theses, journal articles, speeches, and documentaries on the subjects, such as, self-reliance, poverty and unemployment alleviation, rural development, agriculture, environment, biodiversity, forest, tribal life, and socio-economic opportunities.

Hypothesis formulation was based on identifying and assessing the factors impacting the income of the farmers. In Asanbani, Asanpahari, and Dhankuta, the households were interviewed to understand their economy, sources of income, social system, village administration, and education. The discussion revolved around

discovering the factors which augmented the income of the farmers. Discussions were also held with some focus groups, namely, teachers, students, gram sabhas, experts (veterinary doctors, doctors, NGOs), and social workers. Regression was used for testing the hypothesis. A case study was undertaken as a part of the study.

Figure 2.1 Conceptual framework: Main Study

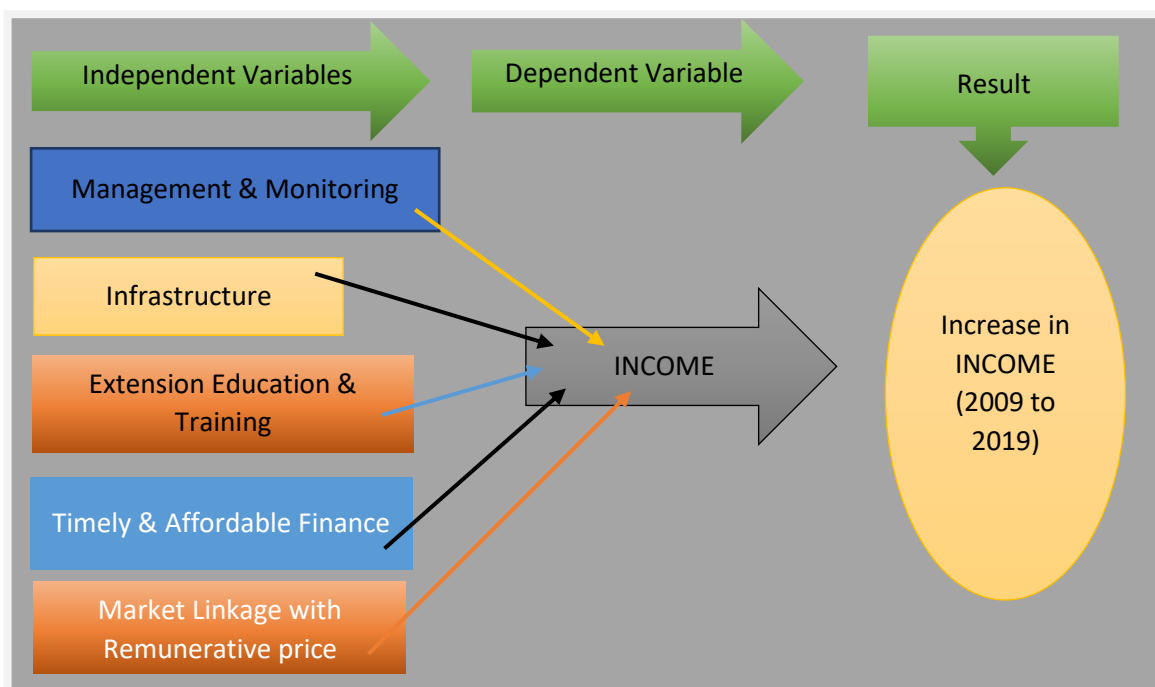
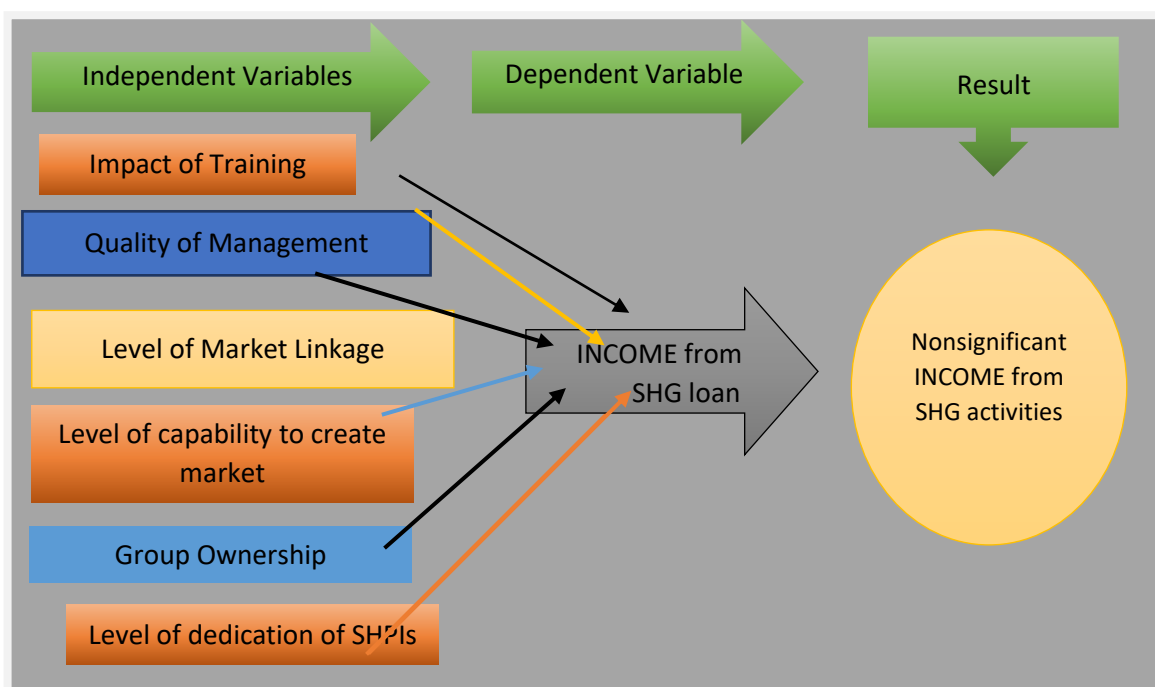
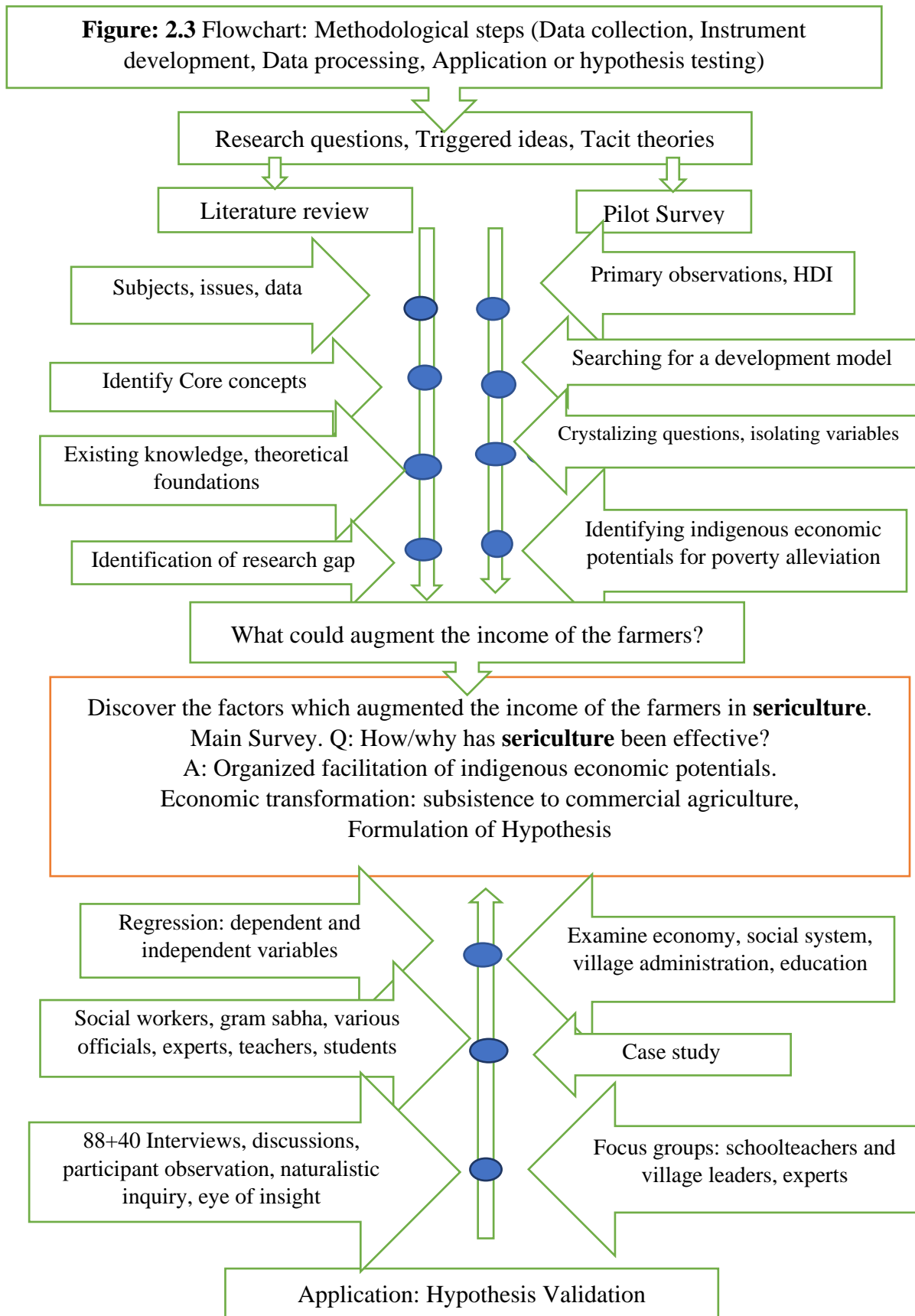


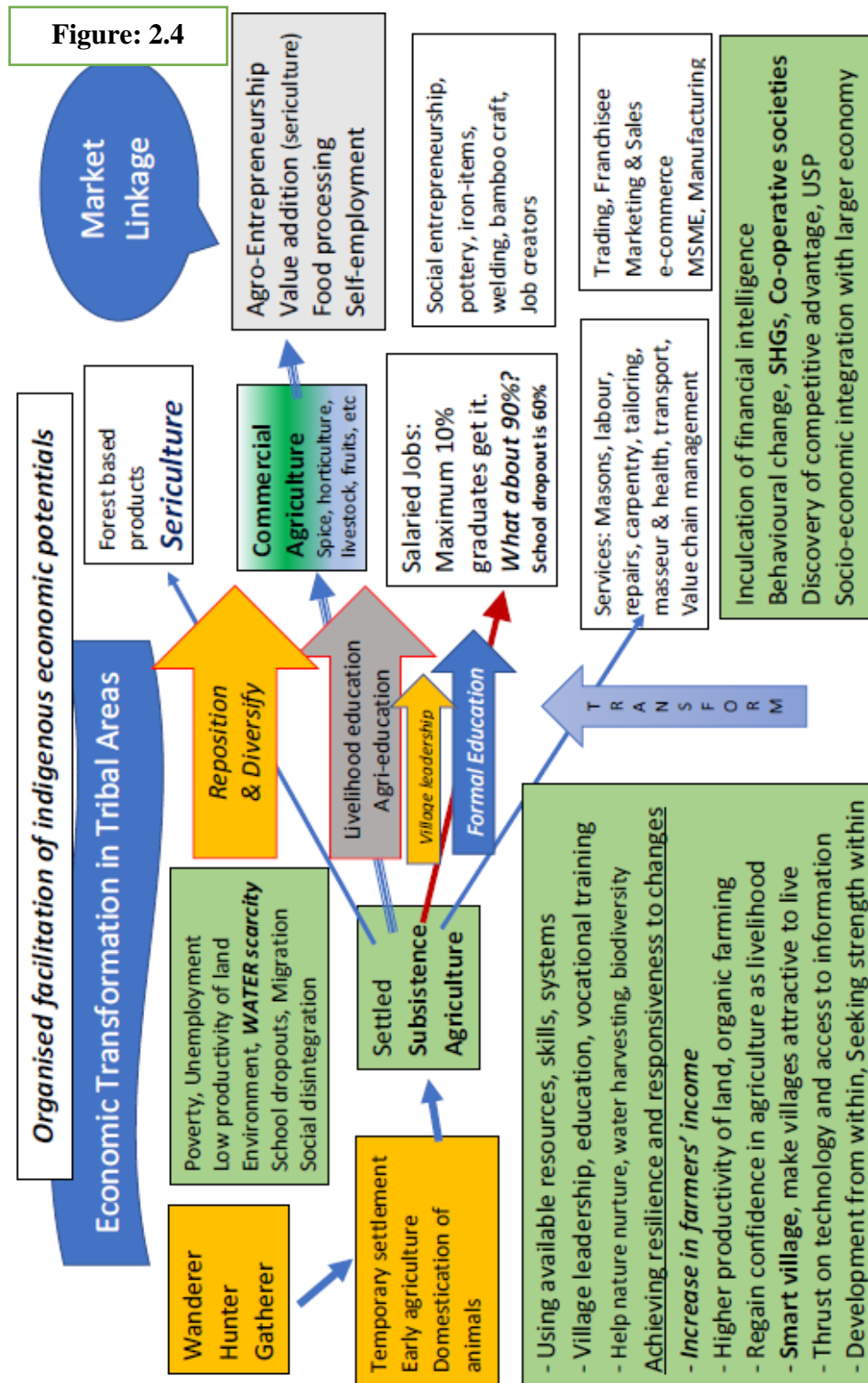
Figure 2.2 Conceptual Framework: Case Study





2.7 Summary: Experiments done by some great men and social workers and development approaches propagated by them provided a foundation or a “blueprint” for this study. Nevertheless, in view of the dearth of adequate focus on the aforesaid gaps (2.5) in the previous researches and studies, this research dwelt primarily on finding ‘self-help’ solutions to the problems of poverty, rural unemployment, water scarcity, environmental degradation, deforestation, agricultural marketing, disconnection of the formal education with the livelihood of the people, disintegration of village community, rural-urban gap, and loss of confidence in agriculture as livelihood in the area. The present study emphasized upon repositioning and reinforcement of indigenous self-reliance for economic transformation in tribal areas with reference to the state of Jharkhand.

The main objectives, status of tribal economy, problems of tribal areas, identification of local potentials, the **main thrust areas** of this study, and resultant avenues have been illustrated in the following flowchart **Figure: 2.4**.



CHAPTER - III

RESEARCH METHODOLOGY

CHAPTER - III: RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the methodology adopted to collect and analyse the data of the study. The research methods and techniques include the research design, research questions, statement of the problem, objectives of the study, population and sample, research hypothesis and variables, data collection technique, and tools for data analysis.

Chawla & Sondhi (2020) cite Grinnell (1993) who describes research as “... a careful, systematic, patient study and an investigation in some field of knowledge, undertaken to establish facts or principles”. “Research methodology is a way to systematically solve the research problem. In it we study the various steps that are generally adopted by a researcher in studying his research problem along with the logic behind them” (Kothari & Garg, 2021).

3.2 Research Questions

Despite the natural endowment and sizable arable land in rural Jharkhand, there had been striking poverty, malnutrition, and low productivity of land (Government of Jharkhand report, 2011-12). The economic data, especially Human Development Index (HDI) of 0.470, also corroborated this inconsistency, which further got accentuated when Jharkhand’s mineral deposits (40% of India’s total mineral resources), coal, iron, copper, bauxite, limestone, uranium, pyrite, etc., were considered (jharkhandminerals.gov.in). Therefore, this study has attempted to address some engaging questions concerning rural Jharkhand:

- i) What are the factors leading to persistence of poverty in Dumka district in general and the villages under the study in particular?
- ii) What are the factors leading to success of sericulture in Kathikund, Dumka district?
- iii) What is the status of performance of SHGs in Jharkhand in general and that of the villages under the study in particular?
- iv) Why the people, owning land, endowed with natural resources, living in natural surroundings, must be poor?
- v) How and why had their indigenous agriculture, knowledge and skills remained under-utilized?
- vi) How had tribal economy deteriorated from a self-reliant economy to an over-dependent beneficiary of the outside world?
- vii) Why had the traditional self-governance system become dysfunctional?
- viii) Is the prevalent formal education system appropriate for the farmers and agriculture?

3.3 Research Design

Research design constituted the blueprint for the collection, measurement, and analysis of data. This research combined two types of designs, i.e., descriptive research design and causal research design. Under descriptive design, a researcher describes the situation or a case. Descriptive research design gives a detailed sketch or profile of the respondent population being studied. It provides a comprehensive and detailed explanation of the phenomena under study. Although it lacks the precision and accuracy of experimental designs, it generates data on the *who*, *what*,

when, where, why, and how of research (Chawla & Sondhi, 2020). “An experiment is generally used to infer causality. In an experiment, a researcher actively manipulates one or more causal variables and measures their effects on the dependent variables on interest” (Chawla & Sondhi, 2020).

This research, being a multi-disciplinary study, encompassing concepts from sociology, economics, rural development, development economics, management, communication, and development studies, adopted a judicious mix of quantitative and qualitative methodologies. The former involves generation of data in quantitative form which can be subjected to formal quantitative analysis, such as, regression and descriptive statistics. Qualitative approach to research is a function of researcher’s insights and observation. Its main techniques are personal interviews, focus group discussions, case study, participant observation (Kothari & Garg, 2021).

For the quantitative study interviews were conducted with the sampled sericulture farmers and the SHG women (a case study) with two different respective sets of questionnaires. The qualitative methodological tools included personal interviews with questionnaire, discussions, experts’s opinions (officials at sericulture centre, government officials, NGOs, and doctors), focus groups (gram sabhas, schoolteachers, students, and experts), eye of insight and naturalistic inquiry.

3.4 Designing questionnaire and methodological tools:

3.4.1 Interview questionnaire: There were two separate sets of questionnaires for quantitative data and qualitative data in the main study (Appendix 4 & 5). The quantitative questionnaire recorded income of the sericulture farmers from different sources. It also recorded in 7-point Likert scale the satisfaction level of the farmers upon the factors of income, namely, infrastructure, managerial support, extension

education, timely and affordable finance, and market linkage with remunerative price. The qualitative questionnaire comprised open as well as close-ended questions covering the farmers' profile, their views on development/welfare schemes, and their perspectives on and expectations for development. There was a separate questionnaire for the case study on start-up problems of the SHGs in the area. It covered their profile, income, and the factors of failure. (Appendix 6).

3.4.2 Participant observation: It was imperative for the researcher to be a participant observer while conducting interviews and discussions to comprehend behavioural patterns, non-verbal communication, and clues from body language and gestures. The people in general took time to understand the theme and the purpose of the study. While some were not very articulate, a few others were vague in their responses. They were not comfortable to answer in precise numbers. They answered in approximation. Therefore, participant observation technique became critical to view things from peoples' perspectives.

3.4.3 Focus groups: Some focus groups were identified for the study.

i) The gram sabhas: The gram sabha plays a critical role in village self-reliance (*Gram-swaraj*). Discussions were held with the gram sabhas and *Panches (More Hor)* of the three villages.

ii) The teachers at the local schools: Discussions were held with 25 schoolteachers from five local government schools mainly on the efficacy and suitability of the prevalent formal education system vis-à-vis the livelihood of the rural people.

iii) School and college students: Discussions were held with around 30 local school students and around 30 college students of the district, mainly on the aims of their education.

iv) Experts: Discussions were held with sericulture officials, government officials, social workers, doctors, veterinary doctors, NGOs, and some tribal entrepreneurs.

3.4.4 Case study: The idea of undertaking one case study, namely, “Start-up problems of SHGs in Income Generating Activities”, emerged during the pilot survey. The researcher found it relevant and important to undertake the case study to complement the perspective of the main study. It examined the causes of failures of SHGs in the area.

3.4.5 Eye of insight: Sensitivity and sensibility to non-verbal communication and behaviour pattern was critical to capture the un-said or the inarticulate. This approach might be construed as a subjective interpretation during data collection. But the paralanguage of the respondents worked as useful clues. Upholding research ethics, adherence to the principle of beneficence was accorded a due priority.

3.4.6 Naturalistic Inquiry: The researcher had to use naturalistic inquiry also because the social and cultural practices of the people, their tradition, institutions, and collective psyche had a considerable impact on their economy and development. It was essential to understand their social world and interpret the experiences and actions of the people in societal and cultural context. Belonging to the same tribal community and the district, the researcher very often viewed himself as much as an object of the study and tried to subdue researcher’s bias.

3.5 Statement of the problem

These predicaments had become more glaring in Kathikund, Dumka district, particularly in the three villages of this study, viz., Asanbani, Asanpahari, and Dhankuta. The facts and figures (2011) spoke for themselves. The statistics on Below Poverty Line (BPL), malnutrition, literacy, Human Development Index (HDI), scarcity of water and low productivity of the land of Kathikund were among the most worrisome in Jharkhand. Besides, these conditions had been continuing for quite some time in these three villages, appearing to be a ‘poverty trap’.

Table 3.1: The major development indicators

Development Indicators	Kathikund, (Dumka)	Jharkhand	India
Percentage of people BPL	50%	39%	30%
Literacy	54%, (61%)	67%	74%
School dropouts, Kathikund (Before class 10)	60%	16.6% (UDISE 2021)	14.6% (ST,SC,OBC: 33%) (UDISE 2021)
Underweight children	61% (ST-64%)	57%	43%
Anaemic Children	71% (ST-80%)	69.9% (NFHS,2016)	58.6% (NFHS, 2016)
Malnutrition among women	(4/10)	4/10	2.5/10
Life expectancy	(66.6 years)	66.6 years	65.4 years
HDI, 2011	(0.467)	0.467	0.550
Global Hunger Index (GHI), 2011	(28.67)	28.67	23.7
Monthly Per Capita Expenditure, Rangarajan (2014)	(Rs.920/-)	Rs.920/-	Rs.932/- (Rural)
Unemployment rate (NSSO)	(2011-12) 2.5% (2017-18) 7.7%	(2011-12) 2.5% (2017-18) 7.7%	(2011-12) 2.8% (2017-18) 6.1%

Source: District Census Handbook, Dumka, 2011, India Factsheet, UNDP, 2011,
UDISE, 2021 and NFHS 4, 2016

These problems and questions made the study of this area important and urgent. In this study, identifying indigenous economic potentials and repositioning indigenous self-reliance of the area had been envisaged as the primary approach to development. The selected three villages were situated in a natural setting, amidst or near forest, streams, and rivers with sizable arable land. But the development indicators told a different story. The ecosystem and the traditions of the people showed enough potentials and opportunities. The challenge had been – how to help the people use their indigenous resources: natural (land, water, forest, livestock) as well as human (skills, knowledge, institutions) in an effective way?

Incidentally, there had been a practice of sericulture in the area. In the recent years, sericulture had supplemented the annual average total income of the sericulture farmers to the extent of Rs.25,000/- in six months. This accounted for 40% of a sericulture farmer's total annual average income (Table 4.1 & Figure 4.2). The researcher viewed the existing effective practice of sericulture as an emulable paradigm for supplementing the income of the farmers.

3.6 Objectives of the study

At the backdrop of the aforesaid research questions, the statement of problems, especially HDI, BPL and unemployment, this study attempted to find a basic practicable and effective way out of poverty, essentially by “development from within” or self-help. The main objectives of the study are to;

- i.** Evaluate the causes of poverty in Tribal areas of Dumka district, Jharkhand.
- ii.** Examine the factors of success of sericulture in Kathikund, Dumka district, in supplementing the income of the farmers.
- iii.** Investigate the start-up problems of the Self-help Groups (SHGs) in income generating activities.

3.7 Research Hypotheses and Variables

After an assessment of the socio-economic scenario, geography, ecosystem, indigenous economic potentials, and traditional agricultural practices of the area, the pilot survey, and in view of the objectives of this study, the following hypotheses were formulated.

Hypothesis of the main study:

Hypothesis Ho1: There is no impact of organized facilitation of indigenous economic potentials on the income of the farmers.

Hypothesis Ha1: There is a significant impact of organized facilitation of indigenous economic potentials on the income of the farmers.

Hypothesis of the Case Study:

Hypothesis Ho2: The role of development actors is not a critical factor at the start-up phase for the success of SHGs.

Hypothesis Ha2: The role of development actors is a critical factor at the start-up phase for the success of SHGs.

Hypothesized model: relationship between dependent and independent variables

Based on the pilot survey, occupation and income level of the farmers, identification of indigenous economic potentials, and discovery of an effective initiative in sericulture in the area, functioning of the SHGs in the area, dependent and independent variables were identified and isolated.

Variables pertaining to the main study:

Dependent variable (Y): Income of the farmers.

Independent variables (x): Infrastructure, managerial support, extension education & training, timely & affordable finance, and market linkage with remunerative price. They have been collectively termed as **Organized Facilitation**.

Facilitation: “The provision of opportunities, resources, encouragement and the support for the group to succeed in achieving its objectives and to do this through enabling the group to take control and responsibility for the way they proceed” (Bentley, 1994).

Variables pertaining to the case study:

Dependent variable (Y): Share of Income out of SHG loan in Total Income of the Family

Independent variables (x): impact of training, quality of management, level of market linkage, level of ability to create market, group ownership, and level of dedication of SHPIs.

The hypotheses were tested based on these dependent and independent variables.

3.8 Population and Sampling design

3.8.1 Population: “Population refers to any group of people or objects that form the subject of study in a particular survey and are similar in one or more ways” (Chawla & Sondhi, 2020). The households of the three villages, Asanbani, Asanpahari and Dhankuta of Kathikund block were selected as the population of the study. Broadly

speaking, these three villages comprised a homogeneous group; 100% tribes and 95% farmers, most of whom supplemented their meagre annual income through other farming activities, daily wage labour and as migrant labourers, agriculture being the mainstay of the rural economy. These three villages were adopted by the Central Silk Board of India in 1990s, which had gradually improved supervision, research, and experiments on sericulture.

For the qualitative study pertaining to objectives, I and II, the entire 110 households of the selected three villages were considered as population. From within the same population, there were 60 sericulture farmers and 45 SHG women. For the objective II, which is the study of factors of increase in the income of the sericulture farmers, the entire known population of 60 farmers were considered for the study. The list of 60 sericulture farmers of the three villages with their annual sericulture turnover, was obtained from the office of the Central Silk Board of India, Kathikund. For the objective III, which is start-up problems of the SHGs, all the members (45) of the three SHGs were considered the population for the study. The list of the names of the 45 SHG women was obtained from the registers they maintained.

3.8.2 Sampling Design: “Sampling design refers to the process of selecting sample from a population. Sampling is a process of selecting an adequate number of elements from the population so that the study of the sample will not only help in understanding the characteristics of the population but also enable us to generalize the results” (Chawla & Sondhi, 2020).

Sample size: Yamane formula was adopted for the quantitative as well as for the qualitative survey because it was considered suitable for this finite population.

$$\text{Yamane Formula: } n = \frac{N}{1 + N (e)^2}$$

N = Total Population

n = Sample size

e = Margin of error

The margin of error was taken as 0.05, i.e., 95% of Confidence Level.

Following Yamane formula, the sample size was worked out as under:

The main study:

i. For the qualitative survey, related to the objectives I, the sample size worked out to be 86 (Population = 110 households in the three villages and margin of error = 0.05). Finally, 88 households were interviewed. Simple random sampling method was adopted for collecting the data.

ii. For the quantitative study, related to the objective II, the sample size worked out to be 52 (Population = 60 sericulture farmers in the three villages and margin of error = 0.05). Finally, the data was collected from 54 sericulture farmers. Simple random sampling method was adopted for collecting the data.

The case study:

For the case study, the objective III, the sample size worked out to be 40 (Population = 45 SHG women and margin of error = 0.05). Finally, 40 women were interviewed. Simple random sampling method was adopted for collecting the data.

3.9 Data Collection: Pilot survey and Main survey

3.9.1 Primary source of data: For collection of quantitative data, personal interviews with a structured questionnaire were conducted with 54 out of 60

sericulture farmer households of the selected three villages. For qualitative data, 88 out of 110 farmer households, including the 54 sericulture farmers, were interviewed with another structured questionnaire (Appendix 4). Discussions were undertaken with the focus groups (gram sabhas, experts, students, and schoolteachers), sericulture officials, government officials, social workers, doctors, experts (veterinary doctors, doctors, NGOs), and some rural tribal entrepreneurs.

In the Case Study, a total of 40 women out of around 45 women belonging to three different SHGs, were interviewed with a different set of structured questionnaires (Appendix 6). In these three villages, there were five SHGs, out of which two SHGs were new, and they had not started any economic activities.

3.9.1.1. Pilot survey: The pilot survey was conducted in the first half of the year 2017 among 25 sericulture farmers, 25 students, 20 teachers, some experts, 10 officials of three sericulture centres in Kathikund, viz., Central Silk Board of India (CSBI), Pilot Project Centre (PPC), Government of Jharkhand, and PRADAN, an NGO. Two sets of questionnaires; one qualitative and another quantitative were prepared. Observations from the pilot survey helped the researcher to fine tune both the questionnaires for the main survey isolating the relevant variables (dependent and independent variables, Appendix-5). It was helpful to prune some questions from the questionnaires while retaining only the relevant ones for the main survey.

The pilot survey helped the researcher to ascertain the income of the farmers from the office of the Central Silk Board of India, Kathikund and identify the factors of increase in income of the farmers through sericulture for the period of 10 years, i.e., from 2009 to 2019. The initial qualitative interviews and discussions helped in understanding the causes of poverty and unemployment in the area. Besides, it was

during the pilot survey that the researcher could identify and isolate the independent variables and he found it appropriate to undertake a case study on encountering the start-up problems faced by the SHGs in the area.

3.9.1.2 Main survey: The main survey was conducted from late 2017 till early 2020, at periodic intervals. The main quantitative survey collected data on income of the sericulture households and the factors of success of sericulture in enhancing the income of the farmers in the area. The qualitative survey focused on their economy, livelihood, other sources of income, literacy, traditional knowledge and skills, local leadership, environment, agricultural infrastructure, and the farmers' expectations from the government and other promoting agencies for development of the area.

To understand the working of sericulture the researcher visited all three sericulture centres in Kathikund; Silk Board of India, Pilot Project Centre (PPC) of Jharkhand Government and PRADAN, an NGO: met the official and the staff, lab technicians, and the farmers from the three selected (adopted) villages as well as some farmers from other villages. The researcher saw the process chain of sericulture farming: training, medicated washing of silk eggs, research and development, silk farms of a few farmers, hatchery, collection (harvesting) of cocoons, and finally marketing of the silk cocoons. The officials at the sericulture centres were kind enough to spare time for discussion. They showed the relevant reports pertaining to the farmers; their harvest and the payment made to them by crediting their bank accounts. Discussions were held with the officials, the scientists of the sericulture centres, and the farmers.

The Quantitative survey focused on the causal/independent variables, namely, management, infrastructure, extension education, timely and affordable finance, and market linkage with fair price. These five variables, as the factors of the farmers'

income were rated in 7-point Likert scale (Appendix 5). These five variables/factors were rated in the scale with reference to the years 2009 and 2019.

The general reference period was 1990 and after, i.e., when Silk Board of India (CSBI) started major initiatives in research and development in sericulture in the area. It started experimenting on silkworm varieties from *Sarihan* to *Sukhinda* to *Dababibi*. PPC (Jharkhand Government) and PRADAN, an NGO followed CSBI. Otherwise, sericulture had been practised in an unorganized way in the area for over 60 years. It was practised casually. But a respectable income from sericulture became visible from around 2008-09 when *Dababibi* silk variety gave higher yield.

During the interviews and discussions with the 88 households, the researcher interacted also with women and children (12-15 years old). He also had discussions with the school students (12-15 years old) of the two Paharia (boys' and girls') schools in the area as well as with some college students from the area.

Further, the researcher interviewed 40 out of 45 SHG women for the case study, as a part of this research. Data collection for the case study was done through a separate questionnaire (Appendix 6).

3.9.1.3 Time period: The questions aimed to assess the economy and development of the people over a period since last 30 years. But the increase in income of the farmers from sericulture, agriculture, other farming, and daily wage labour was assessed for a period of ten years, i.e., with reference to 2009 and 2019. This period of 10 years was chosen because computable data was available pertaining to this period and major change experiments in the sericulture centres were undertaken during this period, such as, new varieties of silkworms were introduced, silk eggs were washed with medical gel, and the health of the silk caterpillars were tested.

3.9.1.4 Data processing framework: The results of regression were obtained using **Stata Software** with robust standard error. The results were quantified with R-value, p-value, and correlations. Descriptive statistics, such as, data table, figures, and graphs (Chapter 4) were also used for data analysis and interpretation.

3.9.2 Secondary source of data: The researcher referred to Government surveys and reports, National Sample Survey Office (NSSO), census reports, Jharkhand reports, UNDP reports, books, research papers, references, information and reading materials available online (including films, documentaries, and YouTube), including development indicators (income and health; life expectancy, infant mortality, malnutrition, literacy level, Human Development Index, etc.). References were made to theses, books and reports, university websites, IUJ website, Shodhganga, JSTOR, etc. Google search was a blessing, allowing ready reference from the ocean of information.

3.10 Problems in the research field: This research is based on empirical evidence. However, some inherent limitations and difficulties were encountered. The main difficulties hovered around getting pertinent answers, getting accurate figures or numbers and an appropriate disposition of the people.

i) The people of this population were not comfortable to answer in precise numbers. They answered in approximation, e.g., their income and the income of their parents. It was difficult for the people to state in quantity their income in monetary terms because it came from various sources and some of them were not monetised. Besides, the Santals did not find it proper to be asked about their income, wealth, and possessions (Panangatt, 2012). Therefore, the researcher had to consolidate their

income on his own after hearing from them based on the present value of (money) the agricultural produce.

ii) The farmers found it difficult to answer in scales (1 to 7) or in percentage. The researcher had to explain to help them answer. They were not used to responding to research-oriented questions. They found it difficult to assess the degree of satisfaction / dissatisfaction. The researcher had to explain the context and the purpose of the study lest their answers should become vague. But most of them found it difficult to rate the five variables separately. They viewed the five components of the facilitation by the CSBI holistically. This compelled the researcher to record their responses respectively, depending on their non-verbal communication and paralanguage.

iii) Some people were sceptic in the beginning about the interview, until the researcher could develop some rapport with them. The researcher realised that there had been 6-7 surveys in last few years by various agencies: Government departments, NGOs, Health department, malnutrition surveys, census, etc. They had become fed up with the similar questions while they could not see any good happening to them. Their prime curiosity was whether the interview had any benefit for them. Quite a few of them asked, “What are we going to get after all these surveys?” Their attention span appeared to be short. After halfway through, quite a few of them appeared to lose interest in responding.

iv) Some qualitative questions were related to their personal status. So, some of the households tended to be evasive and vague. For example – What is the main cause of poverty? How often do you consume alcohol? What is your educational qualification?

v) There was a dearth of adequate previous research studies in the topic or near-topic in the area.

vi) The researcher wished he could spend more time in the area. He could not meet some Government officials. It could have brought more insights on issues, such as,

a) Assessment of the benefits from the government development schemes in the area, b) How much social assets were created under MGNREGA? and c) Various deterrents / difficulties in the implementation of the government schemes.

vii) The questionnaires were prepared in English. Considering the literacy profile of the households, it was not practical to ask people to fill them up. The responses have been recorded by the researcher, conversing with them in Hindi and Santali.

viii) The researcher belonged to the district and had spent his early years in the vicinity of these villages. The researcher had made a conscious effort not to allow his pre-knowledge to affect the objectivity of the study adversely.

ix) Blame it on COVID-19. The onset of Covid pandemic in the early 2020 and the travel restrictions, affected the field survey and interviews at the final stage of the research. The researcher had planned to meet some more important government officials. Final touch-up surveys and interviews were done over phone and e-mails.

3.11 Suggestions and things to consider during survey in the field

i) In research on such topic, it is advisable to adopt a judicious mix of qualitative and quantitative research methodologies. Qualitative approach is important because some information and attributes are difficult to measure while quantitative research, which is statistics-based, can analyze the numerical information and causal variables with statistical models.

ii) Studies on rural people, especially the tribes, demand multi-disciplinary approach. Certain dimensions and insights could be missed out without integrating knowledge and skills from other disciplines, such as, sociology, history, communication and behaviour dimension, social psychology, organization development and management, environment, agriculture, constitutional rights, etc.

iii) Sometimes ‘participant observation’ can bring out more insights than the statistics. Therefore, staying and living among the population for longer time is desirable to gather relevant information. It shall also allow people to develop confidence in the researcher. The people were reserved and discerning to open-up and revealing things to the outsiders. Therefore, it is important to bear in mind that they treat outsiders with suspicion.

The Santals generally viewed outsiders with suspicion and distrust (Panangatt, 2012). It is important to prove one’s credentials well. Therefore, it is advisable to meet the *Manjhi*, the Head of the village first and take him as the contact/nodal person to establish one’s credibility among the villagers. In Asanpahari, Jaksu Singh alerted the researcher that the people during that period suspected strangers to be ‘child lifters’.

iv) A researcher needs to be very respectful to the people and be sensitive to their verbal and non-verbal communications. Certain questions should be asked discerningly in public, such as, number of meals, education level, and properties. They might not like to be viewed as matric fail, poor and backward. The head of the family would not like to be viewed as a helpless poor in front of his family members.

v) It is very important to strike a rapport with the respondents by creating a natural conversational environment to elicit genuine answers. Avoid being ethnocentric. A researcher should be mindful of his/her own body and hand movements, speed and tenor of his/her speech, and ethical considerations. He/she should not be aggressive and intrusive. Humility, empathy, courtesy, unassuming body posture and soft voice facilitate people to open up with the researcher, trust him/her and to accept him/her as a well-wisher.

The population of this research, in general, were not comfortable talking to a stranger without the presence of some other villagers. The people also were careful not to allow anyone to talk to any stranger alone. The *Manjhi* of Asanbani never replied to researcher's question one-to-one level. He always called a few people to witness the conversation lest he should be suspected of revealing some undesirable information. He in turn suspected the researcher whenever he talked to the villagers without his presence; especially to the family and their kins who challenged his leadership as the *Manjhi* of the village.

vi) Framing understandable questions: While collecting quantitative data, such as, annual income, a researcher needs to use his/her assessment as well, because people may not be able calculate it well or they may have reservations to reveal it. They may not be accurate answering in numbers. In this study, the researcher had to redesign and reformulate his questionnaire quite a few times.

vii) Questionnaire should not be long. The researcher needs adequate preparation to what questions to ask and how to ask. The people generally lose interest (attention span) in the interview after half an hour.

viii) It is advisable to meet officials from as many related government departments, such as, education, water supply or irrigation, forest, agriculture, Block Development Officer (BDO), etc.

ix) It is very important to bear in mind that a researcher should be a patient listener. He should make people feel that their responses are important. A researcher should neither be a judge nor a critique. He is only looking for answers to the questions from peoples' perspectives and seeking solution to problems.

x) Political, religious, racial, and ethnocentric overtones must be avoided in all circumstances.

3.12 Summary

Assessment of income of the people was a difficult task because a large part of their income was not monetized (subsistence economy) and they had at least four sources of fluctuating income. Income from sericulture was verified from the local office of the Central Silk Board of India (CSBI). Qualitative interviews and discussions revolved around understanding their economy, livelihood, local leadership, impact of formal education, problems related to agriculture and above all what had and could enhance the income of the farmers. The major endeavour was to explain the factors contributing to the success of sericulture in the area in supplementing the income of the farmers. The example of the success of sericulture could lead to a conclusion that if the similar facilities and facilitation were provided to other indigenous crops, produces, services and artisan products, the farmers could increase their income, come out of poverty, and live a decent quality of life in their own habitat without migrating out.

CHAPTER -IV

DATA ANALYSIS AND INTERPRETATION

CHAPTER - IV: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

As mentioned in the research methodology, this study followed a judicious mix of qualitative and quantitative methods in data collection and analysis. The main data was collected between 2017-2019. For qualitative data analysis, a combination of the following tools was used, namely, content analysis, narrative analysis, discourse analysis, thematic analysis, and interpretative phenomenological analysis (Warren & Rautenbach, 2020). Quantitative data analysis was causal as well as descriptive. Regression was used for testing the hypotheses. Descriptive data analysis and interpretation have been done using tables and graphs. The data analysis and interpretation have been presented in two parts: data analysis and interpretation of the main study and those of the case study.

4.2 Scales: The term ‘scaling’ is applied to the procedures for attempting to determine quantitative measures of subjective abstract concepts. Likert scales or summated scales express either a favourable or unfavourable attitude towards the given object. The overall score represents the respondents’ position on the continuum of favourable unfavourableness towards an issue (Kothari & Garg, 2021).

In this study the degrees of satisfaction and dissatisfaction on the five independent variables were recorded with reference to the years, 2009 and 2019 in 7-point Likert scale to examine their impact on the farmers’ income. These five independent variables comprised management, infrastructure, extension education, timely and affordable finance, and market linkage with remunerative price (Appendix 5).

1	Strongly disagree/dissatisfied
2	Considerably disagree/dissatisfied
3	Marginally disagree/dissatisfied
4	50-50 (satisfied/dissatisfied)
5	Marginally agree/satisfied
6	Considerably agree/satisfied
7	Strongly agree/satisfied

The income of the individual farmers, the dependent variable, was recorded based on their statement and discussions with them, which was verified from the payment register maintained at the office of the Central Sericulture Board of India (CSBI), Kathikund. The same independent variables were also ranked in the scale of 1 to 7 vis-à-vis their income from other farming activities, such as, vegetables, seasonal fruits, livestock, and some minor forest products (MFP).

In the Case study also Likert scale was used to record the degrees of agreement or disagreement of the SHG women. The status and availability of independent variables, namely, training, management, and monitoring of SHGs, market linkage of their products, capability to create market, group ownership, and dedication of Self-help Group Promoting Institutions (SHPIs), were recorded in the scale of 1 to 3 (Appendix 6) to examine their impact on the income from SHG economic activities.

1. No	2. Inadequate	3. Yes
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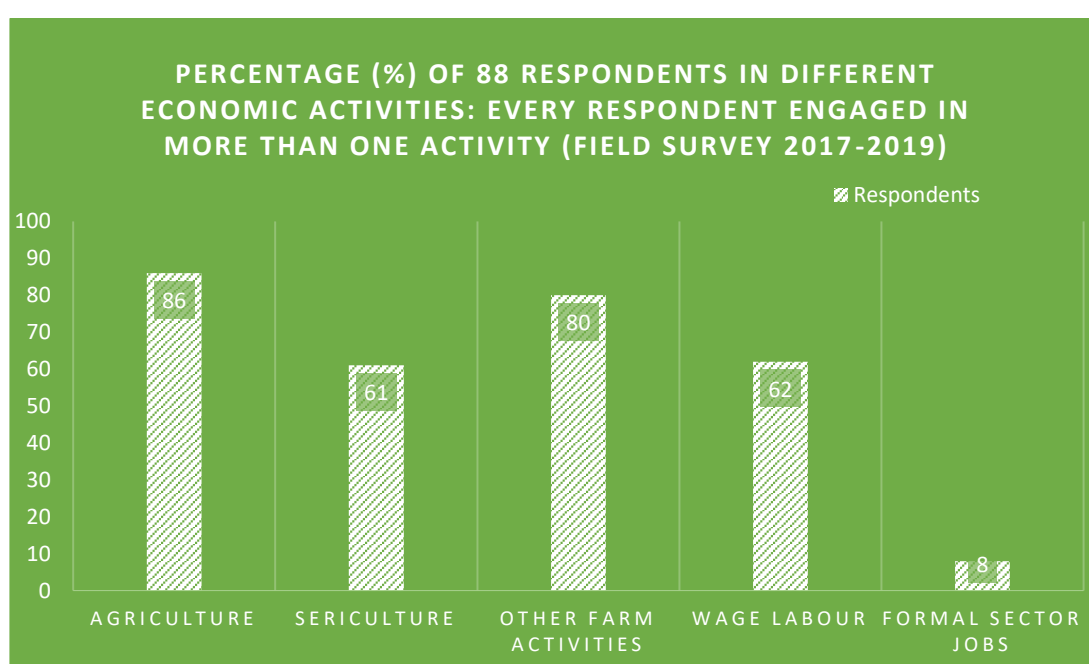
and

1. Poor	2. Mediocre	3. Good
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4.3 Data analysis and interpretation of the main study: Qualitative questionnaire (Appendix 4) collected households' information related to the family profile, occupation, causes of poverty, sources of income, problems & predicaments, landed property, literacy, local leadership, and their expectations from the Government and other development agencies. These data have been presented in the following tables and graphs. Some interpretations and observations have been incorporated in discussion paragraphs in Chapter 5, including discussions with focus groups.

4.3.1 Farmers' engagement in various economic activities: Agriculture (86%) has been the mainstay of the tribal economy. Nevertheless, in recent times, agriculture alone was not adequate for subsistence. Therefore, the respondents engaged mainly in three other economic activities, namely, sericulture (61%), wage labour (62%) and other farm activities (80%), such as, raising livestock, vegetables, bamboo baskets, minor forest products (MFP), etc.

Figure 4.1: Farmers' engagement in various economic activities



Source: Field Survey, 2019

Seven respondents had salaried jobs in formal sector. During the non-cropping season, i.e., February to May, many farmers engaged in daily wage labour and sometimes, migrated to the neighbouring states, especially to Burdwan district of West Bengal. Young people travelled far to Delhi, Punjab, Karnataka, Tamilnadu, Kerela, and to the Northeastern states in search of part-time employment.

4.3.2 Average annual income (2009 & 2019) of 54 farmers

Table 4.1: Village wise per farmer average annual income, 2009 & 2019 (in Rupees)

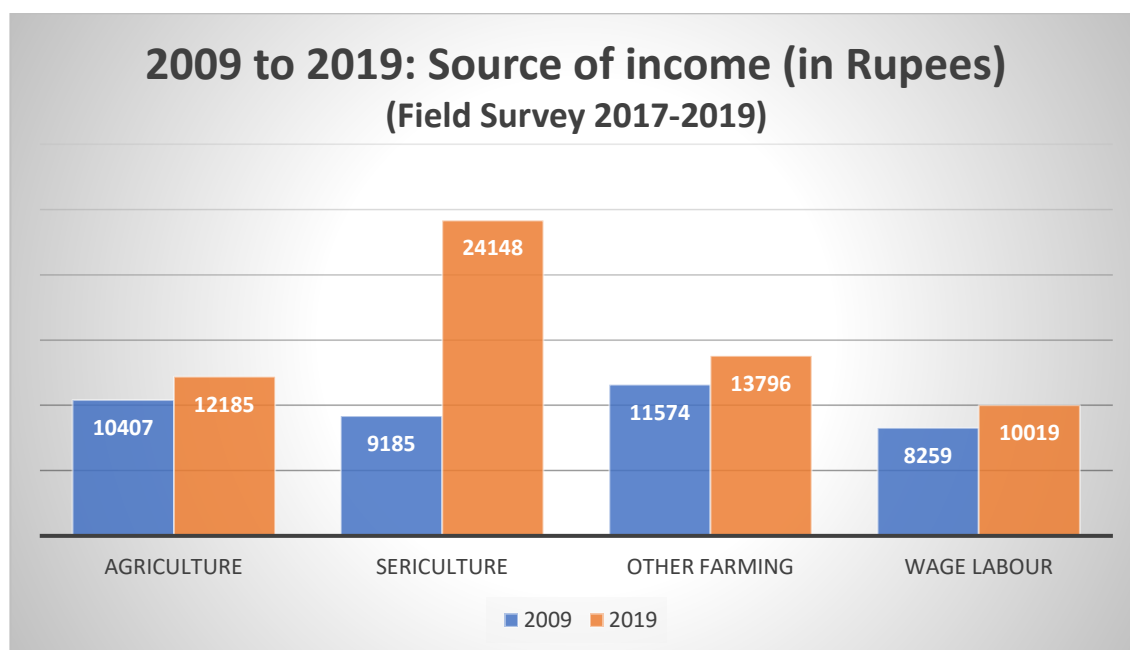
Three villages	Agriculture	Wage labour	Sericulture	Other farms income	Total average income
Asanbani 2019	16042	7250	26250	13958	63500
Asanbani 2009	13667	6417	10417	11208	41708
Asanpahari 2019	3313	18500	26375	10813	59000
Asanpahari 2009	3188	14063	9188	9688	36127
Dhankuta 2019	15714	5071	18000	*16929	55714
Dhankuta 2009	13071	4786	7071	*14357	39286
All three villages, 2019	12185	10019	24148	13796	60148
All three villages, 2009	10407	8259	9185	11574	39426

* Includes Mahali, the bamboo artisans

Source: Field Survey, 2019

From the table above and the following figures, it can be observed that agriculture continued to be the mainstay. However, the increase (53%) in income of the farmers during the period from 2009 to 2019, can be attributed to sericulture. Consistent organized facilities and facilitation in sericulture had helped increasing the income of the farmers through sericulture. The above data pertains to 54 sericulture farmers; Asanbani (24 farmers), Asanpahari (16 farmers), and Dhankuta (14 farmers).

Figure 4.2: Annual average income of the 54 sericulture farmers from different sources with reference to 2009 and 2019 in Rupees



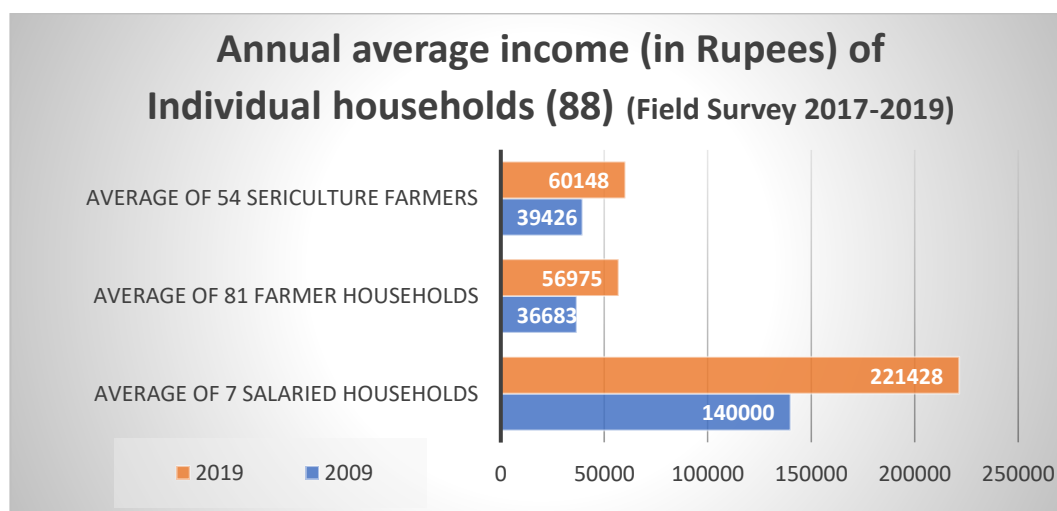
Source: Field Survey, 2019

i) Sericulture has been a saver of people. The rate of increase during the decade in sericulture was 163%, vis-à-vis increase of 17% in agriculture, 21% in wage earning and 19% in other farming. The overall increase (53%) in average income of the farmers during the period from 2009 to 2019, can be attributed to sericulture which contributed 40% to the total income of the sericulture respondent farmers in 2019.

ii) As such, it can be said that there was no real increase in income from agriculture, wage earnings, and from other farming activities. The marginal monetary increase may be ascribed to the result of the time value of money or inflation.

iii) Some of households could not undertake agriculture because of inadequate irrigation facilities and limited land holding (4.3.4), especially in Asanpahari. Such people resorted to working as migrant labourers and as local daily wage labourers.

Figure 4.3: Annual average income of 88 households in Rupees

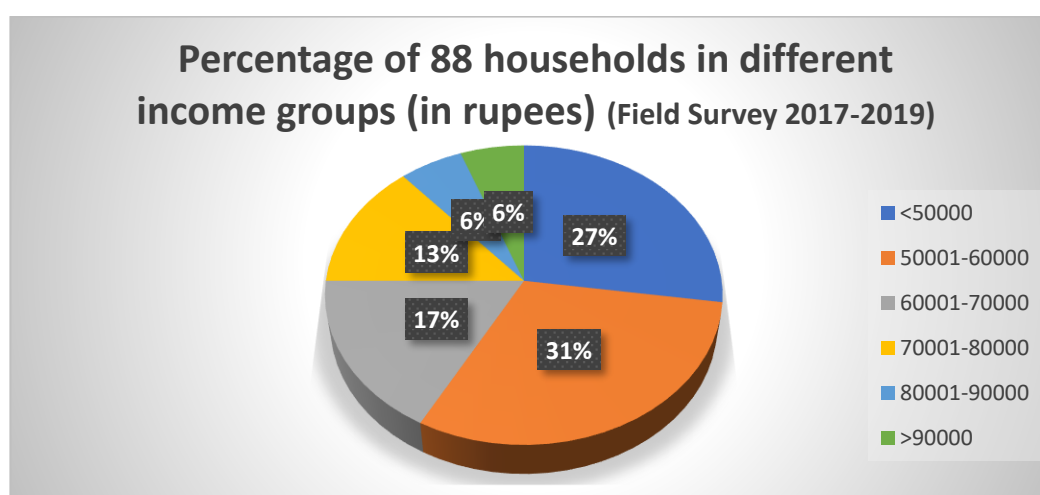


Source: Field Survey, 2019

It can be observed that the average per capita income of the 54 sericulture farmers was more (Rs.60148/-) than that of 88 households (Rs.56975/-) when the base included also the 27 non-sericulture households. It is important to note that the census 2011 had returned 50% BPL in the area (Table 3.1). Most of the respondents received rice/wheat from the Government under TPDS (4.3.5). The average per capita income of Rs.56975/- of the three villages corroborated this BPL position.

4.3.3 Households (88) in different income groups in Rupees

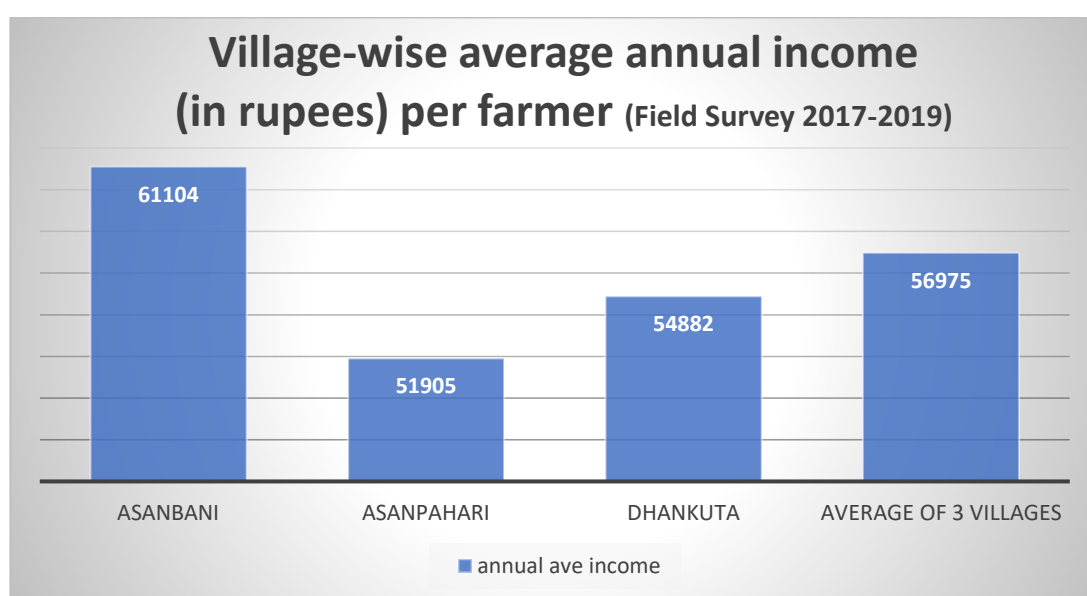
Figure 4.4: Percentage of 88 households in different income groups



Source: Field Survey, 2019

The majority, i.e., 58% farmers (27%+31%) belonged to the income range of below Rs.60,000/-. Taking Rs.55,000/- for a household as BPL (Planning Commission, i.e., Rs.32/- x 5 members x 365 days = Rs,58,400/-), i.e., around 58% households out of 88 households belonged to BPL. The current MPCE of Kathikund was Rs.920/- (Rs.920/-x5x12= 55,200). It is plausible to assume that this level of MPCE kept 50% households of the three villages below poverty line (BPL).

Figure 4.5: Village-wise annual average income of farmers (81*)



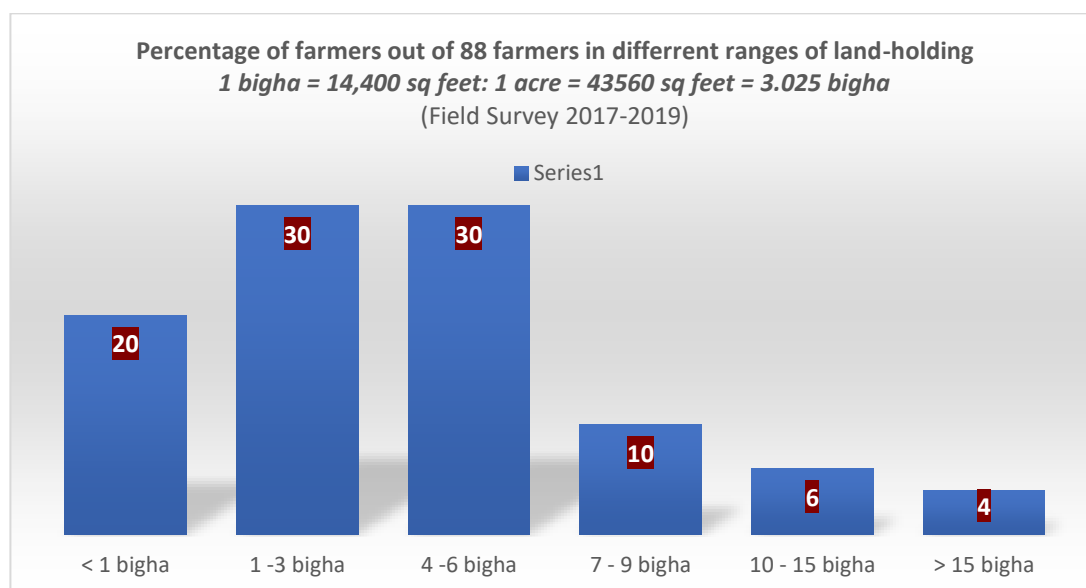
** 7 salaried households are excluded for the calculation of the average income*

Source: Field Survey, 2019

The average annual income per household income of Asanpahari (Rs.51905/-) was below those of Asanbani (Rs.61104/-) and Dhankuta (Rs.54,882/-), assumably because the landholdings of the households of Asanpahari was much less in comparison to the other two villages as shown in Figure 4.6. However, the average income of sericulture farmers of Asanpahari recorded Rs.59,000/- because two farmers of the village, Harinarayan Grihi (Rs.80,000/) and Sanatan Murmu (Rs.70,000/-) were outliers (Appendix 2).

4.3.4 Land holding pattern of the farmers (1 acre = 3 bigha = 43560 square feet)

Figure 4.6: Size of land holding of the 88 farmers



Source: Field Survey, 2019

The land holding pattern was nearly uniform in Asanbani and Dhankuta. The most people in these two villages held 4-6 bighas on average, which were fragmented over 3-4 places. In Asanpahari, 29% households held below 3 bighas. Therefore, many farmers of Asanpahari engaged in daily wage labour for their livelihood (Table 4.1).

4.3.5: Annual average expenditure of a family (5 members)

Table 4.2: Annual average expenditure (Rupees) of a family on basic raw food

Rice	2 kg x Rs.22 = 44
Vegetable/cereals	36
Oil, salt, spices & sugar	30
Daily Total	110
Annual Total	Rs.110 x 365 = 40,150

Source: Field Survey, 2019

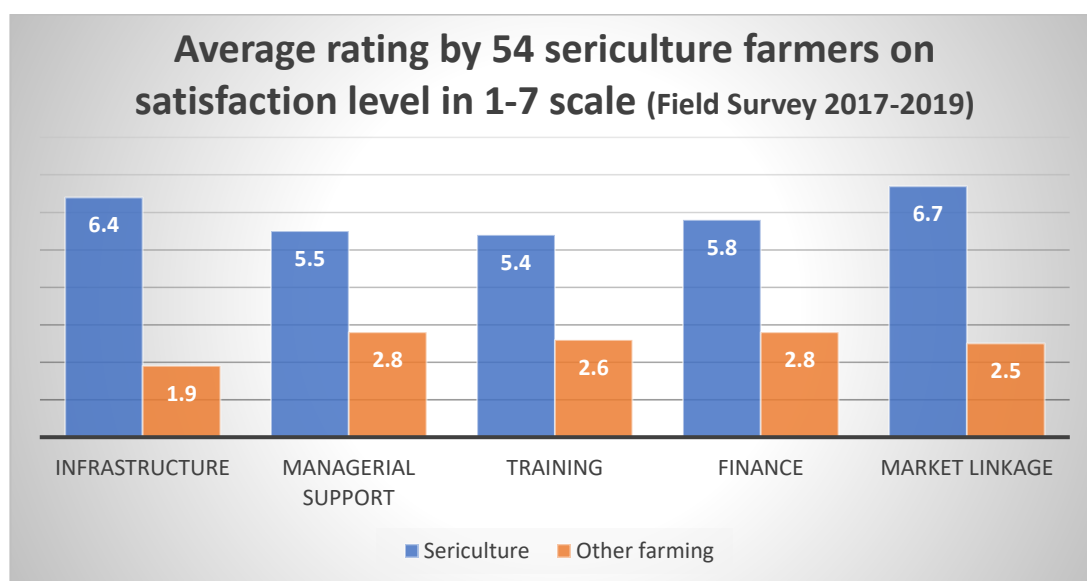
A sizable number of households lived with the bare minimum. The average borderline BPL household of 5 members spent around Rs.40,000/- (raw food) annually on two and half meals a day for 365 days. It meant Rs.22/- per day per person. It could be considered equal to Rs.32/- (cooked food) for reasons that the difference of Rs.10/- accounted for the hidden costs; fire and labour which the people did not have to spend on. Paul Murmu of Asanbani said that an average family of the village ate rice of worth Rs.16,000/- to 17,000/- in a year. It worked out to be 2 kg rice per day per family $[(Rs.16,000 / Rs.22) / 365 = 1.99 \text{ kg}]$. It meant that every household spent Rs.110/- on food two and half meals per day.

This level of expenditure on food generally did not include milk, eggs, and non-vegetables unless people did their own fishing in pond or river or ate home grown livestock. In fact, people supplemented their food with some local catch or supply, such as, seasonal fruits, tender leaves of certain trees (moringa or *munga*, peepal, *sin' arak*), some roots, mushroom, river fish, kitchen garden produce, etc. The idea of indigenous self-reliance is also to promote such food supplements. The food support from the government under Targeted Public Distribution System (TPDS) for BPL families worked out to approximately, an average of Rs.9000/- a year, i.e., 30 kg rice x 12 x Rs.25/- = 9000. It meant that this much of money value supplemented their other necessities and expenses on clothes, health, marriage, and festivals.

4.3.6 Satisfaction / dissatisfaction level of the respondents on the factors affecting income from sericulture and other farming: The following figure shows the satisfaction / dissatisfaction level of the 54 sericulture farmers on the factors or the independent variables (x), affecting their income from sericulture and other farming in the scale of 1 to 7. These independent variables were collectively called

Organized Facilitation. The satisfaction scores relating to the other farmings were comparatively much lower than those recorded for sericulture, especially in infrastructure (water) and market linkage. Farmers knew only local market, *hatia*.

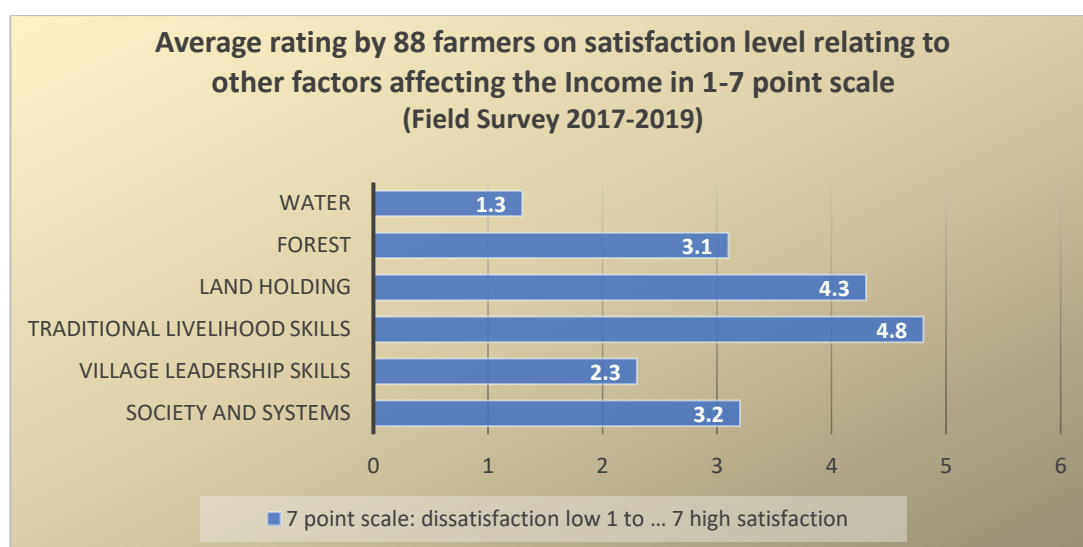
Figure 4.7: Satisfaction / dissatisfaction level of the sericulture farmers (54) on the factors affecting income from sericulture and other farming.



Source: Field Survey, 2019

4.3.7 Other factors affecting the income of the farmers

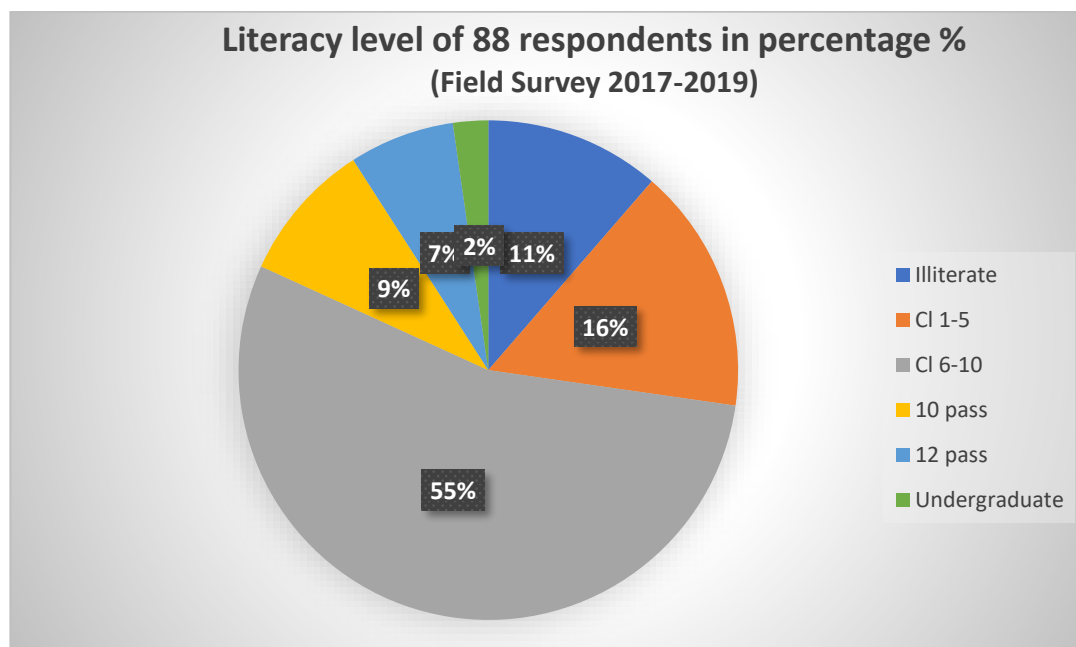
Figure 4.8: Other factors affecting the income of the farmers:



Source: Field Survey, 2019

4.3.8 Literacy level of the 88 respondents in Percentage

Figure 4.9: Literacy level of the 88 respondents in Percentage



Source: Field Survey, 2019

The above pie chart showed that people had made attempts to get education. But 71% people studying below class 10 indicated that the formal education system did not address the people's immediate aspirations, i.e. livelihood. The interviews and discussions revealed that the formal education system was job oriented, urban oriented and it pushed people to rigorous academic competition where many tribal and rural people found themselves at disadvantage. So they generally decided to dropout before class 10 and opted for some known, practical and achievable ways of income. They were contented with basic literacy.

Discussions with the people revealed that the formal education system was antithetical (mutually incompatible) to their family's well-being and social cohesiveness. In the short run, they viewed that the formal education system

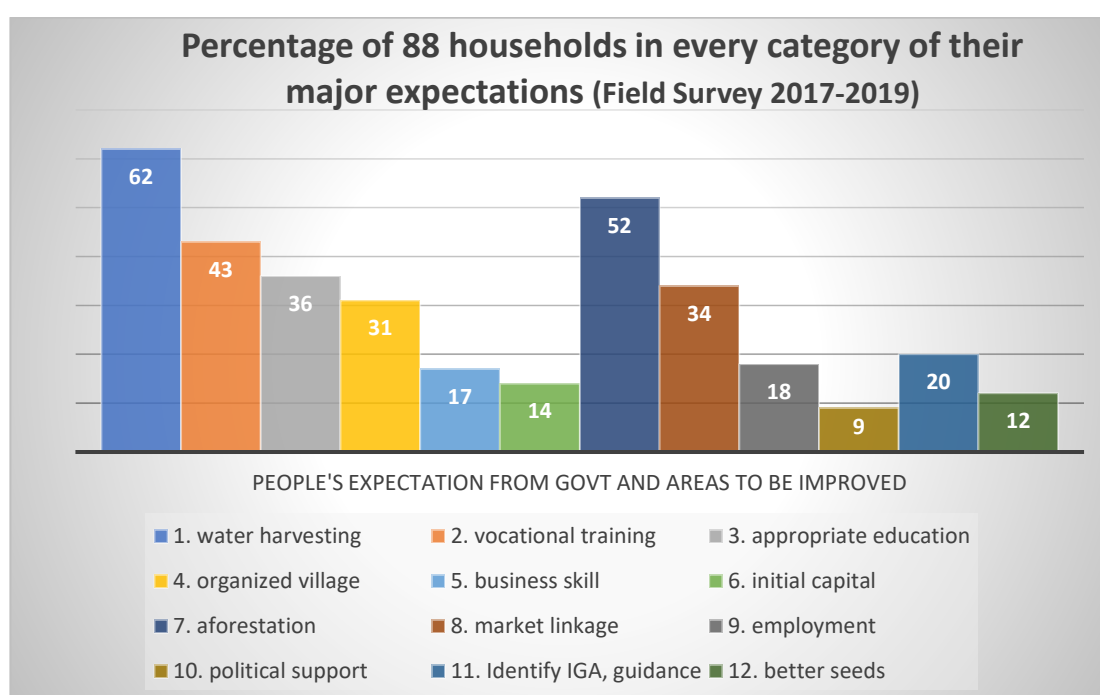
snatched their children away from them, who contributed to economic activities of the family. In the long term, they feared that the education would take their children away to the cities and towns and there would be no one to take care of them in their old age. Summarily, the people did not find the prevalent formal education system suitable for their livelihood, aspirations, and community well-being.

The high rate of school dropout also indicated that people appreciated education but only for some basic literacy and acquiring capabilities to interact with the outside world. Getting jobs after education was not the main target of their attending school. They wanted some exposure to the outside world to increase awareness and to empower themselves to defend themselves from the cheating outsiders by learning to read, write and speak in the mainstream languages. Some villagers told, “*Alo jemon le ere ocok*’”, meaning, so that we don’t get cheated. Incidentally, seven out of the eight people who studied beyond class 10 had got jobs in formal sector.

4.3.9 The farmers’ major expectations or improvements wished: The qualitative questionnaire included open ended questions on which areas they wanted improvements. They were asked, i) what support from Government can improve your income? and ii) other reasons for low farm income or suggestion to improve farm or agricultural income.

In the areas, such as, water harvesting, re-organizing village life, afforestation and identifying income generating activities, initiative and involvement of the people play a great role. These activities are generally not capital intensive. But they are essential in building social assets, progressive native leadership and organizational development. They would further induce environment for development, new ideas, initiatives, motivation, and renewed confidence in agriculture.

Figure 4.10: Major expectations of the farmers for a good quality of life



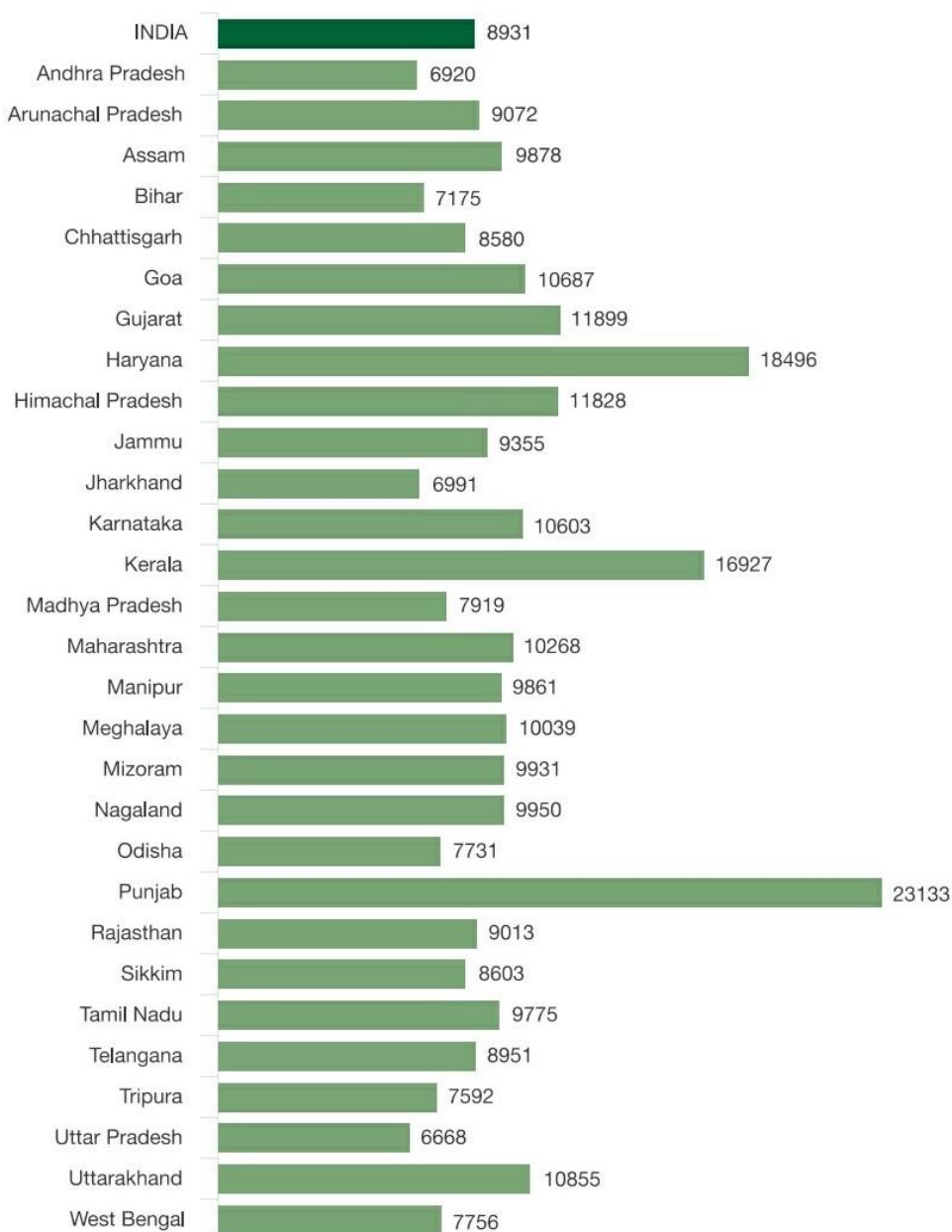
Source: Field Survey, 2019

The major expectations voiced by the people is presented in the above bar graph. Many of them have named more than one expectation. Water harvesting (62%), afforestation (52%), vocational training (43%), appropriate education (36%), and market linkage (34%) were among the top five expectations of the people in that order, followed by re-organizing village leadership and village life, and guidance in identifying income generating activities.

It was interesting to note that only 9% (lowest) out of 88 people voiced expectation from political leaders. It probably indicated a compounded hopelessness about political leadership over the years. Ill governance of the political leaders and the apathy of the government officials were perceived by the people as the (dis)order of the day. So, they did not expect much from them nor did they question them. Some said, “*Noko then do cet'em asok'a!*”, meaning, no point expecting from them.

Figure 4.11 Average Monthly Income of Agricultural Households in India as reported by NABARD

Figure 4.4 Average Monthly Income of Agricultural Households by States (In Rupees per month per household)



Base = Agricultural Households

Source: NABARD All India Rural Financial Inclusion Survey 2016-17, 2018, p. 29

4.3.10 Hypothesis testing of the Main study: Based on the objective of the study, the following hypotheses were formulated:

Ho1: There is no impact of organised facilitation of indigenous economic potentials on the income of the farmers.

Ha1: There is a significant impact of organised facilitation of indigenous economic potentials on the income of the farmers.

The organised facilitation comprised of five factors or the independent variables, i.e. infrastructure, managerial support, extension education, timely & affordable finance, market linkage with a remunerative price.

TABLE 4.3: Main study; Result of Hypothesis testing

Regression of Income on organized facilitation in Sericulture & Other farming

$$Y = c + a_1X_1 + a_2X_2 + a_3X_3 + a_4X_4 + a_5X_5 + a_6X_6 + a_7X_7 + a_8X_8 + e$$

Where

Y = Ln of Income

X₁ = Sericulture Monitoring & Managerial support

X₂ = Sericulture Infrastructure

X₃ = Sericulture Training & extension education

X₄ = Sericulture timely and affordable credit

X₅ = Sericulture Market Linkage

X₆ = Other Farming Infrastructure

X₇ = Other Farming Credit

X₈ = Other Farming Market Linkage

Result of Regression on Income of facilities and facilitations in Sericulture and Other farming				
Variables	Coefficient	Std. Error	t value	Pr(> t)
(Intercept)	5.351	0.688	7.778	0.000 ***
Seri.Monitoring	0.213	0.040	5.375	0.000 ***

Seri.Infrastructure	0.179	0.026	6.868	0.000 ***
Seri.Training	0.184	0.0280	6.553	0.000 ***
Seri.Credit	0.094	0.0421	2.241	0.028 *
Seri.Market Linkage	0.148	0.0244	6.073	0.000 ***
OtherFarm.Infrastructure	0.008	0.0468	0.170	0.866
OtherFarm.Credit	0.143	0.0506	2.830	0.006 **
OtherFarm.MarketLink	0.0258	0.0319	0.807	0.423
R-squared: 0.864				
Adj. R-squared: 0.839				
<i>Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1</i>				

- i) From the above results, it is seen that the facilities such as, infrastructure, credit/finance (financial inclusion), market linkage and facilitation like training and monitoring management in sericulture had led to improvement in the income level of the farmers. R-square of 0.864 and Adj. R-square of 0.839 indicated that there was a significant impact of the independent variables on the dependent variable.
- ii) Monitoring, Infrastructure, Training and Market linkage provided in the sericulture were highly significant, indicating that these factors determined the improved earning of income among the farmers.
- iii) The improvement in the infrastructure, training, and market linkage (with 1 unit increase in the scale of improvement) could improve the income level of the farmers approximately by around 14-18%. Management of the project through constant monitoring could improve the productivity and quality of the products, which would lead to increase in the income level of the farmers by about 21% due to developed market linkage for these products.
- iv) Further, the line of credit available for sericulture and other farming activities were also significant at 5% level and 1% level, respectively, which showed the importance of credit in economic activities related to farming.

v) Infrastructure and market linkages in the other farming structure were statistically insignificant, probably due to deficient infrastructure and under development of markets for these products.

In view of the above findings, the Null Hypothesis were rejected.

Hypothesis Ho1	There is no impact of organized facilitation of indigenous economic potentials on the income of the farmers.	Rejected
Hypothesis Ha1	There is a significant impact of organized facilitation of indigenous economic potentials on the income of the farmers.	Accepted

Data analysis and interpretation including the result of the regression analysis pertaining to the Case Study has been presented in the following paragraph. A few other observations of the Case Study have been discussed in Discussion V, p.216.

4.4 Data analysis and interpretation of the Case Study: There were five SHGs in the selected three villages (Asanbani, Asanpahari, and Dhankuta) of the research area. Three SHGs which had started income generation activities, were identified for the study. There were 15 active members in each of the three SHGs. The other two SHGs were new and had not started income generating activities.

The sample size was calculated following Yamane formula. Accordingly, 40 out of 45 women of three SHGs who had undertaken income generating activities, were interviewed.

Table 4.4: Profile and income of the 40 SHG women (Appendix 3)

Profile and income of respondents	Range	Frequency	%
Age	< 30 years	1	2.5
	30-40	14	35.0
	41-50	18	45.0
	51-60	7	17.5
Literacy	Illiterate	7	17.5
	1-5	2	5.0
	6-10	24	60.0
	10 pass	7	17.5
Marital status	Single	0	0.0
	Married	32	80.0
	Widow	8	20.0
Years in SHG	5 and less	0	0.0
	6-10	11	27.5
	10 and more	29	72.5
Other annual cash income: livestock, fruits, sericulture in Rupees Excluding agriculture, labour wages	10000-15000	14	35.0
	15100-20000	8	20.0
	20100-30000	18	45.0
Income from SHG loan/activities in Rupees	<1000	11	27.5
	1001-2500	4	10.0
	=>2510	25	62.5
	>4000	0	0.0
Total annual family income in Rupees (4 husbands had jobs/pension) Including agriculture, labour wages (Total respondents:40)	<50000	1	2.5
	50100-60000	15	37.5
	60100-70000	16	40.0
	>70000	8	20.0

Source: Field Survey, 2019

i) 65% women were school dropouts before class 10; 17.5% were illiterate. ii) Average annual family income of the families was around Rs.60,000/- which was in the borderline of BPL, iii) The average annual income of Rs.2300/- per woman from loan taken from SHG indicated that they had start-up problems even after 7-13 years (except the loans taken for some agricultural seeds). iv) Some households supplemented their annual income in the range of Rs.12,000/- to Rs.20,000/- raising goats, pigs, and cattle (Appendix 3), v) The women whose family income was comparatively higher, had engaged in sericulture or had raised livestock.

Table 4.5: Factors of SHGs' success/failure

Factors	Range	Frequency	%
Training received	No	23	57.5
	Inadequate	16	40.0
	Yes	1	2.5
Traditional skills	No	0	0
	Inadequate	40	100.0
	Yes	0	0
Infrastructure/facilities	No	2	5.0
	Inadequate	38	95.0
	Yes	0	0
Management/leadership in SHG	Poor	33	82.5
	Mediocre	7	17.5
	Good	0	0
Monitoring by SHPIs	Poor	40	100.0
	Mediocre	0	0
	Good	0	0
Other factors of failure Open questions (Total respondents:40)	Unsuitable IGA	31	77.5
	No market linkage	34	85.0
	Low income trap	10	25.0
	Group ownership	11	27.5
	No family support	9	22.5
	Inadequate financial literacy	27	67.5
	Lack of dedication of SHPIs	33	82.5
	Indifferent line departments	13	32.5

Source: Field Survey, 2019

Table: 4.6: Regression Result: Factors of Start-up problems of SHGs

Regression Result: Factors of Start-up problems of SHGs				
Share of Income from SHG loan in Total Income of the Family (Y)	Coefficient	Robust Standard Error	t-statistics	P> t
Inadequacy of Training	-0.658	0.360	-1.83	0.076
Inadequacy of Management	-0.264	0.079	-3.36	0.002
Lack of Market Linkage	-0.439	0.256	-1.72	0.095
Lack of capability to create market	-0.418	0.390	-1.07	0.290
Group Ownership	-3.554	0.235	-15.14	0.000
Lack of Dedication of SHPIs	-0.267	0.224	-1.19	0.242
Constant	4.954	0.333	14.86	0.000

Number of observations	40.00			
F (6, 33)	130.09			
Prob > F	0.00			
R-squared	0.84			
Adj. R-squared	0.81			
Root MSE	0.64			

Source: Regression Analysis, 2020

1. The model is a good fit as it explained that R-squared (0.84), i.e., 84 % of variation in the income generated from SHG loan. The Adj. R-square was 0.81. The F test is significant. The fitted model is Y,

Where, Y = Share of Income generated from loan from SHG in Total Income of the Family

x1= Inadequacy of Training, which is defined as those who responded No training received is taken as 1, otherwise 0

x2= Inadequacy of Management, where response with mediocre is taken as 1, otherwise, 0

x3 = Lack of Market Linkage, response with No is taken as 1 and 0 otherwise

x4 = Lack of capability to create market, No demand response is taken as 1 and 0 otherwise

x5 = Group Ownership

x6 = Lack of Dedication of SHPIs

2. All the independent variables are negatively related with the dependent variable, indicating that these factors pulled down the income generated from the SHG loan.

3. Among the factors, Inadequacy of Management and Group Ownership were found high at 5% level of significance, while Inadequacy of Training and Lack of Market Linkage were found to be at 10% level of significance.

4. Although the Lack of capability to create market or Demand and Lack of Dedication of SHPIs were statistically insignificant, they had negative impact on income generated from the SHG loans.

An R-squared of 0.84 indicated that the regression was a good fit. The F-test (0.00) was significant. Therefore, the null hypothesis (Ho2) was rejected, and the alternative hypothesis (Ha2) was accepted, i.e.,

Hypothesis Ho2	The role of development actors is not a critical factor at the start-up phase for the success of SHGs.	Rejected
Hypothesis Ha2	The role of development actors is a critical factor at the start-up phase for the success of SHGs.	Accepted

4.5 Summary

In view of the nature of this study, it was important to adopt a judicious mix of the quantitative and the qualitative method. The data analysis and the results of regression indicated that the alternative hypotheses were accepted. The main hypotheses affirmed that the organized facilitation of indigenous economic potentials would create opportunities for a sustainable employment and income for the people. The case study revealed that SHGs needed hand-holding and continued support of the development actors in their nascent stage (start-up phase) of their economic endeavour.

The above data analysis and interpretation could help the Government, development agencies, and the leaders to revisit the policies and approaches to tribal development and agriculture. Some analysis and interpretations have been incorporated in the discussions of the following chapter.

CHAPTER - V

RESULTS, DISCUSSIONS & CONCLUSIONS

CHAPTER – V

RESULTS, DISCUSSIONS AND CONCLUSIONS

5.1 Introduction

Right from the inception of planned development (1951) in India, tribal development, rural development, and agriculture had been accorded the highest priority in the planning process. Nevertheless, the BPL (50%), underweight children (61%) and HDI (0.467) of Kathikund area indicated that the desired results were still awaited. All the objectives of this study revolved around identifying the causes of poverty in the tribal areas and finding some effective solutions. The findings are discussed in order of the objectives of the study.

This chapter has enumerated the major causes of poverty. It has identified some agricultural produce of the area, which have the potentials to transform from subsistence agriculture to commercial agriculture. It has explicated the factors of success of sericulture in Kathikund as an effective initiative for economic transformation. It has also described some experiments in Indigenous Self-reliance in the area, some of which did not yield the desired results, explaining causes thereof. It has given some insights into aligning planned development effectively to practicable tribal and rural development.

A few successful examples from other regions of Jharkhand and India also have been presented to explicate the viability of the similar initiatives and experiments. It has also made some observations and interpretations. One case study on SHGs was undertaken to complement the issues and ‘self-help’ perspectives of the study.

5.2 Result for Objective I: Major Causes of Poverty in Tribal Areas

The following major causes of poverty in the tribal areas of Jharkhand have been identified based on the empirical observations and the interface with the households of the three villages, discussions with the experts, social workers, and focus groups. Most of the causes have been concurred by SAMETI, Jharkhand (2020). Some of the causes were the absence of good practices which have been derived from their presence in the sericulture in the area. A few other causes have been inferred from the case study, some successful initiatives in other parts of India, and secondary sources, i.e., review of literature and various reports.

5.2.1 Inadequate infrastructure: Scarcity of water was reported to be the root cause of deteriorating agriculture and economic backwardness. There was lack of irrigation facility in the area. There were no visible efforts for watershed management or water harvesting.

Large stretches of cultivable land, kept waste for years, were observed (cultivable waste land, 8.0 %, Table 1.4). The people cited lack of irrigation facilities for the uncultivated land. The underground water table had gone down too deep to dig open wells. The depleting forest cover indicated ineffective forestry. Unfortunately, the people too had lost the good habit of planting trees. The rivers had become primarily rain-fed. Despite the presence of two sizable rivers and catchment area in the valleys of the Rajmahal hills, no water reservoir was visible in the area. Although Dumka district was among the six districts of Jharkhand, covered under Rural Water Supply and Sanitation Project (RWSSP), the people could not recount any initiative under this project.

Water scarcity reduced their cropping opportunity to only one cropping season (*Kharif*) which depended on the vagaries of Monsoon, resulting in disguised employment in agriculture. Efforts for water harvesting in the area was not visible or they were not effective. The Block Agriculture Officer said that they had schemes for '*Dobha*', meaning 100 feet x100 feet size pond in private land of the farmers. Regarding 'check dams', the block officials explained that the suitable land belonged to the forest department. Watershed management, therefore, could not be taken up without the initiative and cooperation of the forest department. They also explained that check dams were not constructed because they had failed in the neighbouring areas due to siltation. A few others added that those check dams did not have appropriate exit gates. Apparently, the narration of the problems generally prevailed over finding a solution to the problem.

Although people had a tradition of raising livestock, they did not raise them in large numbers fearing the livestock would die of diseases en masse. They did not have the knowledge of the vaccines or medicines to be given to the livestock. The people said that the veterinary service was inadequate, casual, and not readily available inspite of Government's stated schemes (INDIA 2020: A reference manual). Still, every family had at least a couple of goats, poultry, cattles, and pigeons. Some people raised a couple of pigs. The National Commission on Farmers stated, "Indebtedness of farmers is arising not only because of farming related expenditure, but also because of the need for health care" (Reddy, 2012)

Electricity in the area was irregular. Heavy investment was required in the tribal areas of Jharkhand (Singh, 2009). Roads were reasonably good. But they were not yet a dominant factor or economically exploitable asset to directly enhance the

income of the people. Very few families had motorcycles. No one had a car. No one owned a tractor.

5.2.2 Lack of appropriate education: The prevalent formal education looked delinked from the local livelihood skills (Figure 4.9). The people did not receive any training, nor did they know to face epidemics of the livestock. They did not have adequate information about the commercial potentials of local produce, such as, custard apple, jackfruit, dry chilli, turmeric, papaya, baby corn, etc. Formal education system did not give adequate thrust on vocational education and agriculture. The formal education system had not enabled the people to generate livelihood nor to take up self-employment. Therefore, except for those few who excelled in competition for Government and private jobs, education system had deluded nearly 90% of such people who attended the prevalent formal education system. It was much contradictory to M.K. Gandhi's idea of "education as insurance against unemployment". Gandhi called such education a "debauchery of mind" (Bombay Sarvodaya Mandal & Gandhi Research Foundation, 2013).

The teachers of five local government schools admitted that the formal education syllabus was not aligned with the livelihood and aspirations of the local and rural people. This could be a major reason for the large school dropouts, which was 55% in Kathikund and illiteracy 15% in these three villages (Figure 4.9). The teachers emphatically suggested that agriculture should be included in the school syllabus before class 10. Shri Baikunth Mandal of Paharia Boys' school, Asanpahari, suggested that agriculture should be taught in schools "as a subject and not only as a chapter". Then the students would learn something useful for livelihood even if they did not pass matric. The prevalent education system which had not undergone

appropriate reforms since India's Independence (1947). It did not empower them to undertake gainful (self-)employment indigenously. "We need to thoroughly overhaul our present education policy, which has become outdated and irrelevant in the context of our changed environment. More emphasis needs to be placed on the vocationalization of education." (Singh & Shishodia, 2016).

Baskey (2011), in his research among the rural and tribal students of Birbhum district (W.B.) stated that prevalent formal education system had not been designed for the rural and tribal life. A native idiom explained poetically the vicissitudes of the rural people, particularly in relation to the prevalent formal education, "*Serma cetanen, Dharti ketec'en*", literally meaning the sky was too high and the earth was too hard. Figuratively, it meant that on the one hand, the aspirations induced by the mainstream worldview looked too high to achieve for the rural folks while on the other hand, the local circumstances were unfavourable to excel in the traditional skills. Consequently, the rural folks appeared to lapse into a state of 'Learned helplessness' and then most of them resorted to maladaptive behaviour.

Some teachers suggested that Moral Science should also be made integral part of the school syllabus. They reported a decline in the moral standard of the students, especially, civic sense, courteous and respectful behavior, communication pattern, inter-community respect and general discipline. Now, that the physical punishment of students was legally banned, the teachers had their limitations to discipline the children. Besides, such prevalent indiscipline of most of the children was indicative of the moral decadence of the society at large. Some teachers desired a renewed thrust on awareness for caring for and relatedness with the nature and environment by way of its inclusion in the syllabus as a subject in the senior classes.

The people sent their children to schools mainly to become aware of their rights and to acquire abilities to defend themselves (their vulnerabilities) against the cheating outsiders. Getting job was not the prime intention of sending their children to schools. They hoped that education would empower them to stand up for justice; *“Thorako akil len khan bako ere ocoká.”* Without formal education they found themselves unworthy of meeting Government officials. Education would give them courage to meet Government officials. The people felt that education in schools and colleges should help their children to communicate better with the outsiders and the Government officials. In general, the people ascribed the dearth of knowledge, information, awareness of rights and necessary livelihood skills, as the causes of their economic backwardness: *“Bud-akil-hudis reak’ obhav”*, meaning lack of knowledge, wisdom, and self-belief.

Some parents responded that the highly educated sons and daughters preferred to live in towns and cities and avoided visiting their native villages. This phenomenon discouraged many parents to educate their children beyond a certain level.

The parents were not convinced of the appropriateness of the prevalent formal education. While about 60% children in the area attended school, about 60% out of them dropped out before class 10 (4.3.8). This indicated their perception of the (dis)utility of the prevalent formal education, presumably a sort of ‘synaptic pruning’ in their mind, i.e., eliminating irrelevant matters when making choices; meaningless level of learning (MLL) in PROBE (Dreze & De, 1999). Therefore, it is essential to align the basic and secondary school education with the livelihood and aspirations of the local people to enable them to achieve gainful employment indigenously.

Jean Dreze cited R.K. Narayan's description of the 'average child' which was heavily influenced by the urban middle-class view (Dreze and De, 1999). Adequate thrust had been given to 'right to education' but, adequate attention had not been given to 'what to teach'; the appropriate, meaningful, and relevant content of education.

Some indigenous intelligentsia called the prevalent formal education system "factory schools". In a webinar of indigenous intelligentsia from India, USA, and Canada, they concurred that such schools taught the children to undermine and underestimate indigenous values, identity, nature relatedness, local language, culture, and agriculture. Gladson Dungdung, an indigenous activist, citing the practices at most schools, said that "factory schools" prepared the children to undertake jobs with the corporates and the Government. He added that, thereafter as if designed, they could be uprooted from their land, agricultural occupation, and their identity to make ways for mines and industries in tribal areas.

5.2.3 Inadequate skill adaptation or adaptability: Besides agriculture, the local tribes possessed quite a few livelihood skills, such as, animal husbandry, carpentry, ironsmith, bamboo crafts, herbal medicines, house making, etc. But these skills had not been improved and adapted to present time, e.g., systematic method of raising livestock, veterinary care, bamboo craft, masonry, upholstery, understanding the demands of the market, etc. Most of the households raised livestock; 2-3 cattles, goats and pigs. But none showed efforts to upscale their livestock with commercial intention. On being asked, "why don't you raise a greater number of livestock?" some replied, "They die en masse, and we do not know the medicines".

Dr. Stephen Soren, a veterinary doctor said that vaccines for livestock were easily available at an affordable price, and they were easy to administer, such as, vaccines

against PPR, FMD, Pox for goats, vaccine against Ranikhet for poultry, and vaccine against hog cholera or swine flu. The knowledge of these vaccines and their schedule can easily be disseminated among the farmers. But unfortunately, the people did not possess this information.

Awareness and advancement of such skills would enable farmers to earn more than the present level of income. For instance, sericulture in the area provided 'extension education' to the farmers and conducted periodical workshops. Such training and extension education in other agricultural activities could also effectively enhance and update their skills. But no serious and organized efforts by any agency were visible to upgrade and adapt farmers' income generating traditional skills, knowledge, and artisan aptitudes to present day demands and markets.

The prevalent formal education system appeared to be under the influence of Intellectual Imperialism. Urban oriented formal education system and the mainstream material prosperity appeared to have conditioned the local people to underestimate agriculture as a viable and a sustainable livelihood. Prolonged poverty, deprivation, and hopelessness appeared to have pushed people to maladaptive behaviour, mainly to alcohol abuse. Nevertheless, success in sericulture had demonstrated that change in behaviour was possible. It is important to believe in change. Persistent endeavour over a period of 12-15 years in sericulture had helped and motivated the farmers to achieve a respectable income (5.3.1).

5.2.4 Dearth of organized market linkage: There was a dearth of organized agricultural marketing. "An efficient system of marketing is essential for the economic development of a country. ... Well organized markets will encourage even the small farmers to turn out marketable surplus" (Reddy, 2012).

The agricultural produce did not have an organized whole-sale market linkage in the area. The farmers sold their agricultural produce, including livestock and meats in local market, *hatia* on retail basis. Some social workers reported that a few traders in goats and *desi* chicken had formed a buyers' cartel which dominated the market prices forcing the farmers to sell their livestock at much understated price. Anuraj Tudu, a qualified graduate who had started a pig farm in his village Nawadih, said that scaling up agricultural produce had direct correlation with an organized market, which was much awaited. Development of clusters of similar economic activities shall facilitate marketing and reduce operational costs.

Sales growth of the agricultural produce was limited without developing wholesale market linkage or an organized agricultural marketing with remunerative prices. The development of an organized agricultural market would induce farmers to undertake income generating agricultural activities (Gadgil & Guha, 1995). The farmers would eventually understand the dynamics of the market and learn to respond to the demands of the markets. For instance, the Central Silk Board of India, PPC, Jharkhand and PRADAN had facilitated marketing in sericulture, in a wholesale scale. As a result, the farmers had augmented their produce in the last 10-12 years. Gadgil & Guha (1995) in "Ecology and Equity", stated that with increasing penetration of the market, the sizes of resource catchments of local communities were rapidly expanding.

Research article by the researcher in IJRAR, *Unleashing Rural Economic Potential by Developing Agricultural Marketing*, 2019 IJRAR May 2019, volume 6, Issue 2, emphasized that developing organized agricultural market would induce more agricultural production. Inadequacy of agricultural marketing or inadequate thrust on

it had been the major cause of economic backwardness of tribal areas, which otherwise was endowed with abundant natural resources. The researcher viewed agricultural marketing as the main driver of economic development.

5.2.5 Weakening of social institutions or social capital: Disintegrating social cohesiveness, decadence of traditional leadership and unorganized community were a matter of concern. “Social capital as a resource, has a critical role to play in rural circumstances” (Reddy, 2012). A basic lesson, we learnt in our early school days was that family was the first unit of a society and the first school. But this basic lesson had been ignored often. Padma Shri Simon Oraon reiterated the value of family cohesion. He said that the family should sit together more often and discuss family issues, budget, education of the children, etc. The women respondents were a little reserved to speak frankly when their men were present. Nevertheless, they conveyed a few important feedback; a) Men don’t listen to their women’s advice, especially “Don’t drink too much and anytime”, b) Men didn’t co-operate in the household chores including caring for the babies, c) Men did not give correct account of their cash income from daily wages to their wives, d) Men did not sit down with their children and family to discuss family matters. Generally, there was no practice of planning for a better future in the family.

The people said that their grandfathers were healthier and had better immunity against diseases. In the preceding generation, the people enjoyed a better community living, dancing, and socializing in festivals and marriages. They were more abiding by the laws and the customs. There was more cooperation than competition. Their needs were bare basic minimum and so their dependence on outside world was

limited. They worked hard and used alcohol occasionally and in social groups. They adhered to the family and social values. Their social cohesiveness was stronger.

Generally financial planning and budgeting were not evident in the households, except some budgeting for marriage, *bhandan* (a ritual after death) and festivals. It was done mainly by storing food grains, raising some goats and pigs, and collecting firewoods for the occasion.

The spirit of community development and social capital had deteriorated. Mead (1937), a noted American cultural anthropologist had observed among around 12 tribal communities of New Guinea that they had moved from cooperation to competition over a period. Urban orientation and migration of labourers to other states had further aggravated family and social cohesiveness.

5.2.6 Ineffective Leadership [traditional, political, civil society (Public Action)]

The leadership may be divided into three categories: traditional, political, and civil society.

Weakening of village leadership: Village leadership had deteriorated over the years. It had become visionless, inactive, and ineffective. The village community looked unorganised. This unorganised status of the village had multiple adverse effects on their socio-economic life. For instance, farmers could not undertake the cultivation of vegetables in non-cropping season because of the system of '*arak' gidi din*' (untended grazing of domestic animals in non-cropping season). Some members of the village did not trust the judgement of the *Panch*, leading to social disintegration. Seemingly, the society had moved from co-operation to competition and even to jealousy (Mead, 1937).

People reported that the system of untended grazing of domestic animals in non-cropping season had discouraged them to undertake vegetable cultivation. They had no fenced farms. Some village leadership had stopped such practice of '*arak' gidi din*' in the neighbouring villages, e.g., Pandan, Ero and Rajbandh where people could cultivate vegetables. In Ahmednagar, Maharashtra, rural development led by Anna Hazare in Ralegaon Siddhi and Popat Rao Pawar in Hirve Bazar, motivating people to stop untended grazing of domestic animals, was among the first steps.

The role of the traditional leaders, *More-hor*, the Panch, looked reduced to only officiating and witnessing social and religious functions, birth, marriage, death, and the festivals. Reportedly, no meetings and discussions for improving the management of village and quality of life, were held. None of the Heads (*Manjhi*) of these three villages appeared to command respect in general. The *Manjhis'* interest was limited to taking benefits of the honourarium arable land (*Man*) and the monthly stipend of Rs.2000/-.

The *Panches* of the three villages generally felt that the traditional self-governance system had been sidelined by the Panchayati Raj system, although not excluded. The system of election brought in a sense of competition and politics leaving behind the wounds of defeat. In the village level, the *Mukhias* were generally perceived as extension of power-hungry and money-hungry (percentage) system. The lack of a visionary and an acceptable leadership added to the woes of weak unity in the villages. The elders of the villages reported weakening social order and discipline.

The prolonged BPL (50%), underweight children (61%) and HDI (0.467) were adequate to indicate the neglect of the area. The people could not recount any political leader who had shown concern or discussed issues relating to poverty

alleviation and employment generation. The sitting MLA of the area has been in active politics for over 35 years. He lived in Kathikund. He was reportedly accessible at his residence. But the people could not recount any development initiative taken up by him in the area. The respondents did not know the name of the sitting M.P. from Dumka, nor any development activity initiated by him.

The native emerging educated and the affluent people appeared disconnected from their villages. The people with salaried jobs, talented and the capable, associated village life with “backwardness” and viewed urban life as “land of opportunities”. They preferred to live in Dumka or in towns and cities. This trend depleted local intellectual pool and added to the misery of ‘brain drain’. Overall, dearth of a constructive leadership in the area was a concern.

5.2.7 Ineffective Governance and non-alignment of policies with local conditions:

The people reported prolonged neglect of the area, particularly in the areas of agricultural infrastructure. The farming in Jharkhand largely depended on rainfall, 82% of which was concentrated during Khariff season (June to September) and on the vagaries of the Monsoon. Water scarcity, lack of irrigation and watershed management despite JHALCO, central assistance under AIBP and coverage under Rural Water Supply and Sanitation Project (RWSSP), indicated ineffective governance and deficient implementation of the Government projects.

Singh (2009), HoD, Department of Economics, Ranchi University wrote in Jharkhand Journal of Social Development, “It is a pity that there has not been any perceptible improvement in the economic condition of the people and rural infrastructure such as irrigation, water harvesting, rural connectivity and

communication, storage & marketing, etc. due to ill-governance, political instability and corruption”. He also reported that Jharkhand had been receiving central assistance for 6 irrigation projects under Accelerated Irrigation Benefit Project (AIBP) programmes. But no such initiatives were reported by the people in these three villages. Dreze, Khera and Siddhartha (2017) reported about the fudging of muster rolls in NREGA, “In Jharkhand, detailed muster roll verification of NREGA works in five randomly selected gram panchayats of Ranchi district suggested leakages of around 33%” (Drez, 2017). Sanjay, Meena and Alam (2018) also enumerated the problems in MGNREGA, mainly, lack of proper planning, supervision, capacity building, people’s participation in decision making, absence of a social audit, and persistence of venality and corruption.

Administration: There was no system of taking note of the peoples’ problems by the Block officials nor had the people any habit of apprising their problems to the block officials. Prolonged suffering under various problems had numbed positive thinking of the people. “Poor performance in the past on development has been attributed mainly to administrative deficiencies” (Gaekwad, 1975).

There has been indiscriminate introduction of modern agriculture – fertilizers, chemical pesticides, and hybrid varieties. Use of fertilizers and pesticides was conditioned (imposed) replacing traditional organic farming. High yielding hybrid crops were promoted instead of native nutritionally suitable crops. “The farm crisis is reported due to high input costs, lowering of water table, degradation of soil fertility and unrewarding pricing mechanism” (Reddy, 2012).

Panangatt (2012), critically appraising the development programmes stated that they were grandiose, “... more rhetorical than real”. “The development assumptions,

concepts, and principles are often taken from other cultures which are quite different from tribal culture” (Panangatt, 2012). He added that there was a need for mobilizing the existing resources within the community.

Lack of co-ordination among various government departments and agencies:

There was a lack of co-ordination between block officials and the forest department. These two departments appeared to operate in silos which was detrimental to constructive outcomes. Regarding the watershed management, the block official explained that the suitable land belonged to the forest department. He also explained that check dams were not constructed because they had failed due to siltation in the neighbouring areas. A few others explained that those check dams did not have exit gates. Explaining the problems prevailed over making efforts to find solutions to the problems of the area. There was no adequate co-ordination between Block officials and the members of Panchayat samiti and Gram sabha and other agencies. There was no system of liaison with the forest department by the village administration and the block officials. “... there is lack of definitive interface between the Panchayat system ... and the delivery system ...” (Bhuria, 2004).

The people reported that the Block officials did not visit villages regularly. The meetings of the *Manjhis*, village heads with the Block officials were not held at regular interval. Even when meetings were held, there was no system of following up the ‘action taken report’. “There are severe irregularities in convening meetings of the Gram Sabha, due to which it has failed miserably in identifying the development needs of the village” (Sanjay, Meena, Alam, 2018). The local artificial insemination centre appeared rented out for residence. Block officials could not tell of any effective system of co-ordination among various agencies and administration.

Non-alignment of policies with the tribal life and conditions: Pond, *Dobha*: The Block Agriculture Officer said that they had schemes for '*Dobha*' meaning 100 feet x 100 feet size pond in private lands of the farmers. But the farmers did not approach the Block for such *dobha* or ponds. Lakhan Kol of Asanpahari said that the farmers were sceptic about the ponds because the ponds' water did not last beyond February. It was neither useful for irrigation nor for fishery. It wasted their limited cultivable landholding. Besides, most of such private landholdings were not situated in the water catchment area.

Mukhya Mantri Janvan Yojna: It is a tree plantation scheme in the private landholding of one acre. It had 75% subsidy. It was feasible only if people had sizable landholding, e.g., Parmeshwar Singh and Basudev Singh of Chandopani had taken the scheme. But this study found that the average landholding of one household was one acre only and that too was scattered plots. Besides, such plantation promoted commercial trees, such as, teak, mahogany, sishu, etc. The tribes generally planted trees for fruits, greenery, utility leaves and shadow; not for cutting and selling. "The Forest Department's programmes of commercial timber harvesting have seriously undermined local subsistence economy" (Gadgil & Guha, 1995). Further, the local people restrained from planting trees in their private or *Khas* land because they apprehended that the Government could later declare and convert such lands with trees into forest land.

High yielding seeds and exotic varieties of livestock: Some time ago high yielding seeds, mainly of rice was promoted. But they failed reportedly because, they demanded higher input cost, fertilizers, pesticides, and water. However, *Sorna* variety had been a success which was more suitable to the local conditions.

Similarly, some exotic variety of goats, pigs, poultry, Jersey cows, etc. were distributed, but they had not succeeded because of their non-adaptability to the local conditions. Even ‘green revolution’ had conditioned people to adopt high yielding seeds and chemical fertilizers which had resulted in pollution of soil, water, and destruction of indigenous biodiversity (2.4.4).

The local people in general were reluctant to use fertilizers and pesticides. They preferred organic farming, and which was advisable to promote. A few studies mentioned disadvantages of green revolution which were acknowledged by the Rio treaty in 1992 (2.4.4).

Big Tractors: There was subsidized financing for tractors. But the local people could not manage them because of i) cost involved in maintenance and a lack of mechanical skills, ii) fragmented land holding of the farmers, iii) heavy monthly instalments (EMI) while they were unable to make its profitable alternative use. May be, a smaller tractor or hand tillers would work better. Otherwise, the people were more comfortable with the traditional oxen-driven plough whose maintenance was self-reliant and the livestock were part of the economic chain, feeding on by-products of the crops. *Chakbandi*, meaning consolidation of landholding was likely to facilitate better farming.

5.2.8 Environmental degradation: deforestation, low underground water table, and soil pollution

There had been a rapid deforestation in the last few decades resulting in large scale depletion of fauna and flora. This had a cascading effect on the life of the people. For the local tribes, forest had been a vital common property resources (CPR): source of food, fruits, feed, and livelihood. Minor forest products had deteriorated.

De-forestation and absence of water harvesting had caused lowering of the ground water table (Ground Water Information Booklet, 2013). Many streams had gone dry, and perennial rivers had turned rainfed rivers.

The local people had also lost the good habit of planting trees. Instead, some cut trees and sell them as fire-woods and logs in the market in the non-cropping season. The people made no efforts on their own at the village level for water harvesting. They thought it was the work of the Government only. Some did not cooperate with afforestation efforts of the Government, fearing that such land could be declared as forest land by the Government and therefore, their right (CPR) to the use of the land could be restricted. The adverse impact of chemical fertilizers, insecticides, and hybrid seeds is discussed in paragraph 2.4.4.

Gadgil and Guha (1995) in “Ecology and Equity”, referring to the forest debate, have underscored the importance of forest that all segments of Indian society – peasants, pastoralists, tribes, slum dwellers, and industries, have a heavy dependence on the produce of forests, as the source of fuel, fodder, construction timber, industrial raw materials, etc.

5.2.9 Diminishing Indigenous Self-reliance:

The people of these three villages had been mainly agriculturalist. They grew their own food and performed most of the activities by themselves. They had a good practice of raising livestock, planting trees for fruits, kitchen gardening, carpentry, knowledge of herbal medicines (for jaundice, epilepsy or *mirgi*, snake bites and many other ailments), and many more. But unfortunately, people had either discontinued these self-reliance habits or were practising them casually. Above all, the people had nearly lost confidence in agriculture as a sustainable livelihood.

Albert Murmu of Asanbani called the livestock, “*Pariwar* bank” meaning a ‘family bank’. The people resorted to these (sale of) livestock to meet expenses during illness, marriage, and other contingencies. Their current earning out of livestock ranged between Rs.8,000/- and Rs.20,000/-. This study explored how these existing indigenous practices could be made more organized and scaled up.

On being asked why they did not keep a greater number of such domestic animals, their replies were: a) They were not confident to take care of the livestock during epidemics when they died en masse, b) It was difficult to tend to them or graze them. It required full time manpower. They did not have tradition of fenced farms, c) The children attended schools. “*Teacher bacche chin lete hain*, teacher snatched away our children away. Who shall tend to our cattle and goats?”, observed Padma Shri Simon Oraon, d) They did not have the tradition of commercial raising of animals on a large scale. The same perspective of the farmers was reported in PROBE report by Drez and De (1999).

5.2.10 A vicious circle: loss of confidence in agriculture; low productivity of land, poverty, lack of capital, hopelessness, alcohol abuse

Quite a few respondents, especially women, stated that alcohol abuse, laziness and lack of progressive thinking were their major weaknesses as well as the causes of poverty. But the researcher felt that it was a subject of scrutiny if they were causes of poverty or consequences of poverty and ‘Learned helplessness’. It was desirable to delve deeper and examine whether in fact the reverse was plausible, i.e., poverty and ‘faulty’ behaviour of the people had resulted from their socio-economic marginalisation. The compounding effects of regular crop failure, low productivity of land, and urban oriented education system had made people lose confidence in

agriculture, although agriculture continued as their main occupation. Their native knowledge and skill in agriculture were still reckonable, which needed reorientation and reinforcement. When agriculture weakened, farmers became dependent on the external world.

Most men admitted to alcohol use. It was rare to come across a man who did not drink. The underweight body of some men indicated alcohol over-use. Whoever looked busy had good health and participated in the interview actively. But people with weak and frail bodies looked idle, clumsy, non-responsive and lacking self-respect. Sometime, a couple of men secretly asked the researcher some money before he left. One woman narrated that her son had got addicted to mobile set. He did not study nor work. He even beat her sometime if she gave him food without non-veg. The woman showed some bruised marks. She said that her health had deteriorated because of working the whole day at home as well as in the field.

The menfolk admitted their laziness, idleness, and inefficient use of time. The children were straightforward in answering the question, “What are the reasons for poverty?” a) People do not work, b) The men sit idle. “*Durup’kok’a ko*”. c) They drink untimely. The men admitted failure to think constructively and progressively: saying “*Bud-akil-hudis reak’ obhao*” meaning lack of knowledge, wisdom, and self-belief. Assumably, this dearth had compounded and accumulated over the years. It had numbed their abilities to solution-oriented thinking. They could not dream big or better, presumably because they could not see what was big, better, or possible. Such prolonged experiences and conditions had probably disabled their urge for taking initiative and had inhibited their entrepreneurial attitude and aptitude.

Diversification and transformation of indigenous agriculture and services, from subsistence to commercial, showed potentials to break this vicious circle, ‘poverty trap’ and ‘low-level equilibrium trap’. Sen and Dreze (1989) referring to Eldredge and Rydjeski (1988) stated, “So-called subsistence cultivators should not be seen as consuming only what they produce nor producing only for their own consumption”.

5.3 Identifying some indigenous economic potentials of the area for transforming them from Subsistence to Commercial Agriculture: Quite a few factors made it imperative to introduce commercial agriculture in the area, such as, low productivity of land, small and reducing landholding of the farmers, increase in needs and aspirations of rural areas (e.g. education, health, communication, and desire for other modern comforts), needs and demands of the external/larger market and above all, the enormous potentials of the indigenous crops, resources and skills. This economic transformation would help integrate the farmers with the global foods and goods chain as active contributors to the GDP. This will bring cash inflow from the external world to the rural areas and free people from ‘welfare trap’, ‘poverty trap’ and ‘low-level equilibrium trap’.

The following table comprised some indigenous crops, fruits, trees, and livestock which had the potentials to transform from subsistence to commercial produce at a reasonable scale. Some of these products find a mention in NABARD’s *Potential Linked Credit Plan for 2020-21: Dumka District* (NABARD, 2020). The following list, however, is indicative and not exhaustive.

Table 5.1: Identifying some indigenous economic potentials of the area

Produces, Group	Gestation Period	Current price per KG/litre	Utility and Demand	Comparative Advantages
Turmeric Spice Cash crop	5 months	Rs.200/-	Eatable Medicine Beauty products	Moderate water Muti-cropping Not perishable

Chilli (dry) Spice Cash crop	5 months	Rs.200/-	Home use Spice-industry Pickles	Moderate water Not perishable Many varieties
Mustard Cash crop	4.5 months	Seed – Rs.40/- Oil – Rs.110/-	Cash crop Leaf vegetable	Rabbi Moderate water Not perishable Waste is a fodder
Baby corn Food Cornsilk	4.5 months	Rs.300/- retail Rs.120/- wholesale Rs.300/- dry	Cash crop Cornsilk is a by-product. It has medicinal value	Khariff& Rabbi Moderate water High-end market Plant is a fodder Cornsilk can be sold dry also
Kheksi, Kantola Spine gourd, (Momordica dioica)	4.5 months	Rs.150/- local market	Potential cash crop. Daily vegetable	Moderate water Tasty local variety Non soil farming Possible in limited land space and Multicropping
Custard apple Fruit <i>Mandargom</i>	5 months	Rs.300/-	Home use. High end market	Dry area Little Moisture Native variety is very sweet
Jackfruit One tree can bear fruits for at least 50 years	3.5 months Annual seasonal fruit,	Rs.250/- per piece normal size Rs.100/- pr kg The tender ones	Home use Urban market	Easy to grow. A grown tree can bear fruits for many years. Leaf is a fodder for goats
Pig rearing Livestock	One year	Local:Rs.150/- Cities:Rs.250/-	Home use Cash produce Support in Contingency	Sukhikheti Less input cost Many varieties High demand
Goat rearing Livestock	One year	Local:Rs.600/- Cities:Rs.700/-	Home use Cash produce Support in Contingency	Sukhikheti Less input cost High demand Caste and religion agnostic
Floriculture, local flowers	Marigold, 'genda' & many other seasonal variants,	Variable	Cash crop Regular use in temples and churches. Office & event management	Moderate water All seasons Demand increasing
Apiculture Bee keeping	4 months	Rs.500/- per KG	Cash crop Health product	Negligible input cost but dependent on flowers
Horticulture Mainly vegetables, Seed collection and Nursery	Seasonal Variants, 4 months average	Rs.20/- average for vegetables Other prices: variable but profitable	Regular Home use Essential food item Cash produce	Moderate water All seasons High demand for local varieties and organic

Broccoli	Can be grown through the year	Rs.100/-	Commercial crop	High end market Moderate water
Trees and decorative plants, Nursery	Through the year	Variable	Commercial venture	High end market Can be done in a small land area
Papaya	Almost throughout the year	Rs.100/- raw Rs.200/- ripe	Home use Nutritious fruit Cash crop	Low input cost Ripe fruit Raw for vegetable Short gestation and long bearing
Jute Jute seed Cash crop	4 months	Variable	Cash crop Rope and fibre Sacks and bags	Moderate water
Bamboo crafts Growing Bamboo tree 'Miracle grass'	Ongoing after 2-3 years of plantation	Rs.80/- per mature tree. Tender shoots for pickles	Crafts, daily use items Variety of baskets Poles, Furniture Firewood Miscellaneous use e.g. Bamboo India	Negligible water Negligible care Multipurpose use including as firewood. Many varieties. Can be grown in wasteland.
Terracotta Pottery	Availability of soil	Variable	Home use pottery, decorative show pieces, terracotta arts	Natural Affordable Eco-friendly Healthy

Source: Field Survey, 2018

The potentials of these agricultural produce had been identified based on their indigeneity, low input cost (of water, fertilizer, and cold storage), relative non-perishability, demands of the high-end market, high value price, and regular demand. The local people possessed the required skills. But inadequate market linkage of these agricultural produce and lack of awareness of the demands and prices of the larger market, had hindered the people to optimise technology, the natural and human resources in/of the area. In most of the farm produce, there are certain varieties and breeds which fetch higher price, also because some species possess medicinal and immunity enhancing properties. The farmers could eventually explore such varieties and breeds and farm them.

For instance, **baby corn** was sold at Rs.35/- per 100 grams in retail market in a city like Mumbai, Delhi, Kolkata, Chennai, etc. But the people of Kathikund were not even aware of that baby corn was a delicacy in the high-end society (market) in cities/hotels.

Full grown maize with cob, sold at Rs.5/- per piece which meant Rs.50/- per kg in the local market while baby corn sold at Rs.300/- per kg in retail markets in cities. If procurement price from farmers could be settled even between Rs.150/- to Rs.200/- per kg, such wholesale remunerative price could fetch a farmer around Rs.20,000/- in 4 months in the present capacity of production. Further, maize could be cultivated twice a year. Cornsilk also had assumed popularity for its medicinal property like dry cornsilk tea.

Similarly, **chilli** and **turmeric** had been cultivated regularly in the area. But very few households cultivated it with commercial intention. The green chilly sold at Rs.100/- per kg while the mature dry chilly sold at Rs.200/- per kg in the local market. The local variety of chilli is hot and tasty. Chilly and turmeric had great demands in spice market. Besides, turmeric, with its medicinal properties was in high demand in beauty (products) industry also.

Mustard (oil): Mustard oil was the staple oil of the region and North India. It possessed a great scope to become a commercial crop in this area. Its bye-product (Chaff) was a nutritious fodder for livestock. In fact, it was a commercial produce during the British Raj, even before Santal Hul of 1855, along with several other oil seeds, rice and *bora*, beans (Datta, 1970).

Broccoli: Vegetables like broccoli have high end markets, including export. In the tribal areas of Jharkhand, it is convenient to grow it with organic compost and through the year. Organic broccoli would fetch a good income to the farmers.

Goat rearing: Goats were raised for meat (mutton) which incidentally was caste agnostic as well as religion agnostic. It had a high demand, and it fetched a high price. An average local full grown *khassi* (castrated he-goat) weighing 15-20 kg could easily fetch Rs.10,000/- in the wholesale market. If raised with commercial intention, one household could raise 10 *khassi* a year and could earn around Rs.100,000/- which was a handsome additional income at the current price (2019). There are some Indian commercial varieties of goats who weigh around 40 KG. Eventually, such breed of goats could be promoted.

Pig rearing: Like goat rearing, pig rearing could fetch a handsome earning in the area. A full grown local *badhia*, castrated male pig, weighing 30-40 kg sold at Rs.5,000/- (Rs.150/- per kg cut meat in the local market); meaning a farmer could earn around Rs.50,000/- if he raised 10 pigs a year. Pork was a favourite delicacy among the local people. It was an excellent source of essential nutrients, vitamins, and minerals, including thiamine, zinc, vitamin B12, vitamin B6, niacin, phosphorus, and iron. It was a nutrient rich food for poor people at a relatively low cost. Local pigs eat most waste food and vegetables and were known for their robustness to survive in difficult conditions. *Jharsuk* breed of pig, developed by Birsa Agricultural University, Ranchi can weigh above 80 KG in a year.

Leaf plates and cups: Leaf cups and plates have been traditionally and widely used. They are the best way to replace plastic and thermacol plates and cups. They are

harmless, unlike thermocol and plastic, and are biodegradable. Sal and Palas tree leaves were the most suitable and were still available in abundance.

Similarly, **Oal or Suran (Jimikand or Yam)** for pickles, Jute for rope and seed, floriculture, apiculture, horticulture (fruits, vegetables, flowers and ornamental plants, nursery), Custard apple (*Mandargom*) have great commercial potential.

Indigenous artisan products: Cane crafts and bamboo crafts, baskets, pottery, ironsmith, woodcraft, date palm-mats and brooms are traditionally used and useful. Jharkhand government had taken initiative to promote bamboo products, but it was yet to pick-up. Yogesh Shinde of Pune, 'Bamboo India' had started replacing plastic products with bamboo products, such as, toothbrush, plates, spoons, earbuds, etc. and has helped farmers to increase their income. Clay pottery or terracotta had been a tradition, but its repositioning in the area had not been explored yet. Teli community possessed traditional knowledge of crushing mustard oil (ghani/kolhu). Upscaling local production of mustard oil can induce upscaling of mustard cultivation which is not water intensive.

In the **services sector** too, repositioning thereof could earn a handsome money, e.g., hair dressing (Nais) could transform into modern saloons and beauty parlours and drummers (Doms) could upgrade their art into band party. Tribes were adept at house building and repair. They could transform their skills into advanced masonry. A local ironsmith (Rana) had transformed his traditional occupation into a thriving welding business in response to growth in house construction in Dumka.

Herbal medicines: Herbal medicines in the area was established, popular and well documented, e.g., '*Studies in Santal Medicines...*' by P. O. Boddington. Although these days its knowledge was limited to few people, it had not died out. In a nearby

village, Ranga, a tribesman successfully treated people for diabetes, blood pressure, jaundice, piles, etc. In the long run, promotion of herbal medicines could be beneficial for all.

Establishing Agricultural Market: The village markets could be developed as hubs for bulk buyers of agricultural produce. Dumka hatia and Tin Bazar which were old and large *mandi*, marketplaces of Dumka. They were important outlets for the local farmers and producers. Development of a *mandi* or Agricultural Produce Market Committee (APMC), in Dumka would bolster agricultural economic activities in the district/region. APMC is a marketing board established by the respective state governments. It could ensure safeguarding the farmers from exploitation by the middlemen, large retailers or cartels and control price spreads. The train connectivity from Dumka could be leveraged to transport local produce to cities and larger high-end markets.

Hijla Mela: John Roberts Carstairs, the then D.C. of Santal Pargana divisions started “His-Law” annual cultural fair on February 03, 1890, on the banks of Mayurakshi river and in the valley of Hijla hills, in the outskirts of Dumka, with an aim to bridge the gap between the local tribes and the British Raj in the aftermath of the Santal Hul 1855-56, to understand local traditions, customs and social regulations. This fair continues to be held in early February every year. The fair gives opportunities to the local artists, artisans, farmers, traders, and entrepreneurs to showcase their arts and culture and market their produce/products. The locale of Hijla provides a panoramic scenic beauty and a romantic view of the Sunset.

Multi crop plantation in a barren land in Jamua, Giridih: Fr. Stephen P.K., a social worker, transformed 7 acres of barren land and helped other barren

landholdings of the native tribes, into flourishing crop fields, much to the surprise of the local people, by experimenting with some indigenous as well as some non-indigenous crops with commercial intention, such as, turmeric, ginger, chilli, oal (yam), potato (alu and kurkka), tapioca, banana and planten, papaya, etc. These plants had responded well in this barren land with moderate water supply and modest organic compost manure. He mentioned that these crops had already attracted the attention of the local vegetable vendors and traders from the nearby towns. Such initiatives are the appropriate examples of progressive farming.

5.4.1 Sericulture in Kathikund: an effective initiative in Economic Transformation

Jharkhand is the leading producer of Tasar silk in the country. Sericulture has been practised in Kathikund area as a cash crop for over 60 years. In the initial years, it was an unorganized economic activity. People practised sericulture in the traditional way with the available species of silk, called *Sarihan*. The silkworm eggs were hatched in leaves by themselves. There was no organized market for the silk cocoons. The local traders or *mahajans* purchased them at a captive rate. Therefore, the income from sericulture was inconspicuous.

Central Silk Board of India (CSBI) entered the area in 1980s. It established an office in Kathikund near the forest Office Depot. It started adopting some villages. The first village they adopted was Sahritola in 1990. Later it adopted three villages: Asanbani, Asanpahari and Dhankuta. These villages were within 1-3 kms from the sericulture office in Kathikund. This initiative of the CSBI had quite a few teething problems. It took some time to convince the farmers to undertake sericulture with

business discipline and commercial intention. In the initial phase the income did not look lucrative.

Eventually, it employed trained staff and a scientist. It started a hatchery and a training centre. It introduced research and development. Before 1990, the farmers reared local *Sarihan* species of silk. The cocoons were small, and the threads were short. In early 1990 the Silk Board introduced a new *Sukhinda* species of silk which was found to be adaptable to local climate. Eventually by mid 1990s the farmers' earned an income in the range of Rs.2000 to Rs.4000. By 2000, the average annual income of the farmers improved to Rs.5000 to Rs.8000. In 2000, the CSBI introduced *Dababibi* variety of silk after some research and its acclimatization test. *Dababibi* produced bigger cocoons and longer thread. With the introduction of *Dababibi* the farmers' average annual income looked respectable at Rs.10,000 by 2010.

CSBI continued with research and development. It ensured distribution of quality healthy seeds. It did an aggressive testing of the health of the caterpillars. It also started washing silk eggs with medicated gel. These efforts improved the production of healthy worms from 50% to 90%. It conducted regular training. It managed and supervised the farmers in the adopted villages. It gave them silk eggs on credit. It purchased the entire silk produce/cocoons of the farmers at the Government determined price, Rs.2/- (first crop) and Rs.3/- (second crop) per cocoon. Over the years CSBI also had been periodically enhancing the price of the silk cocoons. The payment was made directly to the bank accounts of the farmers.

As a result, in the recent years (2018 and 2019) the average annual income per farmer in these three villages had risen to Rs.24,148/- which amounted to 38% of the

farmers' total sources of income. It had two crops in six months. The first season of silk farming started in early to mid-July and was harvested in 30-35 days. The second season started in mid-September and was harvested in 45-60 days. The second crop cocoons were said to be better as the worms got more time to cocoon and early winter was said to be more suitable for better cocoons. Some farmers touched an earning of Rs.75,000/- (Sanatan Murmu, Asanpahari) and Rs.85,000/- (Harinarayan Grihi, Asanpahari) in six months.

Government of Jharkhand also set up a full-fledged Pilot Project Centre (PPC) in Kathikund for hatching silk eggs, training farmers and testing the quality of the silkworms. Although it did not adopt any village as such, it reportedly catered to 200 farmers in Kathikund block and the neighbouring Shikaripara block. The Pilot Project Centre was under the charge and supervision of a trained staff. PPC hatched eggs and supplied them to the farmers. It gave testing facilities to the farmers. It provided training and information to the farmers and finally helped them to market their silk cocoons as well as purchased their cocoons at the government supported rate (price). Shri Amit Kumar Mahto was the Project Manager. He reported an annual average earning of Rs.25,000/- per farmer in two seasons.

PRADAN, an NGO had been active in the livelihood support programme in the area since 1992. It had a full-fledged office near Kathikund *hatia*. Shri Rajendra Khandai was the Team Co-ordinator. It actively supported the people in sericulture – planting Asan and Arjun trees, providing silk eggs, timely credit, monitoring and supervision, and wholesale marketing of their silk cocoons. It promoted community institutions, SHGs and cluster development. These institutions promoted mutual learning, peer pressure and group dynamics. PRADAN held regular training and capacity building

programmes for the farmers and the nodal farmers. It had also trained some farmers to hatch silkworm eggs by setting up Basic Seed Production Unit (BSPU). PRADAN purchased the eggs from BSPU farmers and distributed it among the sericulture farmers on credit as well as on upfront payment. The Government had set up a Basic Seed Multiplication and Training Centre in Kathikund market area. The silk farmers had formed Ebhen Tasar Kit-utpadak Co-operative which facilitated seed distribution and information dissemination. PRADAN managed and catered to the farmers of Kathikund, Shikaripara and Masliya blocks. It also had started promoting poultry and goat farming. It made special efforts in afforestation.

Silk farming in Kathikund, involving people and ensuring their participation and stake, had been effective in supplementing the income of the farmers. Eventually, Kathikund had developed into a cluster for sericulture.

5.4.2 Success stories of sericulture farmers: The researcher interviewed 54 out of 60 sericulture farmers in the three villages which were adopted by the Silk Board of India. The average annual per farmer income from sericulture was recorded at Rs.24,148/-. There were approximately 110 households in the three villages. Some non-sericulture farmers who had other monetized farming activities, such as, goat farming, piggery, vegetables, seasonal fruits, and country liquor, were also interviewed. These farmers earned in the range of Rs.8000/- to Rs.20,000/- in year from these monetized activities. The bamboo basket makers (*Mahali*) made bamboo baskets on a regular basis and sold them in the village *hatia*. Their annual average per household income from bamboo products was around Rs.15,000/-.

A list of 88 households, including 54 sericulture farmers, their annual income in Rupees through sericulture and other monetized farming activities have been

furnished in Appendix 1. The factors of change in income of the farmers from sericulture and agriculture, and other farming was assessed with reference to 2009 and 2019.

5.4.3 Result for Objective II: Factors of success of sericulture in Kathikund

In this special case it is important to see ‘what has worked’ in the success of sericulture in Kathikund area. Sericulture had supplemented the income of the farmers with Rs.24,148/- on an average per farmer in six months. It, however, was not achieved overnight. The Silk Board of India staff said that they took 12-15 years of systematic persistent grooming and motivating the farmers to build their confidence in sericulture as a profitable commercial crop. Its success can be ascribed to the following factors:

i) Availability of required Infrastructure (hatchery, testing equipments, healthy silk eggs): All the agencies had established hatchery for silk eggs. PRADAN had trained some farmers to establish hatchery in their farms. PRADAN collected eggs from these farmers to distribute them among the other farmers. All the agencies have a department for research and development. They test and research on the quality of silk (eggs, worms, and cocoon). Silk Board of India changed the species from local *Sarihan* to *Sukhinda* in 1990 and then to *Dababibi* in 2010-12. In the hatchery, silk eggs were washed with a medicated gel before distributing them to the farmers. This process had increased the chance of healthy worms from 50% to 90%. There were testing facilities with microscopes in the sericulture office. It had increased the production of silk cocoons. Besides these, the agencies helped the farmers planting Asan and Arjun trees. PRADAN worked on general reforestation also. Similarly, tissue culture for other plantations and animal husbandry can be developed.

ii) Managerial support with professional aptitude: The agencies managing sericulture in the area deployed people with professional qualifications, training, and aptitude. The planning and supervision were in place. The field staff undertook timely monitoring, preventive care, and supervision. The success of sericulture has not been a big-bang success from day one. Silk Board of India came in 1990. In the initial years they had to work hard to motivate the farmers, research on the quality (species) of silkworm, do the market linkage at remunerative price, result demonstration, etc. They ensured direct involvement and participation of the people, direct stake of the people. Even today, the field staff call (follow up) and visit the farmers personally. The remunerative income to the farmers became visible in around 2002, i.e., nearly after 12 years of management efforts. The officials and the staff provided timely guidance.

iii) Extension Education and training: The agencies had been imparting extension education regularly since inception. They held regular workshops, training programmes and do hand holding for the farmers. Central Silk Board of India has a training centre in Dumka also. The extension education included improvement in farming activities, improvement in agriculture, systematic application of science to farming for improved productivity and market prospects. The “result-demonstration” is a corner stone in extension education.

iv) Timely and Affordable finance: The agencies extended credit to the farmers in a small way, i.e., by giving them silk eggs by way of advance. One pouch of eggs containing around 20,000 eggs was priced at Rs,1200/- each. The farmers took 1 to 3 pouches depending upon the size of their silk farms. This credit amount was not a burden to the farmers.

v) Market Linkage with a remunerative price: The agencies have ensured wholesale market for the cocoons of the farmers. They buy the entire cocoons from the farmers; the first crop at Rs.2/- and the second crop at Rs.3/- per cocoon. The agencies then sell them to onward value chain. This market linkage has achieved integration of sericulture farmers with the bigger and high-end markets. A smooth wholesale market linkage empowered the farmers to be sellers of indigenous produce to the external buyers.

vi) Timely and direct payment to the farmers' bank accounts of the farmers: Every farmer had a bank account. Timely payment was made directly to the bank accounts of the farmers. A respectable lump-sum handsome amount of money motivated the farmers and encouraged thrift habit among them.

vii) Spirit of Social entrepreneurship: Overall, the governments (central and the state), NGOs, and the support agencies have been working in the spirit of social entrepreneurship (seed, develop, grow, and return to society). They have been able to establish sericulture as a business model exploiting the local potential, involving the local people with their native skills and share the benefits with them. The entrepreneurs, the farmers and the people involved in the entire value chain had stake in the business. Social entrepreneurship and stake elicit commitment.

However, success in sericulture was not easy. It was a gradual process. Shri Suddhosatva Majumdar, the scientist at sericulture centre (CSBI), told that it took over 15 years to raise the annual average income level of the farmers to Rs.24,148/-. Motivating farmers to undertake sericulture with a commercial intention, research on the better variety (*Sarihan to Sukhinda to Dababibi*) and ensuring healthy silk eggs took time, demanded careful planning, and effort. CSBI had consolidated its

presence in kathikund by 2005. Then the average annual income of the farmers from sericulture was about Rs.4,000/- (as told by sericulture officials).

5.4.4 Justification for acceptance or rejection of hypotheses

From Table 4.3, it is seen that i) The facilities such as infrastructure, credit/finance, financial inclusion, market linkage and facilitation like training, monitoring, and management in Sericulture had led to improvement in the income level of the farmers. R-square of 0.864 and Adjusted R-square of 0.839 indicated a significant impact of independent variables on the dependent variable. ii) Monitoring, Infrastructure, Training and Market linkage provided in the sericulture are highly significant, indicating that these factors determined the improved earning of income among the farmers. iii) The improvement in the infrastructure, training, and market linkage (1 unit increase in the scale of improvement) can improve the income level of the farmers approximately by around 14-18%. Management of the project through constant monitoring can improve the productivity and quality of the products, which would lead to increase in the income level of the farmers by about 21% due to developed market linkage for these products. iv) Further, the line of credit/finance available for sericulture and other farming activities are also significant at 5% level and 1% level, respectively, which shows the importance of credit/finance in economic activities related to farming. v) Infrastructure and market linkages in the other farming structure are statistically insignificant, probably due to deficient infrastructure and under-developed markets for these products. vi) The p-value of the model, which is less than 0.05 indicated that the regression model was statistically significant and a fit model.

In Case Study (5.6.2) also, R-square of 0.84 and Adjusted R-square of 0.81 indicated significant impact of independent variables on dependent variables. The significance level of its independent variables was found between 5% to 10%. An R-square of 0.84 indicated that the regression was a good fit. The p-value / F-test (0.00) was significant. Therefore, both the null hypotheses are rejected, and the alternative hypotheses are accepted.

Hypothesis Ho1	There is no impact of organized facilitation of indigenous economic potentials on the income of the farmers.	Rejected
Hypothesis Ha1	There is a significant impact of organized facilitation of indigenous economic potentials on the income of the farmers.	Accepted
Hypothesis Ho2	The role of development actors is not a critical factor at the start-up phase for the success of SHGs.	Rejected
Hypothesis Ha2	The role of development actors is a critical factor at the start-up phase for the success of SHGs.	Accepted

5.4.5 Learning from Sericulture in Kathikund: Sericulture has been a traditional cash crop in the area. The people possessed the skill for sericulture. The forest already had Asan (*Terminalia elliptica*) and Arjun (*Terminalia arjuna*) trees, and the active agencies promoted plantation of many more of these trees. Asan and Arjun trees are called *Atnak* and *Kahwa* respectively in Santali. Initially the people engaged casually in sericulture. But the government and other agencies saw the business potential of sericulture in the area. The aforesaid support and guidance of the various agencies helped scaling-up the production. This subsequently increased the farmers' income as well as their motivation to undertake sericulture with a

commercial intention. Over a period, a cluster of sericulture had developed in Kathikund, which further facilitated cost-effectiveness and wholesale marketing.

Therefore, replication of such best practices, the “effective way” of the existing sericulture model could transform quite a few indigenous subsistence crops into cash crops, such as, turmeric, chilli, mustard, baby corn, custard apple, papaya, jute, piggery, goat rearing, floriculture, apiculture, horticulture, bamboo crafts (*Mahali*), artisan products, potters (*Kunkal*), textile industry and traditional services, such as, drummers, leather works (*Doms*), barbers (*Nais*), ironsmith (*Kamars*), massage therapy, herbal medicines, etc. (Table 1.3) in order to supplement the income of the farmers or rural people.

Other Government agencies, boards, and committees, such as, National Dairy Development Board of India (NDDB), Spice Board of India (Kochi), National Egg Coordination Committee-Poultry India, Jute Corporation of India, National Jute Board, Rashtriya Krishi Vikas Yojna, APEDA, etc. could explore promoting more agricultural produces and agribusiness following the best practices of sericulture in Kathikund (CSBI, PPC & PRADAN). Their presence would boost the economic potential of the area. It then would eventually facilitate financial institutions to extend credit to the farmers.

Central Silk Board of India could further explore the possibility of value addition locally, such as, threading and dying. It shall further increase the income of the farmers and would create more employment locally. Dr. Manoranjan Prasad Sinha, the then VC (2019), Sido-Kanhu Murmu University and a Member of Silk Board of India said that the farmers could earn more if they made value addition to the silk

cocoons locally, e.g., thread extraction, dyeing, spinning, weaving, etc. He added that the CSBI was working on this direction.

Shri S. Majumdar, the scientist at sericulture office of CSBI, added that they were developing some model villages along the Dumka-Rampurhat road as tourist attraction. It would increase the prospects of sericulture becoming more widespread as well as open avenues for export of silk and silk products.

5.5.1 Discussion I: Some experiments in Indigenous Self-reliance where desired results could not be achieved: causes thereof

Since last 50 years, some experiments had been undertaken in Kathikund area to transform some indigenous resources and skills of the farmers into commercial income, such as, *tendu* leaves for *bidi*, *pattar* (leaf-plates and cups), ropes from certain wild grasses, bamboo craft and animal husbandry – goat farming, pig farming, and poultry.

These experiments by entrepreneurs and the Government were yet to achieve a level of lucrative livelihood although people continue to practise goat farming, piggery, poultry and making bamboo baskets in a small scale. From the success of sericulture in the area it could be deduced that effective practices had not been adopted in these experiments. A few specific causes of failure of a few such schemes could be mentioned as under.

Rope making from a local wild grass: This scheme was implemented among the Paharia Adim Janjati (Tribe), Mal Paharia, Nakti, Kathikund. They were given manual machines in early 1970s to make ropes from a local wild grass. But it never took off because a) marketing was not ensured, b) lack of close supervision by

implementing agencies, c) eventually natural availability of the grass reduced and its plantation was never promoted, d) besides, deforestation had affected the natural growth of the grass adversely.

Bidi from tendu (*terel*) leaves: In early 1970s, tendu or temburini (*diospyros melanoxylon*) leaves were collected for making *bidi*. The local people collected leaves from the forest and sold them to the traders. But it did not sustain for long. The reasons, a) It did not fetch remunerative price, b) with the passage of time *bidi* had lost popularity vis-à-vis cigarettes, c) being a tobacco product, it did not get much support from the government, d) due to deforestation, tendu trees had reduced substantially. The people of Asanbani reported that tendu leaves were still collected and sold at Rs.2/- for 50 leaves. But it was done in a small scale.

Leaf plates and cups (*Pattar*): This still had a lot of potential. But it had not received organized attention of the government and agencies in the level of sericulture. Besides, it was fully dependent on supply from the forest. Depleting *Sarjom*, Sal trees had threatened the prospects. Otherwise, leaf cups and plates are the best eco-friendly bio-degradable substitute for the plastic and thermocol products. This scheme was likely to get an appropriate attention of the government and the agencies sooner or later.

Animal Husbandry: The government had provided subsidized finance through banks for goat farming, piggery, milch cows and poultry. But due to the lack of ownership and stake, business discipline, management, supervision, and organized marketing, they failed. They were treated more like welfare-oriented schemes rather than development schemes. Besides, in most cases, exotic breeds were provided for raising instead of those breeds who were adaptable to the local conditions.

Indigo cultivation during British Raj: During the early period of British Raj, *neel* or indigo cultivation was developed and imposed upon the local farmers by the East India Company in Santal Pargana also. By early 19th century England's 95% of total indigo import was from India. Indigo processing unit was called *Nilha-kothi*. Dye (shades of blue) was extracted from tropical indigo leaves (*indigofera tinctoria*). The dye was used to colour yarn and fabric, especially cotton (Denim blue jeans). There was a *nilha-kothi* in Koraiya, 7 kms north of Dumka beside Dumka-Pakur road. The remnants of the *nilha-kothi* could still be seen in Koraiya; the pond, water-lift house, and cemented water tanks. In this context, the relevant point to note was that if the British Raj could develop, produce, and export indigo dye as a commercial produce from Dumka district then, similar other commercial agricultural produce could be developed and marketed in larger or international market now also.

Cotton cultivation: Shri E. J. Soren, a retired civil servant, aged 82 years, told that there was a practice of cotton cultivation in Santal Pargana during the days of British Raj. Reminiscing cotton cultivation and processing, he recited a traditional song expressing emotions of a girl, "*Nayo tokay sutam, Baba ten' luman sari, Okoy ban neltin' bandey!*" (Mother made cotton thread. Father weaved silk sari. I wish someone's eyes fell on me when I wore them!). He also added that oil was crushed (wood-pressed) by the Santals by themselves, especially from mustard and mahua seed or *Kuindi*. (Datta, 1970).

Export of food grains and oil seeds from the area during the British Raj: Datta, (1970), in "Anti-British Plots and Movements Before 1857", recorded that there was a thriving trade of rice, bora (barbatti), mustard and several other oilseeds during the British Raj.

*“... merchants coming from Shahabad, Chaprah, Bettiah, Arrah and some other places, settled within the jurisdiction of the Damin-i-koh being attracted by the facilities available there for trade and money lending business. Barhait (situated about 13 miles N.W. of the Barharwa Railway Station, E.I. Railway Loop), ‘the capital town of the Hills,’ was in (1851) ‘a substantial village with large population and about 50 families of Bengali traders’: there was a good bazar there, where two markets were held a week. There was also a large tank, and Mr. **Pontet**, Superintendent of Damin-i-koh, had planted there a plot of ground with **potatoes**. From Barhait, large quantities of rice, bora, mustard, and several other oil seeds, were carried on bullock carts by many Bengali mahajans (traders and moneylenders) to Jangipur on the Bhagirathi, from which place these were conveyed to Murshidabad and eventually to Calcutta, ‘whence much of the mustard,’ carried from these hills, was ‘exported to England.’ In return for these grains, the Santals were paid in money, salt, tobacco, or cloth. Several Bengali grain-dealers, living in Kathikund (in the Dumka sub-division), bought mustard seeds and rice from the Santals, ‘but for a price far below its true value.’ They exported these grains to Suri.”*

5.5.2 Discussion II: A few examples of initiatives in indigenous self-reliance from some other regions of Jharkhand and India

i) Padma Shri Simon Oraon, Bero, Ranchi; He has been accredited for his excellent contribution to conservation of forest, revival of water bodies, fauna and flora and implementing co-operative farming in 51 villages in 50 years without much support from the government or any agency. He was a Parha raja, head of the area. He was also known as the waterman of Jharkhand. In his leadership they chased forest

officials because they witnessed large scale deforestation under them. Jotiba Phule also had made similar observations (Gadgil & Guha, 1995). The local villagers took over the direct care of the forest. Thereafter, wildlife, ponds, and water reservoir in 51 villages had revived. The availability of water encouraged farmers to cultivate throughout the year, including vegetables. He established a vegetable market for the villagers in Bero. The local administration took an opportunity to collect taxes, *chungi* from the vegetable vendors. He opposed the idea of tax collection from the local vendors and was eventually successful. He observed that the formal education system was not aligned to the aspirations of the farmers. “Education should also make better farmers and not repel people from farming” he said. He was dedicated to make farming a gainful occupation and a means of self-sufficient livelihood.

He also prepared herbal medicines. He advised people, “*Dekho, sikho, karo, khao aur dusron ko khilao*”. According to him, a clean heart, a clear vision, simplicity, and sincerity to contribute to common good are the qualities of a good leader. He was awarded Padma Shri in 2016.

ii) Anna Hazare: Kisan Baburao Hazare of Ralegaon Siddhi, Ahmednagar district, Maharashtra is a social activist. He is accredited to lead a movement for the establishment of Lokpal. He had dedicated his life to rural development, increasing transparency in governance, fight against corruption in public life and to organizing and encouraging grassroots movement through SHGs. He was awarded Padma Shree in 1990 and Padma Bhushan in 1992. His contribution was visible in reviving the village from a barren, poverty stricken and alcoholism to a now prosperous village. His first step to reform was water harvesting. He mobilised and motivated the gram sabhas. Eventually, he followed following fundamental approaches: a)

family planning, b) prevention of alcohol abuse, c) ban on free cattle grazing, d) ban on tree cutting and promotion of tree plantation, and v) voluntary work, *shramdan*. He reiterated that to build a prosperous India, it was essential to reform villages and attitude towards villages.

iii) Popat Rao Pawar, Hirve Bazar, Ahmednagar: Popat Rao led the village from a barren and poverty-stricken area to a thriving prosperous village. The village women had resorted to widespread liquor brewing and the menfolk had become liquor addicts. Their endeavour started with mobilising the villagers for water harvesting by *nalaband* and tree plantation. Consequently, the availability of water through the year enabled the villagers to start commercial farming, such as, vegetables, pulses, maize, floriculture, goat farming, poultry, dairy, etc. They introduced quality education for the matric failed students. According to him, co-operation among the villagers, no-politics, and right use of government fund, were the basic requirements for development. Now villages were clean. There was no alcohol abuse, no malnutrition, no migration to cities, and quality education till class XII was available locally. Eventually it won an award for a 'Model village'.

iv) Padma Shri Jamuna Tudu, Chakulia: She was popularly known as the "Lady Tarzan" for taking on the timber mafia in Jharkhand. She was an environmental activist. She had been working fearlessly since 1998 for the conservation of forest. She formed 300 Van Suraksha Samiti in 25 villages to create awareness "Jangal bachao abhiyan", to plant trees and to prevent illegal felling of trees around her village. She saved 50 hectares of forest from ravaging. She organized 10,000 women and motivated them to protect trees and wildlife. She introduced a practice of planting 18 trees on the birth of a child and 10 trees on the marriage of a girl. She

said, “*Jangal bachega to Prithvi surakshit rahega*”. She was awarded Padma Shri in 2019 for social work.

v) Smt. Chami Murmu, Bagraisai, Rajanagar, Seraikela Kharsawan: She drew motivation during a seminar in Potomda near Jamshedpur. Eventually, she organized women and motivated the villagers to plant trees in their barren and fallow land. In 1995 she received support from DRDA. She formed 2800 SHGs involving 30,000 women and planted 27 lakh trees in 25 years. The SHGs engaged also in goat farming, piggery, poultry, mushroom cultivation, vegetables, making (*murhi*) puffed rice, etc. thereby making many households self-reliant. She was awarded Nari Shakti Purashkar in 2020.

vi) Khelaram Murmu, Ghatshila; Khelaram Murmu was a farmer from Potka Block of East Singhbhum. He was an epitome of a progressive farmer undertaking commercial farming. He adopted drip irrigation. He had connected to e-business commerce. He was supported and promoted by the initiative and collaboration of Agriculture Department of Jharkhand Government, Abdul Hamid (owner of all-season farm fresh) and Agriculture and Processed food Products Exports Development Authority (APEDA). He got full support from a team of Sanjay Kacchap, Secretary, Agricultural Products Market Committee, Parsudih. He exported *bhindi*, ladyfingers to Dubai in addition to supplying them to the local markets.

vii) Soren Ipil power loom, Kathikund: Mrs. Joyce Besra and his son Mr. Alok Soren established a textile power loom in 2016 to produce *panchi-parhand*, a local Santal traditional dress (more like *mekhla-chadar* of Assam). It had employed 12-15 people. It had two sales counters. It supplied to the customers of Assam,

Bangladesh, West Bengal, Bihar, and other parts of Jharkhand. It trained its staff. It had hired an experienced designer, Ms. Sumi Hansdak' from Assam. It was in the process of expanding its products to *gamcha* and *lungi*. Soren Ipil power loom had made an initiative towards achieving self-sufficiency in tribal traditional dress, adding innovation in fashion and designs.

viii) Green Chilli Dhaba, Nakti: It was a humble journey of self-employment in last 12 years. Santosh Soren started a small food hut near his village in Shikaripara block. Eventually he made it bigger and purchased a land in the outskirts of Dumka and started this present food dhaba beside Dumka-Sahibganj state highway. He employed 7-8 cooks and service boys. His wife supported him attending to the customers. He reported a monthly profit of Rs.70,000/-. He supported his income through agriculture, vegetable produce, fishery and piggery in his village property which was about 25 kms from Dumka. He also owned two tractors which he let out to people on rent for carrying bricks, sand and ploughing in the cropping season.

Joel Marandi, another educated farmer of Kukurtopa, also made a respectable living by undertaking a grocery shop near Kukurtopa *hatia*. He also marketed his own agricultural produce. He had taken advantage of his roadside property by building a few rooms also to let them out to other vendors, like cycle repair *mistri* and a tailor.

ix) Jharcraft, Ranchi: It is a Jharkhand Government public sector undertaking. It was founded to promote sericulture, silk textiles, handloom, handi-crafts, terracotta, and other crafts and to revive the unique culture of the state. The state already had a tradition of sericulture, lac farming, bamboo crafts, making leaf cups and plates (from sal, palm, and other leaves), collecting and selling some minor forest products. These produce and crafts had intimate dependence on nature and environment.

Jharcraft attempted to tap the enormous cultural heritage of the local people, especially the tribes who had preserved them for long. It promoted tribal culture, tourism and markets for handicrafts, artisan goods, agricultural produce, and processed foods like pickles. It had established Jharcraft emporiums and sales counters across Ranchi.

Vision: “Jharcraft: a strong backbone of the Jharkhand state” with a mission of “Creating Opportunities and Changing Lives”. Jharcraft was viewed as a supporting unit of the state, contributing maximum to its social, economic, and cultural development. It could effectively, efficiently, and positively affect the lives of many people across the state. Cottage and household industries had the potential to become an important source of livelihood. Jharcraft aimed to provide not only employment but also opportunities to rise and grow by utilising the locally available resources. It paid attention to the local artisans and under-privileged section of the state so that they got maximum benefit through Jharcraft. Its achievements had been recognized by Jharkhand Times Impact Award, 2012 as the “Most admired State PSU”. It received a certificate of excellence by the Institute of Economic Studies (IES).

x) Mansukhbhai Raghavbhai Prajapati, the Potter, *Kumhar*: He hails from village Nichimandal of Morbi, Rajkot. He is an epitome of innovation in traditional pottery occupation. He repositioned and transformed traditional pottery into a viable entrepreneurship with innovations. He described himself as a “*mitti se juda hua admi*”. He dreamed of “*Parampara me sudhar*” adopting new technology and innovations. With pride and satisfaction, he said that pottery had transformed him from *zero to hero*; from a village potter to Forbes’ top rural entrepreneur, famous

rural innovator known for his earthen clay based functional products, such as, Mitti Cool (clay fridge without electricity), non-stick clay tawa, low-cost water filter, etc. He was the holder of the Indian patents for these products which boasted of high efficiency and eco-friendly products.

xi) Dairy farms in Ormanjhi: A few dairy farms had flourished successfully around Ranchi, particularly in Ormanjhi, namely, Medha dairy, Puresh dairy and Raya dairy. Their focus was to provide organic *desi* fresh milk with home delivery service. The outskirts space allowed the farmers to raise cows and bullocks in natural environment and to grow natural fodders.

They received organized support and guidance from Department of Animal Husbandry and Dairying (GOI Ministry of Fisheries, Animal Husbandry and Dairying), Dairy Entrepreneurship Development Scheme, Ministry of Agriculture, GOI, New Delhi, Jharkhand Rashtriya Krishi Vikas Yojna, National Dairy Development Board of India (NDDB) and Jharkhand Department of Agriculture and Animal husbandry in the areas of technology, research and development, training, extension education, finance, subsidy and veterinary care. They were directly supervised and guided by Jharkhand Rajya Sahakari Dugdh Utpadak Mahasangh (Jharkhand Milk Federation). They promoted milk collection centres, supplying mineral mixed feed and training farmers for cattle feed. Initially, Medha dairy had tied up with Sudha dairy. These dairy farms were managed by trained staff, equipped with state-of-the art technology and facilities. Jharkhand Milk Federation guided people in the management of fodder, silage or achar and ways to avail and take benefit of Government schemes. Shri. Rajendra Yadav of Latehar started Raj

dairy successfully. He converted his land property for dairy project and co-ordinated his other fields and ponds with dairy, growing fodders and recycling the wastes.

Jharkhand State Cooperative Milk Producers established 20 bulk coolers in two years in the area and developed cold chain with latest technology, especially for farther areas, such as, Ramgarh, for quality assurance: lactose, the natural sweetness in the milk. They ensured two times collection of milk; morning and evening. They developed systematic testing of milk, research and development, market survey and customer feedback, such as, leakage, weight variation, etc. Shri B. S. Khanna, the Chairman of Jharkhand Milk Federation reported a supply of 1 lakh litres milk per day. They were working towards a full milk self-sufficiency in Jharkhand. Krishi Darshan, a TV programme broadcasted information related to agriculture, new technology, natural pest control, natural feed and gave a daily price index of agricultural produce.

xii) Sona Santal Somaj Samiti, Kodma, Borio (Hidden Gold: a documentary produced by Fr. Vernard Antony, S.J.): The effort by this Samiti in Borio and Barheit blocks (Santal Pargana) and in the surrounding area, was a good example of a progressive initiative for socio-economic empowerment of the tribes. The documentary began with this key sentence, “In spite of having so much of land and energy to work, we still live in poverty”.

This Committee was formed in 1985 in the aftermath of the killing of 14 Santals including Fr. Anthony Murmu (1.3.4) in 1985, allegedly by the local moneylenders (*Diku/Mahajan*). The Samiti was formed by the local people under the guidance of Fr. Tom Kavala, S.J. and Sr. Ranjana of Holy Cross, with a view to organize the tribes economically, particularly, to free the farmers from the clutches of the local

moneylenders. In the leadership of this committee, they formed over 200 SHGs in 13 years with nearly Rs.80 lakh SHG deposits and they had been working actively till date. The tribes decided to stop taking loans from the local moneylenders by mobilising fund among themselves forming SHGs.

In the initial phase, the women faced a lot of pessimism and resistance from the menfolk who called their meetings “witches’ meeting”. But Sr. Ranjana and Fr. Tom encouraged the women to meet in groups, initially as solidarity group, sharing their difficulties and happiness. They trained 10-12 tribal educated women as animators, namely, Paku Tudu, Teresa Kisku, Reshma Marandi, Phul Soren, Veronica Marandi, Paulina Hembrom, Lalita Hansda, Dorothy Hansda, Talamai Marandi, et al. Eventually, the women started cultivating vegetables to avoid buying from the market, from the *Dikku* Traders. By early 1990s, formation of SHGs had gained popularity. They also called it “*Gogo Dol*”, women’s group. The women advised the village leadership to stop the system of un-tending of livestock because it was difficult and costly to build big fences. Gradually, the women involved their men in the meetings. Menfolk’s pessimism started vanishing and they began cooperating. They claimed to have achieved food sufficiency by 2005. They sent their children to schools as well as encouraged their children also to participate in the economic activities of the families.

Soon, the SHGs began diversifying their economic activities from producing vegetables to food processing, such as, producing puffed rice, beaten rice, sweets, and starting grocery shops, snacks shop, plants’ nursery, raising livestock, tailoring, etc. They sold their produce in the local markets which constituted 12% of the local market in 2013. Their produce sold fast because they were organic produce and

fresh from the farm. There was an increase in economic activities and awareness for thrift habits among the people through the SHGs. The women organized a Krishi mela annually near Borio to showcase and to market their produce. The mela also organized sports, entertainment, and awareness programmes. They also celebrated women's day on March 8 with vigour. They liaised with the BDO, DC and the MLA. They considered it an achievement to have acquired the courage to talk to the block and the district administration.

Prospectively, there was a need to expand their economic activities, scale them up, and integrate them with the larger/global market. They were happy to express that they could do things which they had thought they could not do. They were determined not to turn back. They were hopeful that they would be able to solve the problems of the country as well, after solving the problems of their families.

xiii) Dr. Sonelal Soren, Kusumdi, Dumka: He is a qualified doctor. He practised allopathy for some time. But he shifted to practising alternative medicines when he realised that the Ayurveda and traditional Santal medicine had potential to treat the root cause of diseases and not just the symptoms, enhancing immune system, without side effects and at an affordable cost. He underwent two years training in alternative medicines in Ranchi and combined into it his knowledge of traditional Santal (herbal) medicines. He developed a commercial production unit at Kusumdi in Dumka.

His method of treating ailments combined Ayurveda and Santal medicine (herbal, *jari-buti* with experimented balanced dose). He treated quite a few ailments, particularly, gastritis, sciatica, TB, white discharge (leukorrhea), diabetes, piles, and skin ailments. He had developed a brand of products with attractive packaging. He

reported his annual turnover at approximately Rs.15 lakh in 5 years. He had employed 5-6 people including his family members for the job. He had sales counters at Dumka, Barheit, Borio and Bhagaiya. He also had some distributors and franchisees. His initiative was an example of commercial production of herbal medicines. One another local person practised herbal medicine successfully in Ranga village, 10 kms north of Kathikund. He had a small hospital with 10-12 beds.

xiv) Swami Vivekananda Rural Community College, Keezhpathupattu: It is located 120 KM from Chennai, near Puducherry. This institute was established by Mr. Subramaniam and Anuradha Subramaniam in 2008, inspired by Rev. Fr. Xavier Alphose, to help the rural school dropouts, marginalised youth, the excluded and the least. Its trustees included eminent experts from the fields of technology, business, industries, etc., who were socially concerned with a mission to give back to society. SVRCC identified the skill gaps, provided skill training, and ensured job placements in local industrial establishments. It imparted training in 13 technical diploma courses to the underprivileged giving state-of-the-art infrastructure and technology in areas of healthcare, automobile repair, tailoring, plumbing, electrician, computer (hardware), hospitality business, embroidery, etc.

Its emphasis was more on practical learning than on theoretical knowledge. It had trained more than 2500 students since 2008. Now, more than 500 students enrol annually. There was no age bar in admission. It encouraged yoga, meditation, sports, community service as part of everyday life. It had ensured 100% job placements and self-employment. A vibrant and dynamic coordination with the local industries, has been its creditable achievement.

All these examples indicated that native resources, both natural and human had enormous potential to achieve economic transformation through indigenous self-reliance. But it called for an organized facilitation, catalysts (change agents) and development actors (people with vision, mission, basic know-how and dedication) for its success and sustainable progress.

5.5.3 Discussion III: Some insights and interpretations: The following discussions lead to understanding Indigenous Self-reliance as an ‘effective way’ and a sustainable solution to poverty and unemployment.

i) Equity, inclusion, and participation of the people: It is important that the people consider the development programmes as their own and participate in the process. Over a period, most of the development programmes had been viewed as ‘welfare-oriented’ where the people were passive beneficiaries of the schemes. Such development schemes did not emphasize upon the need for people’s active participation or ‘collective self-help’. “The political leaders and their followers perceived tribal development as the acquisition of development resources in the form of subsidies or even as ‘demands’, instead of viewing development as collective self-help and management.” (Panangatt, 2012).

Helin (2008) in “Dance with Dependency”, presented a strong critique of the long-term welfare policy for the indigenous people of Canada. It had resulted in ‘social pathologies’. According to him the psychological effect on people from long term dependence on transfer income was damaging. They had “internalised dependency”. The people had fallen into ‘welfare trap’ and ‘culture of expectancy’.

YMCA, Marthandam reiterated involvement of the people as the primary requirement for a sustainable and an effective development. YMCA promoted self-help with expert counselling, training, motivation, and monitoring.

ii) Spiritual basis for rural development: Understanding life-view of the people and their social institutions are integral to development. Like most ancient cultures, the central value system of the tribes in the area were, i) ancestor worship, ii) nature relatedness, and iii) community-centric life-view, i.e., the ethos where community is above the individual and all human beings are equal.

The tribes revered their ancestors. They viewed themselves as part of the nature. They co-existed in mutual relationship with the nature or the environment, in symbiosis. They valued social cohesiveness and inclusiveness because from them that they derived happiness, sense of belonging and socio-economic security. They loved music and dance and through them they expressed their communion and sharing. They enjoyed leisure and simple entertainments.

Therefore, achieving material prosperity ignoring the core ethos and values would lead to their social and spiritual disintegration. Padma Shri Simon Oraon laid emphasis upon regular family discussions and regard for community-centric life. Achievement of basic security was a primary objective of the development initiatives in tribal areas. But it would be a mistake to ignore simplicity, spirituality, and nature-relatedness as the keynote.

Most of the foundational theories (2.2) did not miss out entertainment, happiness quotient, aesthetics, and artistic urge of the people – music, dance, drama, sports, festivals, and fairs (*melas*) while implementing development programmes.

Happiness of the people, after all, is the ultimate manifestation of success of the development programmes.

iii) Learned Helplessness: The people, in general, expressed a prolonged hopelessness; aggravating water scarcity, feel of neglect, marginalization, unemployment, idleness, etc. Over a period, they appeared to have “learned helplessness”. They had developed complacency with poverty and ‘escape mindset’. People had stopped dreaming. They had nearly forgotten what it meant to dream.

The researcher recalled that just about 40-50 years back the villagers/farmers (men and women) in the same villages got up before the daybreak. The men fed the cattle and proceeded on to plough their field before sunrise. They had their first meal only when the sun was strong. Women lit small kerosene lamps and swept their courtyards, boiled paddy, and cleaned the cowshed. They worked hard in the field in the rain and under the strong sun soiling themselves. They tended to their crops waking up at midnight. But currently the same enthusiasm for work was not evident among the farmers during the major period of the year. What had happened? It could be a matter of further study or scrutiny into the causes behind such deterioration in the work culture, although some details have been provided in paragraph 5.2.

Nevertheless, the apparent laziness, idleness, drunkenness, and the lack of knowledge and wisdom, pessimism, complacency with poverty, and ‘escape mindset’ of the people appeared to be more of symptoms or consequences of prolonged poverty and helplessness rather than the causes of poverty. And now, it had become a vicious circle, ‘distressed agriculture-chronic poverty-maladaptive behaviours’, making it difficult to determine which was the cause and which the consequence.

It was intriguing to note that the people mentioned ill-governance and apathy of political leadership as the causes of their poverty, only in the end of the interview (4.3.9). Some farmers remarked, “*Noko then do cet’em asok’a!*”, meaning “no point expecting from the politicians”. Indifference and apathy of the people in power and position were perceived by the people as the new-normal and the (dis)order of the day.

iv) Responding to time & the Systems theory: In this global village era, development cannot be achieved in isolation. “People should develop along the lines of their own genius” (Panchsheel, 1950). But their genius must be facilitated to evolve further. It called for a delicate balancing act: retain traditional genius yet allow and help them to adopt best practices of the modern time. Thus far, the tribal farmers had produced to consume their own produce. But they also had the potential to feed the world. With the afore-mentioned model of economic transformation, they could cater to the demands of the larger markets and thereby increase their income to acquire their other needs which they did not produce. In this way they would achieve an integration with the larger economy participating in the global food and value chain.

Helin (2008), in “Dances with Dependency”, made a comparative reference to Maori tribe of New Zealand. He cited TeTaru White, the Maori leader: “*e tipu e rea ... Hold fast to your cultural heritage and identity and develop the skills and capability of the Pakeha (European) to sustain yourself and claim what is rightfully yours*”. While holding on to their heritage and identity as well as inculcating business and other skills from the Europeans, the Maori of New Zealand had achieved consolidation of their indigenous community as well as a systematic

integration with the mainstream. They had become net contributors to the national economy, GDP.

Learning and adopting skills from the external world did not mean assimilation but adjusting and responding to the changing times. Systems theory, in this context, implied integration of the native systems, skills and economy with the larger world, economy, and system.

v) Out migration: Quite a few farmers engaged as migrant labourers and daily wage labourers in local markets and towns in the non-cropping season to supplement their income. The magnitude of people migrating out in search of some work had incidentally surfaced during the Corona (Covid-19) pandemic, 2020. Migration from Jharkhand highest in the country: The economic survey of India revealed that more than 5% of the working age population migrated out annually to other states in search of better employment opportunities, education or because of loss of traditional livelihood (timesofindia.indiatimes.com, Feb 10, 2017). The people of these three villages also migrated to other states in the non-cropping season. Some men went to Tamilnadu, Maharashtra, Kerela, Northeastern states, Delhi, Haryana, etc. for long period. Some men and women went to Burdwan (West Bengal) 2-3 times in a year mainly for rice transplantation and harvesting. In the non-cropping season, some of them worked as labourers in MGNREGS as well.

Over the last 30 years, seasonal out-migration for working as daily wage labourers to towns and cities had increased. Some people had learned new skills in the process, such as masonry, welding, cooking in *dhabas*, driving, etc. A rise in house construction in the urban areas had created opportunities for construction labourers. As explained by Gunnar Myrdal, certain centrifugal ‘spread effects’ of expansionary

momentum from centres of economic zones had spread to rural areas (Singh & Shishodia, 2016).

It was interesting to learn that the labourers from Dumka district had acquired a credible title of ‘Dumka labour’ in Border Road Organization (BRO). One engineer from BRO informed that the labourers from Dumka, especially the tribes showed special adaptability to difficult terrains and conditions, such as the high Himalayan altitudes and hot Rajasthan desert border. Incidental to the recent skirmish with the Chinese army in Galwan valley, Ladakh, the CM of Jharkhand was seen waving off a special train to transport 1500 labourers / workers from Dumka to Ladakh region for working in road construction in the high Himalaya terrain (www.deccanherald.com, 14 June 2020).

As such, this study did not intend to discourage people to seek employment outside their villages. But it has attempted to reveal enormous employment opportunities and economic potentials available locally, in agriculture and allied activities. Migrating out for work could be a progressive choice but it should not be allowed to be a consequence of helplessness, compulsion or ‘escape mindset’.

vi) Improved methods and skills of farming: Vandana Shiva, an advocate of organic/ecological farming worked on finding solutions to “How to farm better” (2.4.4). Considering the reducing manpower in rural households due to nuclear family trend and children going to school, this study proposed that a) A system of livestock farming for commercial purpose would work better in a fenced enclosure. The people did not have the tradition of livestock farming in fenced enclosure. But it could be started with some efforts and support. It did not require much land. Rather, it would enhance the productivity of the land because raising livestock did not

directly depend on fertility of the soil nor on rain. Simon Oraon called it ‘sukhi kheti’ b) The people could be given basic training on preventive treatment of livestock which was not difficult nor costly. The people generally raised only 3-4 goats because they feared that they would die en masse when disease affected them. Dr. Kishore Hansdak’ and Dr. Stephen Soren (veterinary doctors) told that the knowledge of prophylactic vaccination for livestock and its schedule can easily be disseminated among the farmers. It would then ward off fears of the farmers and encourage them to scale up their livestock with commercial intention, and c) the people could be enabled to see the opportunities in commercial farming through ‘result demonstration’.

Raju Murmu and Sylvester Murmu of Asanbani had around 15 goats each. They expressed difficulties in grazing them. Therefore, the people could be supported to raise livestock in fenced farms, especially for goats and pigs. ‘*Khassi*’, the castrated he-goats which were in a great demand for meat ‘mutton’. Mutton is a popular and most acceptable delicacy during marriages and festivals, as it is caste-agnostic as well as religion-agnostic. It also added to the reputation of the host. Mutton fetched a good price, Rs.600/- plus per KG (2018) in the local market. One average local grown up *khassi* weighed around 15 KG in a year and could sell (whole) for around Rs.8000/-.

Shende (2010) in his Ph.D. research, IIT, Mumbai, “Poverty, Food insecurity and coping mechanism among tribes in Maharashtra” and in his real-life experiments demonstrated that livestock management could become an effective alternative source of livelihood for tribal households in Maharashtra. Smt. Chami Murmu

(5.5.2.v) who helped form 2800 SHGs, also said that goat farming was one of the most gainful economic activities undertaken by the SHGs.

Improving livelihood through goat farming and commercialization in Mozambique, Inhambane province: This project was funded by European Commission through International Fund for Agricultural Development (IFAD). It helped rural communities, especially women, to transform goat production and marketing from a casual, risky, and informal activities to a more systematic and commercially oriented production system. This experiment revealed that to scale up production it was essential to develop among farmers – knowledge of diseases, improvement in treatment, training, hygienic staying for goats, information dissemination, knowledge of anti-teak spraying, veterinary supplies, and establishment of a regular market with remunerative price.

vii) Limitations of sericulture: Although the sericulture had been successful in supplementing the income of the farmers, it carried an inherent limitation of land and trees. The farmers who had been farming silkworms had been doing it in the forest land as a long time '*Dakhal*' meaning the people had only a usufruct right. The legal ownership of the land belonged to the Government Forest department. Those who had little land and no *Dakhal*, could not engage in sericulture unless work related to value addition of silk cocoons started locally, such as, thread extraction, dyeing, spinning, weaving, etc. Therefore, along with undertaking works related to value addition of silk cocoons, it had become imperative to promote some more indigenous agricultural produce to transform into commercial produce.

viii) Attachment to homeland: It is important to appreciate that, like most tribes, the tribes of Jharkhand also were attached to their land. Despite all the problems and

difficulties, their land gave them physical and social security, belongingness, acceptance, and identity. Therefore, the greatest fear and insecurity of the tribes had been their alienation and displacement from their land, the native habitat. Against this backdrop, Namkum Bagaicha research team reiterated the life-view of the tribes, such as, egalitarianism, cooperation, collectivism, sustainable use of resources, socialist approach, 'Living in harmony with Nature' culture of the tribes, and mentioned the tribes' relation with their land:

“Land does not belong to the human community.

Rather human community belong to the land.” (Bagaicha Research Team, 2015).

In Kathikund, the people generally preferred to live in their villages or in Dumka, the district head quarter. Therefore, creating self-employment through skill/vocational training was an appropriate and a viable model for most of the local populace. Padma Shri Madhu Mansuri, a poet, and a folk singer, expressed the local people's illusion about the mainstream idea of “development”, from which they felt excluded, in the following song. It was written by Meghnath with the support of Sunil Minj and Vinod Kumar in Sadri language.

“Hum gaon chorab nahi, hum jangal chorab nahi

Aur mai mati chorab nahi, ladai chorab nahi.” *(Annexure 4)

ix.a) Social dualism: The influence of the external world had created conflict in the concept of development. The people were aware of the comforts and the luxuries of the modern world, the most of which were out of their reach. “The tendency on the part of the rural people now is to imitate the urban life due to ‘demonstration effect’. This is leading to alcoholism, drug addiction, heavy debts, etc.” (Reddy, 2012)

But they were also aware of the flip side of the growth-oriented development; global warming, deforestation, poaching of animals, extinction of many faunae and flora, melting ice and how it had harmed the nature. They wondered whether it was development. This population had simple and basic aspiration, i.e., to achieve basic food and physical security as an improvement in quality of life. Late Licho, an Andamanese lady had opposed the construction of a road through the territory of the Jarawa. “The Jarawa will be decimated”, she feared. It might have looked like an outdated view, but it reflected a conflict in understanding development. Understanding development from the perspectives of indigenous people is important to ensure their judicious development (Abbi, 2020). The song of Padma Shri Madhu Mansuri also expressed this conflict and the tribes’ illusion about the mainstream “development”. Medha Patkar stood up against such high or big dams (Sardar Sarovar Dam in Narmada River) which inundated forest, arable land and displaced the tribes.

It was important to empower people to respond to the changing world without compromising their best practices. “It is not the strongest of the species that survives, nor the most intelligent; it is the one most adaptable”/responsive (attributed to Charles Darwin). Helin (2008) described that the Maori tribe of New Zealand, consciously as well as subconsciously accepted only such development/survival programmes which did not disturb their heritage and identity. Therefore, while implementing programmes and schemes among the tribes, it is important to ensure and judiciously balance development (survival) with identity; *astitva* with *asmita*. It is like achieving ‘glocalization’.

ix.b) Intellectual Imperialism: Urbanization, industrialization, and economic growth had influenced the people, their life and ecology to the extent that they underestimated agriculture and its prospects. The prevalent education system served aspirations which were urban oriented. None of the students interviewed, aimed to be an agriculturalist or a farmer. Here the issue is – how to reposition agriculture as a lucrative profession and create opportunities for economic well-being? The stated transformed aspirations and ambitions had conditioned the tribes to migrate to urban areas leaving behind their *jal, jangal and jamin* underutilised. This in turn attracted preying eyes of the miners and industrialists (5.2.2). It is urgent to encourage and empower the tribes to utilize their land and resources to appropriate economic use. It would then be a win-win situation for all.

x) Learning from exposure to the outside world; It was observed that exposure to the external world was an effective informal education. It was like freeing Plato's allegorical 'cave man'. Exposure to external world brought in new ideas, discipline, and progressive attitude. It was essential to inculcate appropriate attitudinal change in the people. Those, who had moved out for jobs, studies, and part-time jobs, had learnt to think differently and progressively, even if they had not been able to induce the same attitudinal change among the other villagers (Panangatt, 2012). It is helpful to bear in mind Plato's allegory of the 'cave man' to facilitate behaviour change in the local people.

Jaksu Singh of Asanapahari was an outlier in the village. He moved out to study in the early 1970s to a Paharia residential school, Gopikander. He eventually completed his graduation from Dumka and got a job in the Block office. He lived in his village and continued farming also, with the cooperation of his wife. His son had

recently got a job in Jharkhand Commando while his daughter read in the final year of B.Sc. He explained that his parents had imposed discipline in the family with example. He used alcohol but did not abuse it. He added that the most parents in his village lived undisciplined life, meaning alcohol abuse and laziness. The children learnt to take such behaviour as normal behaviour. Most of the adolescent children engaged in mobile phone without discipline, for which Jaksu added in jest, “*Hello hello, gelo*”. The parents should ensure discipline. He insisted that the children should be weaned off the village milieu to suitable environment for studies. Exposure to the external world would help the children to dream big about progress.

It was also observed that those men who had moved out for work on seasonal migration, especially to other states, learned new things and returned with some positive attitudinal change, motivation, and discipline. Exposure to the external world looked beneficial and desirable, provided that such exposure did not result in flight or escape from the village. It would be a true collective progress if exposure to external world resulted in renewed determination to improve the local condition and life indigenously.

xi) Behaviour dimensions: As stated in paragraph 1.5.2.vii, behaviour dimension was kept beyond the scope of this study because behaviour psychology demanded a separate involved study. Nevertheless, the researcher would like to record some observations.

The concept of Organization Development Intervention (ODI) has been touched upon in this study. The application of ‘extension education’ in sericulture in the area, was effective. The main idea of ODI is to create an environment of learning and reinforcement which facilitate inculcation of relevant behavior in the people to

function in effective way. It is important to identify ‘faulty’ or ‘unsuitable’ behavior and intervene to make relevant amendments in them.

Their subsistence agrarian economy limited their interaction with the larger economy. Promotion of commercial agriculture would expose them to understanding of the supply and demand and dynamics of the market of the larger economy. For this, they would require support (facilities and facilitation) in the initial phase.

Quite a few studies described the tribes as “noble savage”. This phrase, apparently an oxymoron, referred to their state of living in pre-civilized conditions, simple and embodying humanity’s innate goodness, not corrupted by ‘civilization’. According to Jean Jacques Rousseau, the native North American tribes aimed and enjoyed basic things in life. They did not have high ambitions like the ‘civilized’ people. Eighteenth century sentimentalism idealized this character as nature’s gentleman. They were materially simple, psychologically strong and possessed natural goodness.

Today, the people of these three villages did not live in such absolute romantic ‘state of nature’. They were influenced by the external culture and civilization. But to a great extent, their lifestyle and life-view still reflected simple aspirations. They generally had *raska*, happiness orientation. They enjoyed dance, music, food, drink, and simple entertainments as the following Santali traditional song described them:

“Am do adibasi Santal hopon ho; mayam retam raska.

Enec’-seren’ ge tam maran dhon do.”

(You adibasi, Santal, have happiness in your blood.

Dance and music are your precious treasure.)

Unfortunately, other traditional values, such as, family bonding, nature relatedness, awe for the beauty of the universe, cultural heritage and their morality which originally was guided by spontaneous collective community consciousness, and adherence to community cohesiveness, and ethos, showed erosion.

Generally, both the men and women, had athletic build and were hard working. The women could lift heavy bundle of firewood, pot of water, stack of grains, etc. on their head for a long time. The men generally carried such burdens on their shoulders. They were used to work under the scorching sun. They were straightforward and had native aspirations – good crops, food for the year, leisure, and slow life. One elder of the village described primary well-being as food security, “*dhula perec’ bandi*”, meaning adequate food store. Football was their popular game. Football, the *Khassi* tournament was also popularly called ‘football mela’ because it was also an occasion for ‘social meeting/gathering’.

While the tribes had been perceived as ‘noble savage’ or simple people, the literature reviewed in this study, had not placed adequate emphasis upon one aspect, that they could change and respond constructively to the demands of the larger world. The concept of ‘evolving society’ was given a subdued consideration. (Tim, 2020) referred to Heraclitus, “The only constant in life is Change”. In fact, believing in change was imperative to enable people to respond actively to the demands of the larger world using indigenous skills, resources, and strength. It is myopic to view tribal society as savage and stagnant, and if appropriate attention is not accorded to their systematic integration with the larger world. Here, Organizational Development Intervention would mean preparing the people for a behaviour which would enable them to interact and integrate with the larger world or economy effectively and on their own terms.

Apparently, the prevalent education system offered only one one-way ticket or development model – mug up the syllabus to get job and migrate to cities. Those who did not study engaged in agriculture and lived in rural areas by default. Those who studied and did not get job (i.e., over 90% of post matric), kept wondering what went wrong. This was a vulnerable group with a serious identity crisis. This research has attempted to explicate that there were abundant potentials for self-employment for the literate as well as for not-so-literate in rural and tribal areas, particularly in agriculture, agro-entrepreneurship, and in cottage industries.

Therefore, this study held that the behaviour of the people was largely a product of their tradition, experience, and immediate environment. Nevertheless, the behavior could be reoriented and reinforced by demonstrating positive consequences of the economic experiments and initiatives with ‘result-demonstration’, as sericulture had done that. The people may be the product of their environment but need not be the victim of their circumstances.

5.5.4 Discussion IV: Critical issues which emerged from the discussions with the focus groups in the field survey: In this study, the following critical issues emerged, the provision, reform, and management of which would be critical to economic transformation:

i) Water scarcity was reported to be the root cause of most of the problems. If water for irrigation is made available, most economic activities, mainly agriculture, will thrive. Ensuring availability of water / irrigation to the farmers through watershed development (trap, harvest, and store); treatment of catchment area, gully plug, nala bunds, small check dams, and afforestation, can induce economic

activities in the area. It is important to accept that water scarcity is man-made and not natural.

ii) Leadership is the prime mover of development by self-reliance. Ineffective local leadership had made the area remain in receiving end for such long. Anna Hazare, Popat Rao Pawar, Simon Oraon, Chami Murmu and the likes have exemplified that an effective local leadership is a prerequisite to development by self-reliance. This study has reiterated the importance of reorganizing village leadership, *gram sabha*.

iii) Participation and ownership of the people in the development process make development effective and sustainable. Shri Devendra Fadnis, ex-CM, Maharashtra, in a documentary produced by Paani Foundation (2018), stated that when public and administration came together, no one could stop development.

iv) Coordination among the various departments of administration and the people is a prerequisite to ensure success of any government scheme. A determined support to the farmers, in the form of organized facilitation by the Government, sponsors, and non-government agencies would be critical to achieve economic transformation, to improve the quality of life and to empower people gradually to higher level of development.

v) Education should primarily empower people to take up livelihood as also advocated by M.K. Gandhi, “an insurance against unemployment” (Gandhi Research Foundation, 2017). The other things would then fall in line. Concomitantly, the formal education system required reform by reinforcing livelihood education / vocational education to restore the confidence of the people in agriculture.

vi) Market linkage: An effective market linkage for the agricultural produce, artisan products and services can unleash rural/tribal potentials and thus can induce and enhance economic activities. Development of clusters of similar economic activities can further facilitate cost-effectiveness, wholesale marketing, and upscale productivity.

vii) Environment, forest, and biodiversity: Achieving non-violent co-existence with nature is inevitable to help nature to nurture us.

Although over 85% people in Kathikund engaged in agriculture, it had stagnated at subsistence level for a long time. Therefore, for more than one reason, as elaborated upon in this study, it is imperative to diversify and transform rural and tribal economy, mainly by adopting commercial agriculture. Application and implementation of the proposed solutions in tribal areas in the paradigm (best practices) of sericulture, hold immense promise for achieving indigenous self-reliance and sustainable well-being of the people.

5.6.1 Appropriateness of undertaking a case study

In the context of this study where ‘Self-reliance’ was the central thrust, effective functioning of SHGs was considered important for a sustainable rural development. Therefore, the start-up problems of SHGs in Kathikund area caught the attention of the researcher. It became important to explore and understand the causes of the start-up problems of the SHGs. This case study was considered helpful to understand some not-so-easily-visible root-cause of the problems of rural areas and to identify the ‘effective way’ to resolve them lest they should continue to be viewed superficially.

5.6.2 A Case study: Start-up problems of SHGs in Income Generating

Activities: A Case Study of SHGs in Kathikund, Dumka, Jharkhand

Introduction: Self Help Groups (SHG) and microfinance have been acknowledged in India and developing countries as successful innovative experiments in poverty alleviation. The origin of SHGs in India may be traced back to the establishment of Self-Employed Women's Association (SEWA) by Ela Bhatt in 1972. Rotating Savings and Credit Association (ROSCA) started in some European countries like Germany and Britain in the late 19th century. Muhammad Yunus started pioneering this concept effectively as SHGs in 1970 in Bangladesh. This achievement won him and Grameen Bank of Bangladesh, Nobel Prize in 2006.

NABARD started its pilot project in 1991-92 in consultation with Reserve Bank of India, Commercial Banks, and NGOs. Commercial Banks started financing SHGs since 1991. Government introduced Self-Help Group Promoting Institutions (SHPI) under which RRBs, DCCBs, NBFCs, PACs, FCs, NGOs, etc. joined for better outreach of microfinance programmes. Now, SHG-Bank Linkage Programme in India has become the largest microfinance programme in the world, with 100 lakh SHGs involving 12 crore households (NABARD, 2018-19). There were around 2.24 lakh SHGs in Jharkhand.

Quite a few SHGs have worked successfully, particularly in the states of Maharashtra and Gujarat. In contrast, the ineffective performance of SHGs in the states of Madhya Pradesh (Chouksey, 2019), Odisha, Bihar, and Jharkhand (Mishra, 2018) raised an urgency to examine the causes for ineffective performance of SHGs in such regions, particularly in Kathikund block of Dumka district, Jharkhand.

Statement of the problem: Some SHGs in Kathikund area could not undertake viable income generating activities (IGA) even after 5 to 13 years of their formation. Bharti SHG, Asanpahari, undertook poultry farming after getting some training from the Block officials in 2009 taking a loan of Rs.40,000/-. They built five chicken-sheds, using only three sheds for raising 300 chicks. They could raise only 65 chickens till sale. It could not resume farming poultry even when their outstanding corpus fund was reported to be Rs.60,000/-. The women did not hold regular meetings. The SHG had not fully repaid the bank loan. Chand-Bhairi SHG of Asanbani started raising exotic breed of pigs and goats which died in a couple of months. Sido-Kanu SHG of Asanbani had not started any economic activity even after 13 years of its formation with outstanding corpus fund of Rs.90,000/-. Ma Saraswati SHG and Chand Tara SHG of Asanpahari had also not started any IGA after 5 years of their formation.

Objective of the study: This case study is undertaken to identify the factors of failure of Bharti SHG, Asanpahari, in managing the poultry farm as well as to understand the problems of the other SHGs in starting viable income generating activities (IGA).

Methodology of study: The primary data was collected through interview using a brief questionnaire. The questions covered their income, occupations, skills, training, and infrastructure. Discussions were held with the women in group as well as individually. Participant observation was used as an important tool. References have been made to some government reports, related literature, and websites and a few SHGs in Maharashtra. Data analysis and regression were done in **Stata Software** with robust standard error.

Review of Literature: Sharma and Sharma (2019) in “Microfinance through SHGs – A case study of SHGs in Imphal East District, Manipur” undertook case studies of one successful SHG and another one of a failing SHG. The following factors contributed to the success of Ningolsintha SHG which mainly engaged in embroidery and wool knitting: i) members were sensitized about the objectives and given training before they undertook the activity, ii) more than 80% of women were educated above high school, iii) a good rapport with the supporting agency (NCUI-Women Cooperative Education Project), iv) 50% members were young, unmarried and energetic, v) working together gave a good working environment, vi) machinery were new and suitable, vii) established marketing of the finished goods, viii) the group procured raw materials in bulk and thus enjoyed economies of scale, ix) their group leader (45 years old) was calm, cool, and wise.

They mentioned the presence of local institutions like ‘Marup’, which was a kind of rotating, saving and credit association (ROSCA) of Europe. The case study of an unsuccessful group, Laima SHG which mainly engaged in Bori (nuggets) making business, revealed following major problems: i) inadequate training, ii) ignorance about availability of raw material (black lentil, urad dal) which was not produced indigenously, iii) problems of marketing, competition with organized market, and lack of organized distribution channel, iv) lack of timely credit, v) instability; post-marriage commitments, change in their address, vi) exploitation by the strong member; vii) weak financial management, fund diversion to consumption, marriage, house construction, viii) non cooperative attitude of the financial institution, ix) inadequate support from the line departments.

Esty (2011) in an article, “Lessons from Muhammad Yunus and the Grameen bank” enumerated factors of path-breaking success of Grameen Bank, Bangladesh: i)

Leadership and commitment to a vision: This was an overarching factor of success. As a visionary and an eminent economist, he conceived, built, guided, nurtured, and even restructured Grameen Bank when time demanded. ii) challenged and changed the prevailing practices and tradition, iii) built a team that owned the dream, iv) relentless communication, v) flexibility and resilience, and vi) patience and perseverance.

Chouksey (2019) and Kumari (2010) pointed out that lack of professional knowledge of the SHPIs to identify suitable business opportunity and proper marketing network, was the key issue. SHPIs were incapable to mentor SHGs in setting up income generating activities. Mishra (2018) in TOI blog “What is next for Self Help Group in India?” reminded that SHGs were institutions of participation. He reiterated a vision that SHGs could expedite India’s economic growth as business units, as network for delivering Government services and as tools for combating social problems.

Significance of the study: This study has pointed out specific problems faced by the SHGs in this region, particularly the start-up problems caused by inability to identify IGA, inadequate training, unorganised market linkage, etc. The findings of this case study could be used as inputs to align the policies and approaches to such SHGs in effective ways.

5.6.3 Result for Objective III: Findings and Discussions of the Case Study

Ho2	The role of development actors is not a critical factor at the start-up phase for the success of SHGs.	Rejected
Ha2	The role of development actors is a critical factor at the start-up phase for the success of SHGs.	Accepted

Data analysis and data interpretation of the case study is made in paragraph 4.4.

Discussions V: After data analysis and empirical observations, the following inferences could be drawn as the causes of the start-up problems of the SHGs:

i) Inability to identify suitable IGAs: There was a lack of professional aptitude in identification of suitable business opportunity (Coulsey, 2018) by the SHG promoting institutions (SHPIs). Women (77.5%) said that suitable income generating activities (IGA) had not been identified. World vision distributed exotic (*bideshi*) breed of pigs and goats to Chand-Bhairo SHG. The livestock died within a couple of months. Some NGOs trained some women in mushroom cultivation. But such cultured mushroom neither had local market nor was it linked to urban market. Mushroom is fast perishable. A few ladies were trained to make incense stick, *agarbatti*, which they did not start. The women expressed that the local breed of pigs, goats and chicken would be more practicable as they would adapt to the local conditions, and their feed and maintenance would be cost effective. SHGs promoted by Jalgaon Janata Co-operative Bank, Maharashtra, managed, facilitated market linkage, and monitored the SHGs through the animators on an ongoing basis.

ii) Inadequate training and handholding: 57.5% women did not receive training while 40.0% received inadequate training. They wanted capacity building with market linkage. The training imparted mainly focused on maintaining register of accounts, holding regular meeting and SHG-bank linkage. At the start-up phase, they did not express need for credit linkage.

iii) Inadequate economic infrastructure: 95% women found the infrastructure and related facilities inadequate: scarcity of irrigation water, deficiency in services like animal husbandry, veterinary care, and transportation. Inadequacy in veterinary

support was said to be a major cause of the failure of the poultry farm in Asanpahari. This inadequacy also demotivated the other women to raise more goats or pigs lest the livestock should die of diseases en masse.

iv) Absence of organized agricultural market linkage: 85% women pointed out difficulties in selling their produce. They sold their agri-products in the retail local markets/hatia. The IGAs of SHGs would scale up only when organized bulk marketing is ensured. Not much effort was visible in this department. Incidentally, sericulture in the area had flourished because the Central Silk Board of India, Pilot Project Centre (PPC), and PRADAN (an NGO) had created an organized market with remunerative price.

v) Dearth of development actors in SHPIs: Lack of dedication of SHPIs (82.5% women) and ineffective monitoring (100% women) were stated to be among the major causes of SHGs' start-up problems. SHGs in Bangladesh achieved success because of the vision, guardianship, and dedication of Muhammad Yunus. In Ichalkaranji, Maharashtra, a co-operative bank had an SHG cell headed by an officer with expertise and experience in the functioning of SHG. The General Manager of the bank possessed a high level of dedication for poverty alleviation. He played a proactive role in marketing and market linkage of the products of the SHGs. In the West Garo Hills district of Meghalaya, the attitude of SHPIs towards SHG members (90.67% respondents) was not forthcoming (Kumari, 2010).

vi) Indifference of line departments: The block officials and the NGOs generally lost interest in the SHGs beyond formation, training, and SHG-bank linkage. Kanan Devi, the leader of Bharti SHG, complained of bank officials for not responding to

her queries. “It is often said that SHGs have to be linked with income generating activities, but it is far from reality” (Mishra, 2018).

vii) Problem of group ownership of asset: All the 11 women of Bharti SHG said that group ownership of asset, especially the livestock, was impractical. It was difficult to distribute work and fix clear accountability. Individual ownership would allow one to see the impact of one’s contribution to work and thereby improve and realise satisfaction. P-value of group ownership indicated high significance of 0.000 (Table 4.6).

viii) Weak leadership: 82.5% women reported their leadership to be weak. In Sido-Kanu SHG, no member could enforce discipline when some women defaulted in repayment. In the case of the poultry farm in Asanpahari, some women suspected their leader of misappropriating the fund.

ix) Low-level equilibrium trap: The women (25%) and their men expressed that their current level of income was too low for saving and investing in some economic activities, especially when return on such investments was un-remunerative or uncertain. They refrained from taking a loan because they could not see viable economic activities. [Jharkhand PCI: Rs.20,106/- (2010), Dumka MPCE: Rs.920/- (2011), Govt. of Jharkhand report of the area: as on 2011-12]

x) Inadequate financial literacy: The SHG women (67.5%) did not understand market; the demand, supply, and price. This deterred them to make informed and effective decisions with their resources. The Bharti SHG borrowed Rs.40,000/- from a bank at the first go, without assessing their repaying capacity. The training content for SHGs should include the basics of risk mitigation / management and guidance like ‘Start small’.

xi) Lack of family support: Some women (22.5%) talked of their non-cooperative alcoholic husbands. A few others reported that their grown-up children were addicted to mobile phones and did not cooperate. Most of these women had to manage household chores alone.

In spite of the limitations in the functioning of the SHGs in these villages the following positive outcomes of forming SHG, were observed.

- i) Involvement in SHGs had made women appreciate thrift habit and saving. They showed improved responsiveness to financial literacy, ideas of self-reliance and resource management.
- ii) Sido-Kanu SHG carried out the work of distribution of the subsidized rice, sugar, and oil efficiently as “network for delivering Government services” (Mishra, 2018).
- iii) All the SHGs and the women looked more organized, positive, and motivated than before.

Recommendations:

1. Professionalism in identification of suitable potential income generating activities for SHGs and market linkage of SHGs’ produce should be accorded priority at the start-up phase.
2. SHPIs should take responsibility beyond forming SHGs, imparting training and SHG-bank linkage and guide and monitor SHGs till maturity, i.e., become development actors.
3. Under National Rural Livelihood Mission (now DAY-NRLM) a special cadre should be created involving officers/experts with interest and aptitude for rural development, to monitor the schemes for SHGs.

[Dedication is essential for the success of any scheme, particularly rural development. Behind the success of SHGs there were people/agencies with great dedication: Muhammad Yunus (Bangladesh), Varghese Kurien (AMUL), Ela Bhatt (SEWA), Indira Kranti Pathaam (Andhra Pradesh), Kudumbashree (Kerela), Dr. Spencer Hatch (YMCA, Marthandam, Tamil Nadu), etc.]

4. As suggested by Mishra (2018), the SHGs can be utilized to deliver Government services, such as, banking correspondence (BC), mid-day meal cooking, Public Distribution System (PDS), etc.

5. The Government could take initiative for consolidation (*Chakbandi*) of fragmented small landholdings (discrete land use) of the farmers to facilitate farming in an enclosed structure which would be similar to controlled-environment agriculture (CEA), e.g., a greenhouse, to augment productivity of the land.

Concluding statement: Identification and establishment of viable income generating activities for SHGs are paramount for promoting self-employment and organizing rural poor. Otherwise, the vision of National Rural Livelihood Mission (DAY-NRLM) shall collapse and crumble. It was essential for SHPIs to become development actors. This entails identifying IGA, appropriate training and capacity building, handholding, market linkage and close monitoring; whose dearth was the weak link in the effective functioning of SHGs in Kathikund area.

5.7 Theoretical Implications and Practical Implications: effect on future research, policy formation, and actions

Identifying ‘effective ways’ deserved attention to address the issues and concerns of the rural and tribal areas, agriculture, and the farmers. India’s 80% poverty and disguised employment are found in rural and tribal areas despite huge indigenous

potentials and opportunities which have been unravelled in this study. This research has multifarious implications for future research, policy formation, actions for Government and Non-Government organizations, various groups, and development actors.

5.7.1 Theoretical Implications: “Theoretical implication is a newly found addition(s) to the existing theories or building materials for new theories” (Oni, 2018). Some findings of this study are affirmation of the existing research results, theoretical foundations (2.2), approaches, and experiments, such as, critique on prevalent education system, dysfunctional traditional leadership, general apathy of the administration and political leadership, ill governance, and impact of environmental degradation on tribes. But this study appeared to be the first of its kind in this area. The results and findings have been reiterated with a specific view to economic transformation in tribal areas. The major findings of this study have brought new dimension to the issues and objectives addressed in the study, namely.

i) Major causes of poverty in Tribal areas: As described in detail in paragraph 5.2, some of the causes might not look new. But this study has not only reiterated these causes but also has revealed new perspective to them, for instance, water scarcity for agriculture, need for water harvesting, the dearth of organized market for agricultural produce, lack of appropriate education, weakening of social institutions, non-alignment of government’s policies with local conditions, understanding development from the tribes’ perspective, and a vicious cycle of ‘distressed agriculture-chronic poverty-maladaptive behaviours’.

ii) Identifying some indigenous economic potentials for transforming them from subsistence to commercial produce: Some existing reviewed literature had identified

some indigenous economic potentials of their respective geographical areas, e.g., Shende (2010) identified goateries as a coping mechanism to address food insecurity among tribes in Maharashtra. NABARD (2020) also identified some indigenous potentials of the area in its potential linked credit plan for Dumka district. This study identifies some more indigenous potentials in agriculture, artisan goods and traditional services, like drummers, barbers, masseurs, etc., and in cottage industry.

iii) Organized facilitation: This is the main finding of the study. In this study, the organized facilitation comprised of five facilities and facilitations, namely, infrastructure, managerial support, extension education, timely & affordable finance, and market linkage with a remunerative price. The rural and tribal areas have indigenous potentials, and the people possess native skills and labour force. But they need the above-mentioned organized facilitations to achieve success (enhance their income), as it had been demonstrated by the Central Sericulture Board of India in Kathikund. The effective best practices at CSBI, Kathikund can be called a discovery of a development paradigm in tribal areas.

iv) Critical role of the development actors in the start up phase of the SHGs: The researcher came across five SHGs in the three villages (the population of the research). None of the women of these SHGs could undertake income generating activities successfully. This study has revealed the causes of the unsuccessful functioning of the SHGs, namely, inability to identify suitable IGAs, inadequate training and handholding, inadequate economic infrastructure, absence of organized agricultural market linkage, indifference of line departments, and problem of group ownership of assets. The researcher did not come across any such study of the problems of the SHGs in the area.

Other implications, significant contributions (5.8) of the research, and suggestions (5.9.2) for future research are discussed in the following paragraphs.

5.7.2 Implications for Researchers: Over 70% of labour force and over 90% in tribal areas in India, engaged in Agriculture and allied activities. This study has drawn attention to research in the areas of commercial agriculture, rural development, aligning education system to rural livelihood, revamping local leadership, and adopting ‘effective ways’ to implement developmental schemes.

5.7.3 Implications for Universities and Research institutions: Universities can give renewed focus on IT solutions for the farmers – research and development, develop affordable machines and scientific methods of agriculture. Universities and research institutions have capabilities to encourage research in development studies. For instance, Birsa Agricultural University, Ranchi had developed a crossbred pig, *Jharsuk*. Crossbred livestock have advantage of a genetic phenomenon called heterosis. *Jharsuk* had gained higher commercial value.

5.7.4 Implications for Schools and training institutions: Department of Education, schools, colleges, and vocational training institutions can impart livelihood education and training which would give the farmers confidence early in their life. Formal education system should reform and revise the syllabus by incorporating vocational courses, livelihood skills, *Aajeevika*, like agriculture, handicrafts, animal husbandry and other income generating crafts and artisan products, thereby aligning education system with livelihood of the people. Vocational and extension education need reinforcement. Higher education could focus on developing user-friendly and affordable technology. This would make education practicable and meaningful.

5.7.5 Implications for Government Ministries, Departments and

Administrations: Various ministries, mainly Rural Development, Ministry of Tribal Affairs (MoTA), MSME, Forest, Agriculture (soil test and potential study), Jharkhand Department of Agriculture and Animal husbandry, etc. can derive practicable insights from this study to make effective policies to invest in (small) farmers to promote agro entrepreneurship in rural and tribal areas. Community Development Block/Administration needed to co-ordinate effectively among the various bodies, Government departments, panchayats, banks, NGOs, and civil societies. Social audit should be conducted regularly, ensuring compliance.

5.7.6 Implications for Various Boards and Committees: In the example of Central Silk Board of India, other boards, and committees, such as, National Dairy Development Board of India (NDDB), Spice Board of India, Kochi, National Egg Coordination Committee-Poultry India, Jute Corporation of India, and National Jute Board, APEDA, JHARCRAFT, etc. can bring their presence in the area to promote the economic potential of the area. It would eventually facilitate financial institutions to extend credit to the farmers. If various Boards and Committees enter the area and promote agricultural produce, artisan products, services, etc. like CSBI, it would expedite facilitation and organizing people to adopt commercial farming.

5.7.7 Implications for Gram Sabha and village leadership: Traditional leadership, as observed, was dysfunctional. It needed reorganization to respond to the needs of the time, for instance, the system of untended grazing discouraged people to grow vegetables. Village leadership could be trained in basic financial management by initiating village level co-operative (credit) society like AMUL. The villagers could be trained to be self-reliant in animal husbandry. They should be

educated about their duties and responsibilities as envisaged in PESA Act, 1996. Gram Sabha members or the farmers could be trained in management of their village and organizations, i.e., planning, organizing, developmental meetings, liaising with various government departments / NGO officials, understanding market and market linkage. Every village could be developed as a co-operative (credit) society and enabled to assume financial management (which was not done traditionally). Approach of the Government to development should shift from 'welfare approach' to 'participation / involvement' model.

5.7.8 Implications for Voluntary Agencies, civil societies, and development

actors: Through this study, the social workers and NGOs can gain adequate insights and understanding about the potential of the area. It shall help them to align their projects and schemes to the identified indigenous economic potentials and to adopt effective ways to improve the quality of life of the people. The case study on 'the start-up problems of the SHGs', has reiterated that the SHGs/farmers needed handholding in the nascent start-up phase. SHPIs should realize the importance of becoming development actors. Civil societies and village leadership, *gram sabha* can articulate local issues, demands, and have regular dialogues and coordination with the local administration. Voluntary agencies and civil societies should become development agents or actors, i.e., they should be dedicated to effect results, going beyond meeting the targets. They should have regular interface with the administration and insist on 'Social Audit' of development schemes and projects.

5.7.9 Implications for Entrepreneurial opportunities: Development and diversification in agriculture can create ample new opportunities for employment

and income. They usher in scope and opportunities in agro-entrepreneurship and other related trades, services, and marketing.

For instance, Dr. Nilratan Shende's social enterprise EAGL (Eshein Agro Livestock Pvt. Ltd.) envisioned to build a hunger-free India by promoting agriculture-related livelihood initiatives in tribal areas of Maharashtra, especially through goat farming. Investment in rural/tribal areas is essential to promote growth, especially in improving infrastructure, promoting agri-processing and agribusiness, training the farmers, and providing them with affordable finance. Bolivia had achieved a respectable self-reliance in agriculture and had reaped growth in agricultural output by making a planned investment in agriculture (Ansari, 2016).

5.7.10 Implications for Farmers: The farmers are the primary target beneficiaries of this study. Suggestions and solutions indicated in this study have a direct relation with poverty alleviation and employment generation. It is essential to ensure people's active participation and involvement.

5.7.11 Implications for Department of Forest, Agriculture, and Irrigation: Water scarcity and environmental degradation affect agriculture and tribal life directly. This study has underscored the importance of watershed development, reafforestation, social forestry, and biodiversity. Restoration and protection of fauna and flora with biodiversity are necessary. Department of Agriculture, Water supply, and animal husbandry need to work in coordination. The Forest Department could revisit some of its forestation policy and align them with the practices of the local people, e.g., promote fruit-bearing trees like mango, jackfruit, mahua, etc. rather than commercial trees like eucalyptus, sal, teak, mahogany, etc. (Tribes primarily plant trees to reap the fruits and not to cut trees for sale). Department of animal

husbandry could be more proactive and responsive in their services and disseminate basic knowledge of treatment and care of livestock. Studies and experiments have revealed that organized livestock farming can conveniently increase the income of the farmers.

5.7.12 Implications for Financial institutions: This study should help financial institutions to align their services better to the local conditions and potentials. They could intensify financial literacy campaigns, including thrift and savings, awareness programmes on financial frauds, cyber frauds, and resource management. Such efforts shall enable people to take up (start-up) projects. Financial institutions should not only extend credit linkage or loans but should also accord priority in earnest to credit nurturing and business intermediation, focusing on micro and small finance which are less burdensome for the farmers. For instance, Central Silk Board of India distributed silk-eggs on credit of Rs.1200/- per pouch, which was recovered from their produce. The farmers generally took 2 to 3 pouches of silk eggs. Banks could reinvigorate the extant village adoption plan in earnest.

5.7.13 Implications for Emergent and Political leaders: This research can give new insight to the leaders to start some effective initiatives. The political leaders (MPs, MLAs, Mukhias, District councilors, etc.) can take clues from the potentials and proposals indicated in this study, to coordinate in the government schemes effectively in the area. They can use their influence and position to liaise and network with different Boards and commissions for suitable subsidies, interest subvention, grants, and above all, invite their presence in the area, in the way sericulture had done it. They can contribute to effective policy formations.

They can motivate and guide the people in progressive initiatives. Such activities shall increase their engagement in ‘developmental politics’ instead of engaging only in ‘electoral politics’. The emergent and the political leaders could visit people and spend more time with them to discuss, plan and coordinate with them. Spending more time with them shall increase the confidence of the people and motivate them to solve their problems pro-actively.

Last but not the least, this research shall help the researcher, not only to enrich his knowledge and perspective but also to apply the acquired knowledge into effective action.

5.8 Research Contributions

After considering the previous research and studies, this study in and of the area, to the researcher’s knowledge, was the first of its kind.

- It identified the major causes of poverty in tribal areas and what could work effectively to enhance the income of the farmers, taking some learning from the best practices in sericulture in the area.
- It explicated that indigenous self-reliance, ‘internal resources and forces’, ‘development from within’ model was more viable and sustainable than development by external aids or grants.
- It has demonstrated the factors of sericulture’s success (5.4.3) in the area, the organized facilitation which supplemented the income of the farmers, such as, required infrastructure, managerial support, extension education and training, timely and affordable finance, market linkage with remunerative price. Replication of such facilities and facilitation into other agricultural

produce, services and artisan goods could similarly augment the income of the farmers.

- It has pointed out the urgency to address the problem of water scarcity and deforestation, without which tribal/rural development was near impossible.
- It has explained the importance of promoting self-help agencies, such as, village leadership, SHGs, development actors, NGOs, Self-help Group Promoting Institutions (SHPIs), and cooperative societies to achieve sustainable self-reliance.
- It has critically reviewed the formal education system and revealed that it needed reform vis-à-vis rural livelihood, for instance, inclusion of livelihood skills, '*Aajeevika*', particularly in agriculture, in the school syllabus.
- It has expounded that transformation of some agricultural produce, artisan goods, and services from subsistence to commercial, would restore the confidence of the farmers in agriculture as livelihood and this paradigm shift was imperative to integrate tribal economy with the larger economy.
- Undertaking a case study on Start-up problems of SHGs in income generating activities it has shown the causes of failures of SHGs in the area (Table 4.6), such as, lack of training, inadequate management, lack of market linkage and marketing, group ownership, and lack of dedication of SHPIs.
- It has revealed how repositioning of rural and tribal economy would usher in opportunities for agro-entrepreneurship in tribal areas.
- This study underscored the relevance of 'smart village'.

5.9 Limitations of the study and Suggestions for future research

There were some limitations of the study. Some were inherent, i.e., they were inhibited by local conditions, some were constrained by time and place, and above all, the truth is that knowledge is infinite. Therefore, research must go on.

5.9.1 Limitations of the study

- It was difficult for the rural people to be accurate in answering in numbers and in 1-7-point scale. The researcher had to use a few other references to assess certain numerical responses, especially their income. Major part of their income is not monetized. The people were not comfortable talking about their assets and wealth. They were reserved about giving critical views on the village leadership.
- Secondary Data: Quite a few secondary data have been taken from census 2011, awaiting decadal census 2021. Although some recent data have been incorporated, the figures of census 2011 were retained at many places for the sake of comparability.
- There was not much study on the economic potentials of the area, except the potential linked credit plan (PLP) for the Dumka district, which was prepared by NABARD at some regular interval, where to the banks could extend gainful credit.
- In-depth evaluation of Government scheme, being another involved study, was kept out of the primary scope of this study for the sake of focus on the main area of research. The primary empirical evaluation of – ‘why most previous development schemes did not yield desired results’ could not be

undertaken. It, therefore, depended on the secondary source, the available literature, and reports.

- The study of behavioural pattern of the people has not been undertaken in this study. No such dedicated study could be found in the previous literature. It could have been helpful to understand the causes of faulty behaviour of the people, if any, vis-à-vis the proposed solutions.

5.9.2 Scope for further research

It was difficult to make derivations/inferences due to inadequate research available in this area on this topic. The researcher assumed that this study had opened avenues for research on a host of inter-connected subjects or topics, such as,

- Study on potential indigenous commercial crops along with soil testing.
- Research can be undertaken on suitable farming practices to enhance the productivity of the land considering the shrinking and dispersed landholding of the people with generation.
- Considering the absence of organized agricultural marketing in the area, comprehensive research was required to establish and identify markets, demand-supply gap, price (leveraging), etc. so that the farmers reap benefits.
- The area, despite being a hilly area, water scarcity was the root cause of problems of the farmers – how watershed development and management could be improved and achieved in the area.
- How to make (re-)forestation effective in the area and ascertain revival of faunae and flora.
- Opportunities in agro-entrepreneurship / social entrepreneurship.

- Reorienting village leadership: traditional tribal self-governance, and Panchayat system – Organizational Development Intervention could improve the quality of life in rural/tribal areas.
- What is appropriate education in the tribal and rural areas? How to make vocational training and extension education effective.
- How self-help groups could work better. How SHPIs could become development actors.
- Behavioural pattern – how to address ‘faulty’ and maladaptive behaviour of the people, amending and making them suitable for agro-entrepreneurship.
- Why had many previous Government schemes not yielded desired results?
- There is a pressing need to undertake a study on how to effectively achieve integration of tribal economy with the larger / global economy.

5.10 Concluding Statement

Establishing justice and order is the prime objective of any civilization and it is not possible without ensuring elimination of poverty, dignity of labour, employment, appropriate education, good governance, care for the mother Earth, sustainable development, equitable distribution of income and judicious access to resources.

This study has revealed the relevance of indigenous self-reliance, unfolded its factors, and has explicated how repositioning of some indigenous agricultural produce, artisan products and traditional services could supplement the income of the farmers in the paradigm or the best practices of sericulture in Kathikund.

Going forward, it would not be a matter of choice but a socio-economic imperative to reposition indigenous self-reliance to eliminate poverty, unemployment, and

inequality. Organized facilitation of indigenous economic potentials would entail i) ensuring watershed development, afforestation, and protection of the environment; faunae and flora with biodiversity, ii) ensuring basic infrastructure; water, health facilities, education, crop care, and veterinary care (animal husbandry), iii) establishing agricultural marketing, iv) aligning the formal education system with the occupation, livelihood and aspirations of the native people, especially with agriculture and agribusiness, v) reorganizing the native leadership and institutions, and vi) promoting agro-entrepreneurship and social entrepreneurship with professional management.

Involvement of people, trusting their native skills and knowledge, “People should develop along the lines of their own genius” (Panchsheel, 1950), and reorienting them and supporting them respond to the changes, technology, and markets, would play a crucial role in the integrated development of the people. However, this approach may not be the only one nor the last one but plausibly the most appropriate approach at the present juncture of rural and tribal economy, particularly in Jharkhand, India.

To sum up, in any development initiative and intervention, the quintessence is to discover, develop and deliver. Until then, no matter how huge the potential which awaits even within, we shall, like a musk deer, wander around searching for the fragrance, *Kasturi*, everywhere except wherefrom it oozes, i.e., ‘within’. No wonder a village elder said in Santali, “*Hasa babon casaeda. Ar ban khan, hasa rege sona*”, meaning “We do not utilise our land well. Otherwise, gold lies in our soil”.

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APPENDICES

Appendix 1

Village-wise List of 88 Households and Their Income in 2019

Asanbani								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Napay Murmu	7	3.5	15,000	10,000	25,000	12,000	62,000
2	Suniram Marandi	3	5	18000	10000	25,000	10,000	63,000
3	Dhaniram Murmu	9	4	16000	9000	30,000	12,000	67,000
4	Somay Murmu	9	4	14000	12000	30,000	11,000	67,000
5	Phatu Murmu	5	5	15000	8000	30,000	10,000	63,000
6	Dhuma Murmu	8	4	15000	12000	13,000	12,000	52,000
7	Khublal Soren	12	40	30000	Batai	40,000	35,000	105,000
8	Sanatan Murmu	10	3	14000	10000	30,000	13,000	67,000
9	Jotin Murmu	Ill	5	16000	10000	15,000	14,000	55,000
10	Baburam Murmu	9	4	14000	6000	30,000	12,000	62,000
11	Biren Hansdak	8	40	18000	6000	30,000	12,000	66,000
12	Budhan Murmu	9	3	16000	8000	12,000	14,000	50,000
13	Ramvilas Murmu	10	5	18000	L.stock	20,000	20,000	58,000
14	Dasrath Murmu	9	4	17000	7000	30,000	13,000	67,000
15	Rakhai Murmu	9	3	15000	10000	15,000	15,000	55,000
16	Raisen Murmu	8	5	15000	9000	28,000	12,000	64,000
17	Surju Murmu	9	3	14000	10000	32,000	7,000	63,000
18	Dukhu Murmu	8	5	14000	12000	35,000	10,000	71,000
19	Birja Murmu	10	4	15000	L.stock	35,000	20,000	70,000
20	Albert Murmu	7	3	14000	Ricemil l	25,000	24,000	63,000
21	Dulhan Baskey	6	4	15000	7000	22,000	15,000	59,000
22	Lukhi Murmu	7	5	16000	L.stock	25,000	17,000	58,000
23	Anjula Kisku	9	5	18000	L.stock	23,000	20,000	61,000
24	Paul Murmu	12	6	21000	27000	Sahiya	13,000	61,000
25	Bijay Murmu	6	4	13000	10000	30,000	5,000	58,000
26	Sylvester Murmu	10	3.5	Job	96000	Retired	34,000	130,000
27	Nicholas Murmu	10	4.5	Job	250000	Block staff	Nil	250,000
28	Raju Murmu	10	5	Grocery	240000	shop, nurse	10,000	250,000
29	Santoshini Tudu	10	4	18000	20000	Lstock,shg	19000	70,000
30	Silwanti Tudu	9	5	20000	20000	Lstock,shg	18000	62,000
31	Muni Hembrom	9	5	22000	20000	Lstock,shg	19000	61,000
32	Hemoti Hansdak'	10	6	20000	20000	Lstock,shg	10000	61,000
33	Sawitri Soren	7	4	20000	18000	Lstock,shg	20000	58,000
34	Sanki Hembrom	Ill	4	16000	17000	Lstock,mfp	20000	56,000
35	Baha Hembrom	5	4	20000	20000	Lstock,shg	20000	60,000
36	Sajoni Hansdak'	Ill	5	19000	18000	L.stock, vg	19000	56,000

Asanpahari								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Budhisol Tudu	7	3	2000	17000	20,000	15,000	54,000
2	Harinarayan Grihi	BA	2	Infl job	72000	80,000	Nil	152,000
3	Shanti Devi	4	1.5	3000	16000	Nil	16,000	35,000
4	Rupan Marandi	9	1	2000	13000	14,000	12,000	41,000
5	Samuel Murmu	10	4	12000	15000	30,000	10000	67,000
6	Rajkumar Dehri	12	1.5	Job	Job	Jhar	Batall	270,000
7	Manik Dehri	8	2	2000	17000	Nil	18,000	37,000
8	Sanatan Murmu	9	3	7000	8000	70,000	Nil	85,000
9	Churka Tudu	5	2	2000	16000	20,000	12,000	50,000
10	Phelen Kisku	7	0.2	2000	10000	Nil	15,000	27,000
11	Marshal Murmu	12	3	5000	7000	27,000	15,000	54,000
12	Pradhan Murmu	5	2	2000	20000	15,000	Nil	37,000
13	Chudka Kol	8	1.5	2000	15000	15,000	16,000	49,000
14	Lakhan Kol	8	2	3000	12000	9,000	15,000	39,000
15	Tika Marandi	Illi	3	2000	11000	22,000	15,000	50,000
16	Mantu Kol	7	2	2000	12000	15,000	14,000	43,000
17	Sushil Marandi	7	3	4000	17000	20,000	10,000	51,000
18	Ilachi Murmu	8	3	3000	10000	20,000	12,000	45,000
19	Bablu Murmu	9	3	3000	16000	20,000	8,000	47,000
20	Ramesol Murmu	Illi	1	Ranu	12000	NIL	25,000	37,000
21	Tuila Murmu	Illi	1.5	3000	17000	Daily wage	18000	38,000
22	Mahender Grihi	9	3	Infl job	50000	NIL	15,000	65,000
23	Naresh Rai	8	1	2000	20000	Nil	15,000	37,000
24	Pansori Murmu	7	2	2000	9000	25,000	14,000	50,000
25	Kanan Devi	9	2	Driver	96000	SahiyaDrv	18,000	114,000
26	Jaksu Singh	BA	3	Job	Job	Block staff	NIL	360,000
27	Umashanker Singh	12	2	Job	Job	Jhar	Batall	270,000
28	Parwati Devi	3	1	5000	25000	Lstock,shg	21,000	51,000
29	Jitni Devi	5	1.5	5000	23000	Lstock,shg	22,000	50,000
30	Jitmuni Devi	5	3	3000	25000	Lstock,shg	25,000	53,000
31	Radha Devi	Ill	1	5000	25000	Lstock,shg	18,000	48,000
32	Arti Devi	Ill	2	5000	25000	Lstock,shg	20,000	50,000
33	Sunita Devi	4	2	5000	25000	Lstock,shg	21,000	51,000
34	Purni Devi	5	3	5000	25000	Lstock,shg	21,000	51,000
35	Manju Devi	6	2	5000	25000	Lstock,shg	21,000	51,000

Dhankuta								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Naren Soren	5	16	28000	L.stock	27,000	25,000	80,000
2	Baburam Mahali	7	3	15000	10000	15,000	19000	59,000
3	Jana M Mahali	9	3	12000	10000	8,000	21,000	51,000
4	Anand Marandi	9	5	17000	L.stock	12,000	16,000	45,000
5	Girish Murmu	7	4	14000	15000	20,000	8,000	53,000
6	Dinesh Hembrom	8	4	16000	L.stock	15,000	18,000	49,000
7	Mangal Murmu	6	3	15000	10000	20,000	8,000	53,000
8	Motilal Murmu	9	4	15000	5000	15,000	16000	51,000
9	Manjhi Murmu	6	5	16000	L.stock	25,000	20,000	61,000
10	Chunda Marandi	9	3	14000	L.stock	25,000	18,000	57,000
11	Ram Hembrom	7	5	16000	10,000	12,000	12,000	50,000
12	Babulal Mahali	7	3	12000	13000	8,000	22,000	55,000
13	Som Soren	12	4	15000	L.stock	25,000	18,000	58,000
14	Talamai Kisku	6	4	14000	L.stock	25,000	16,000	55,000
15	Shanti Murmu	6	4	15000	14000	L.stock	22000	51,000
16	Rupi Soren	Ill	4	15000	16000	L.stock	20000	51,000
17	Maku Hansdak'	Ill	4	15000	16000	L.stock	21000	52,000

Source: Field Survey, 2019

**Other farming income: piggery, goat farming, vegetables, seasonal fruits (mango, jackfruit), bamboo baskets; excluding daily wage labour earnings.*

1 bigha = 14,400 sq feet [1 acre = 43560 sq feet = 3.025 bighas]

Appendix 2

List of 54 Sericulture Farmers and Their Income in 2019

Asanpahari								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Budhisol Tudu	7	3	2000	17000	20,000	15,000	54,000
2	Harinarayan Grihi	BA	2	Infl job	72000	80,000	Nil	152,000
3	Rupan Marandi	9	1	2000	13000	14,000	12,000	41,000
4	Samuel Murmu	10	4	12000	15000	30,000	10000	67,000
5	Sanatan Murmu	9	3	7000	8000	70,000	Nil	85,000
6	Churka Tudu	5	2	2000	16000	20,000	12,000	50,000
7	Marshal Murmu	12	3	5000	7000	27,000	15,000	54,000
8	Pradhan Murmu	5	2	2000	20000	15,000	Nil	37,000
9	Chudka Kol	8	1.5	2000	15000	15,000	16,000	49,000
10	Lakhan Kol	8	2	3000	12000	9,000	15,000	39,000
11	Tika Marandi	Illi	3	2000	11000	22,000	15,000	50,000
12	Mantu Kol	7	2	2000	12000	15,000	14,000	43,000
13	Sushil Marandi	7	3	4000	17000	20,000	10,000	51,000
14	Ilachi Murmu	8	3	3000	10000	20,000	12,000	45,000
15	Bablu Murmu	9	3	3000	16000	20,000	8,000	47,000
16	Pansori Murmu	7	2	2000	9000	25,000	14,000	50,000

Dhankuta								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Naren Soren	5	16	28000	L.stock	27,000	25,000	80,000
2	Baburam Mahali	7	3	15000	10000	15,000	19000	59,000
3	Jana M Mahali	9	3	12000	10000	8,000	21,000	51,000
4	Anand Marandi	9	5	17000	L.stock	12,000	16,000	45,000
5	Girish Murmu	7	4	14000	15000	20,000	8,000	53,000
6	Dinesh Hembrom	8	4	16000	L.stock	15,000	18,000	49,000
7	Mangal Murmu	6	3	15000	10000	20,000	8,000	53,000
8	Motilal Murmu	9	4	15000	5000	15,000	16000	51,000
9	Manjhi Murmu	6	5	16000	L.stock	25,000	20,000	61,000
10	Chunda Marandi	9	3	14000	L.stock	25,000	18,000	57,000
11	Ram Hembrom	7	5	16000	10,000	12,000	12,000	50,000
12	Babulal Mahali	7	3	12000	13000	8,000	22,000	55,000
13	Som Soren	12	4	15000	L.stock	25,000	18,000	58,000
14	Talamai Kisku	6	4	14000	L.stock	25,000	16,000	55,000

Asanbani								
	Name	Lit	Land	Agriculture income	Wage income	Sericulture income	Other farm income	Total Income
1	Napay Murmu	7	3.5	15,000	10,000	25,000	12,000	62,000
2	Suniram Marandi	3	5	18000	10000	25,000	10,000	63,000
3	Dhaniram Murmu	9	4	16000	9000	30,000	12,000	67,000
4	Somay Murmu	9	4	14000	12000	30,000	11,000	67,000
5	Phatu Murmu	5	5	15000	8000	30,000	10,000	63,000
6	Dhuma Murmu	8	4	15000	12000	13,000	12,000	52,000
7	Khublal Soren	12	70	30000	Batai, share	40,000	35,000	105,000
8	Sanatan Murmu	10	3	14000	10000	30,000	13,000	67,000
9	Jotin Murmu	Illi	5	16000	10000	15,000	14,000	55,000
10	Baburam Murmu	9	4	14000	6000	30,000	12,000	62,000
11	Biren Hansdak	8	40	18000	6000	30,000	12,000	66,000
12	Budhan Murmu	9	3	16000	8000	12,000	14,000	50,000
13	Ramvilas Murmu	10	5	18000	L.stock	20,000	20,000	58,000
14	Dasrath Murmu	9	4	17000	7000	30,000	13,000	67,000
15	Rakhai Murmu	9	3	15000	10000	15,000	15,000	55,000
16	Raisen Murmu	8	5	15000	9000	28,000	12,000	64,000
17	Surju Murmu	9	3	14000	10000	32,000	7,000	63,000
18	Dukhu Murmu	8	5	14000	12000	35,000	10,000	71,000
19	Birja Murmu	10	4	15000	L.stock	35,000	20,000	70,000
20	Albert Murmu	7	3	14000	ricemill	25,000	24,000	63,000
21	Dulhan Baskey	6	4	15000	7000	22,000	15,000	59,000
22	Lukhi Murmu	7	5	16000	L.stock	25,000	17,000	58,000
23	Anjula Kisku	9	5	18000	L.stock	23,000	20,000	61,000
24	Bijay Murmu	6	4	13000	10000	30,000	5,000	58,000

Source: Field Survey, 2019

Appendix 3

List of 40 SHG women, Source: Field Survey, 2019

SIDO-KANU, Asanbani, promoted by PRADAN								
	Name	Age	Lit .	SHG Income Generating Activity	Other farming activities	SHG Income	Non-crop income	Total family Income
1	Santoshini Tudu	53	10	PDS ration	Cattle, seri	3000	15,000	70,000
2	Silwanti Tudu	51	9	PDS ration	Goats	3000	15,000	62,000
3	Asunta Kisku	50	10	PDS ration	Goats, jodrted.	3000	15,000	200,000
4	Hemoti Hansdak'	56	9	PDS ration	Goats	3000	15,000	61,000
5	Stenshila Hembrom	49	9	PDS ration	Goats, veg	3000	15,000	75,000
6	Salomi Hansdak'	54	8	PDS ration	Goat, pig, chi	3000	15,000	70,000
7	Beronica Soren	55	10	PDS ration	Goats	3000	15,000	100,000
8	Sawita Hansdak'	40	9	PDS ration	Cattle, seri	3000	15,000	60,000
9	Sonoti Soren	48	9	PDS ration	Cattle, seri	3000	15,000	65,000
10	Muni Hembrom	58	10	PDS ration	Goat, pig	3000	15,000	61,000
11	Dulhan Baskey	50	6	PDS ration	Cattle, pig	3000	15,000	59,000
12	Curki Kisku	50	8	PDS ration	Cattle, goat	3000	15,000	63,000
13	Lukhi Murmu	40	9	PDS ration	Cattle, seri	3000	15,000	65,000
14	Hoponmai Marandi	38	9	PDS ration	Cattle, seri	3000	15,000	70,000
15	Manjli Baskey	58	8	PDS ration	Cattle, seri	3000	15,000	65,000
16	Anjula Kisku	45	9	PDS ration	Cattle, seri	3000	15,000	69,000
17	Juli Prabha Hembrom	45	10	PDS ration	Goat, seri	3000	15,000	70,000
CHAND-BHAIRO, Asanbani, promoted by World Vision								
18	Sundri Kisku	41	8	Pig, Agrbati	Goat, pig	4000	15,000	70,000
19	Merila Tudu	40	9	Pig, Agrbati	Goat, veg	4000	15,000	80,000
20	HupniHansdak'	40	9	Pig, seed	Goat, cattle	4000	15,000	70,000
21	Kahan Murmu	41	9	Pig, seed	Goat, pig	4000	15,000	75,000
22	Mary Soren	32	8	Pig, seed	Goat, pig	4000	15,000	75,000
23	NilamatiHansdak'	32	8	Pig, seed	Goat, MFP	4000	15,000	70,000
24	Sawitri Soren	22	10	Pig, msroom	Goat, MFP	4000	15,000	58,000
25	Sanki Hembrom	45	ill	Pig, msroom	Goat, Veg	4000	15,000	56,000
26	Budin Tudu	43	5	Pig, seed	Goat, Veg	4000	15,000	75,000
27	Basanti Hembrom	30	5	Pig, seed	Goat, fruits	4000	15,000	70,000
28	Baha Hembrom	45	ill	Pig, seed	Goat, MFP	4000	15,000	60,000
29	SajoniHansdak'	50	ill	Pig, msroom	Goat, MFP	4000	15,000	56,000
BHARTI, Asanpahari, promoted by Block Officials								
30	Kanan Devi	38	10	Poultry	Goat, driver	500	25,000	140,000
31	Siwani Kisku	43	8	Poultry	Goat, seri	500	15,000	100,000
32	Shila Marandi	40	9	Poultry	Goat, seri	500	15,000	65,000
33	ManjanHansdak'	41	8	Poultry	Goat, seri	500	15,000	62,000
34	Parwati Devi	38	ill	Poultry	Goat, pig	500	15,000	63,000
35	Jitni Devi	36	ill	Poultry	Goat, pig, chi	500	15,000	66,000
36	Jitmoni Devi	42	ill	Poultry	Goat, cattle	500	20,000	61,000
37	Radha Devi	45	ill	Poultry	Goat, cattle	500	20,000	61,000
38	Arti Devi	38	6	Poultry	Goat, cattle	500	18,000	65,000
39	Pansori Murmu	40	9	Poultry	Goat, seri	500	15,000	50,000
40	Shanti Murmu	35	8	Poultry	Goat, seri	500	16,000	75,000

Appendix 4

Qualitative Questionnaire for Households of the three villages

This questionnaire is prepared for a research activity related to Ph.D. program at ICFAI University, Jharkhand on **Indigenous Self-Reliance in Jharkhand: A Study in three villages of Dumka district, Jharkhand (India)** by Innocent Soren and supervised by Dr. Satyendra Kishore & Dr. Varghese Panangatt.

I shall be highly grateful to you if you could spare a few minutes to complete the questionnaire. There are no right or wrong answers to the questions. Answer given by you will be kept confidential and used for academic purpose only. (*Members sharing one kitchen is assumed as one family/household*)

1. Name (HoF) _____ Village: _____

2. Main occupation: _____

3. Other sources of income: _____

4. Dietary habit: What do you generally eat? _____

5. Annual expenditure on food _____

6. Annual Income of your family: (Aggregate of 2 and 3 in Rupees)

Less than 50,000	50,000 – 60,000	61,000 – 70,000	More than 80,000
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7. BPL Card, **AYY Antyodaya Anna Yojna (AY Annapurna Yojna) / BPL / APL**

8. Aadhaar Card ... ? YES / NO

9. (i) Land property in bigha:

(ii). Other assets:

10 (i). Have you taken any loan ? YES / NO

(ii). If Yes, then from whom ? ...

(iii). Whether repaid ? YES / NO

11. Financial Literacy: How do you manage your income and expenditure?

12. What diseases do the villagers generally suffer from ?

(Malaria, Jaundice, Kalajar, Typhoid, etc.)

13. Please rate the Infrastructure / Services in your area:

Satisfaction in % _____ (Road, Water, Health, Education, Electricity)

14. What are the causes / factors of diminishing Indigenous Self-reliance ?

15. Do you maintain Kitchen garden? YES / NO

16. How much annual income is good for “**Well-being**” of a rural family?

17. How effective are the development/welfare schemes of the Government ?	Rate in %
Ration: PDS = Public Distribution System Rice Rs.1/- per KG for BPL card holders	
Anganbari or ICDS	
Sarva Shiksha Abhiyan and Mid-day Meal at schools	
Other flagship schemes: NREGS, NRHM(Health), NSAP (Social Assistance), NRLP	
Well, Tube-well, pond, bunds, check-dams; covered under Rural Water Supply and Sanitation Project (RWSSP).	
Goatery, piggery, poultry, milch-cow	
Social forestry	

18. What support do you want from the Government or other agencies ?

19. The main **cause of poverty** in the area ? _____

20. Your education level _____

21. Why do you send your children to schools ? _____

22. How many trees have you planted in your life ? _____

23. Achieving a chance, you would live in a ... Village / Town / City / Metro City / Foreign country

#Unemployed = Literate but involuntary non-engagement in any income generating activity

JOHAR and Thank you very much for your time

Appendix 5

Questionnaire Quantitative: **Sericulture: Success Stories of Farmers**

<i>Name, HoH:</i>		Village:	
1	<i>No. of members in the family</i>		
2	<i>Literacy of Main bread earner</i>	<i>Illiterate /1-5 / 6-9 / 10 + / 12 +/ BA</i>	
3	<i>Main occupation</i>		
4	<i>Supplementary occupation</i>		
5	<i>Annual Income from <u>Sericulture</u></i>		
6	<i>Annual Income from <u>other farming</u>; vegetables, goat, pig, cattle, minus (-) staple crops & wages</i>		
7	<i>Total family annual income*</i>		
8	As a current cause/factor of increasing Income from Sericulture. <i>Likert scale: Rank (1 to 7)</i> 1 strongly disagree/dissatisfied 2 considerably disagree/dissatisfied 3 marginally disagree/dissatisfied 4 50-50 (satisfied-dissatisfied) 5 marginally agree/satisfied 6 considerably agree/satisfied 7 strongly agree/satisfied	Water / Forest	
Managerial support, monitoring			
Infrastructure (hatchery)			
Extension education, Training			
Timely & affordable credit			
Market linkage with fair price			
Timely payment			
9	As a current cause/factor of increasing Income from other farming: goat, pig, cattle, poultry, vegetables, etc. <i>Likert scale: Rank (1 to 7)</i>	Water / Forest	
Managerial support, monitoring			
Infrastructure (animal husbandry, crop care)			
Extension education, Training			
Timely & affordable credit			
Market linkage with fair price			
Timely payment			
10	As a current cause/factor of increasing Income of farmers? <i>Likert scale: Rank (1 to 7)</i>	Landholding	
Traditional livelihood skills			
Village leadership: is it progressive?			
Society and systems; how favourable?			
11	What support from Government can improve your income?		
12	Other reasons for low farm income or suggestion to improve farm or agricultural income		

Appendix 6

Questionnaire

Case Study: Start-up Problems of SHGs in Income Generating Activities

_____, Kathikund:

Leader:		No. of members:		Corpus fund:	
1	Name, Age				
2	Literacy level	Illiterate / upto 5 / 6 to 10 / 10 pass			
3	Marital status	Single / Married / Widow / Divorced			
4	Occupation of your husband				
5	Total annual family income				
6	Who helped you form the SHG?				
7	Income generating activities (IGAs) before joining the SHG		Monthly income		
8	IGAs undertaken using credit from the SHG		Monthly income		
9	Sale (units) per month?				
10	Did you receive any training on skills, facilities, market, etc.?	No	Inadequate	Yes	
11	Possess skills? for maintenance, animal husbandry, veterinary, etc	No	Inadequate	Yes	
12	Facilities for maintenance, animal husbandry, veterinary, etc	No	Inadequate	Yes	
13	Quality of your management?	Poor	Mediocre	Good	
14	Monitoring by any agency?	Poor	Mediocre	Good	
15	Any other reason for failure? Or what could improve?				

Explanation of some terms used in the Case study

Self Help Group (SHG): “An SHG is a group of about 15-20 people from a homogeneous class who join to address common issues. They involve voluntary thrift activities on a regular basis and use the pooled resources to make interest-bearing loans to the group” (Box vii.3, September 04, 2008, Trends and Progress, RBI).

Income generating activities (IGA): “An activity carried out in order to generate revenues used to ensure the financial sustainability of the organization”; a family or a group. (IGI Global)

Low-level equilibrium trap: It is a concept in economics developed by R.R. Nelson, which states that at low levels of per capita income people are too poor to save and invest much. As per capita income rises above zero saving level, a rising proportion of income will be saved and invested, and this will lead to higher rate of growth in income.

Development actors: Development actors serve as agents with the capacity to take responsibility for people’s lives and make decisions that result in action and achievements. Agency has to do with the capacity for activity (IGI Global). They are individuals, organisations like civil society, institutions, government, community-based groups, NGOs, and parastatals. Some agencies call their grass-roots level workers ‘animators’ meaning energizer or vitalizer.

Annexure 2

Constitutional Safeguards for Scheduled Tribes (STs)

I. Educational and Cultural Safeguards	
Art. 15(4)	Special provisions for advancement of other backward classes (includes STs)
Art. 29	Protection of Interests of Minorities (includes STs)
Art. 46	The State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.
Art. 350	Right to conserve distinct Language, Script, or Culture; Instruction in Mother Tongue
II. Social Safeguard	
Art. 23	Prohibition of traffic in human beings and beggar and other similar form of forced labour
Art. 24	Forbidding Child Labour
III. Economic Safeguards	
Art. 244	Clause (1) Provisions of Fifth Schedule shall apply to the administration & control of the Scheduled Areas and Scheduled Tribes in any State other than the states of Assam, Meghalaya, Mizoram and Tripura which are covered under Sixth Schedule, under Clause (2) of this article.
Art. 275	Grants in-Aid to specified States (STs & SAs) covered under Fifth and Sixth Schedules of the Constitution
IV. Political Safeguards	
Art. 164(1)	Provides for Tribal Affairs Ministers in Bihar, MP and Orissa
Art. 330	Reservation of seats for STs in Lok Sabha
Art. 337	Reservation of seats for STs in State Legislatures
Art. 334	10 years period for reservation (Amended several times to extend the period)
Art. 243	Reservation of seats in Panchayats
Art. 371	Special provisions in respect of NE states and Sikkim
V. Service Safeguards	
Art. 16(4), 16(4A), 164(B), Art. 335, Art. 320(40)	
VI. Other Safeguards	
Santal Pargana Tenancy Act, 1949	
Chotanagpur Tenancy Act, 1908	
Wilkinson Rule, 1837 (Kolhan Area: East & West Singhbhum and Saraikela Kharsawan)	
PESA: Provisions of the Panchayats (Extension to Scheduled Areas) Act, 1996	
Samata Judgement, 1997	
Forest Act, 2006 (Since 1894)	
The National Food Security Act, 2013	

Annexure 3

Schemes launched by Ministry of Tribal Affairs (MoTA) for Scheduled Tribes

- i) Special Central Assistance to Tribal Sub-Scheme (SCA to TSS); 100% grant (since 1977-78) is utilized for ITDP, ITDA, MADA, PVTG
- ii) Grants in aid under Article 275(1) of the Constitution
- iii) Development of Particularly Vulnerable Tribal Groups (PVTGs)
- iv) Institutional Support for Development & Marketing of Tribal Products/Produce; Tribal Cooperative Marketing Development Federation of India Ltd (TRIFED)
- v) Mechanism for Marketing of Minor Forest Produce (MFP) through Minimum Support Price (MSP) and Development of Value Chain for MFP gatherers
- vi) Support to National/State Scheduled Tribes Finance and Development Corporation
- vii) Various scholarships to ST students
- viii) Scheme for Grant-in-aid to voluntary organizations working for the welfare of Scheduled Tribe,
- ix) Vocational Training in Tribal Area
- x) Support to Tribal Research Institutes (TRIs) and Tribal Festivals, Research Information and Mass Education

Annexure 4

A song sung by Padma Shri Madhu Mansuri, written by Meghnath

*Hum gaon chorab nahi, hum jangal chorab nahi
Aur mai mati chorab nahi, ladai chorab nahi*

*Bandh banale gaon dubale karkhana banale
Jangal kati khadan kodi century banale
Purkhe the kya murakh jo we jangal ko bachaye
Dharti rakhi hari bhari aur nadi madhu bahaye
Tere josh me jal gayi dharti loot gayi haryali
Machli mar gaye panchi ud gaye jane kis dishayen ... phele*

*Are Koyal sukhi Karo sukhi, sukhi Subarnarekha
Damodar bani gandhi nali Sankh kali rekha
Are tu to pibe pepsi kola bisleri ke paani
Hum kaise apni pyaas bujhayen pike kachra paani ... sele*

*Mafia bane company ke dalal hum saja milthini
Aur usko bachane lekar aaye saath me paltani
Apshsar hue hain raja, thikedar hue dhani
Aur gaon humari ban gayi re saheb ke colony ... sele*

**PUBLICATIONS AND PRESENTATIONS BY THE RESEARCHER
IN THE RESEARCH AREA**

- Soren, I. (2019). *Unleashing Rural Economic Potential by Developing Agricultural Marketing*, IJRAR May 2019, volume 6, Issue 2. p. 260-272
www.ijrar.org
- Soren, I. & Kishore, S. (2020). *Start-up problems of SHGs in Income Generating Activities*, IUJ Journal of Management. Vol 8, No. 1, June 2020. p. 160-167
- Soren, I. (2021). *Liquor Selling Women in Dumka district of Jharkhand: A case study*. Journal of Adivasi and Indigenous Studies. Vol. XI, No.1, February 2021: p. 44-54.
- Soren, I. (2018). *Sevak Netritva: Netritva ka ek naya ayam: Servant Leadership (An Essay)*. PRAYAS, Vol. 20, June 2018. RBI, Kolkata.
- Soren, I. (2016). *Rebuilding Tribal Life; A sustainable legacy* (A Magazine article). (2016). Yuva Pragati, An AICUF West Bengal Publication, St. Xavier's College, Kolkata.
- Soren, I. (2020). *Adibasi koak' Arthik Beboatha Sotok' Lahay: Transformation of Tribal Economy* (A Magazine article). HUL SOMBAD, Vol. 22, P. 17-20, December 2020. (A Santali magazine from Dumka).

Presentations and Participations in Conferences:

- Presented a paper on “*Unleashing Rural Economic Potential by Developing Agricultural Marketing*” during a One Day National Conference. Theme of the conference: “Progressive Paradigms and Advances in Business Practices”. T. John College. April 05, 2019.
- Made a presentation on “Indigenous Self-reliance in Jharkhand: A way out of poverty”, organized by IUJ, Ranchi, in May 2017.
- Presented a paper on “Indigenous Self-reliance and Conservation of culture”, Context: Role of museum in education and development, organized by RSV School, Ghosaldanga, Bolpur-Shantiniketan on December 8, 2016.
- Presented a paper on “Tribes and Forest in India”, organized by Hul Baisi (NGO), Dumka, on December 28, 2019, at Johar, Dumka.
- Participated in National Doctoral Conference 2017 on “Trends in Management Research”. IUJ, Ranchi.
