An Evaluation of Women Empowerment Through Government Schemes in Goa: An Empirical Study

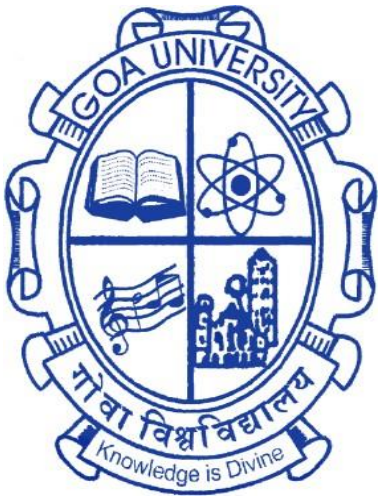
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By

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DECLARATION

I, Dhumatkar Deepa Vishnudas hereby declare that this thesis represents work which has been carried out by me and that it has not been submitted, either in part or full, to any other University or Institution for the award of any research degree.

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CERTIFICATE

I hereby certify that the above Declaration of the candidate, Dhumatkar Deepa Vishnudas is true and the work was carried out under my supervision.

Prof. Subrahmanya Bhat K.M.
Research Guide,
Professor,
V. V. M's Shree Damodar College of Commerce & Economics,
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"विद्या ददाति विनयं विनयाद्याति पात्रताम् । पात्रत्वाद्धनमाप्नोति धनाद्धर्मं ततः सुखम् ॥

Knowledge gives humility, from humility comes worthiness, from worthiness one attains wealth, from wealth one does good deeds, and from that comes happiness.

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DEDICATED TO

MY BELOVED PARENTS

Late SHRI. VISHNUDAS PURUSHOTTAM DHUMATKAR

&

Late SMT. SHANTA VISHNUDAS DHUMATKAR

The words of my parents remain my strength…

"***5 D's for Life:*** When **Duty** guides your path, **Discipline** builds your habits, **Dedication** strengthens your work, **Determination** overcomes your obstacles and **Devotion** anchors your soul-
Success becomes inevitable."

ABSTRACT

Women empowerment has gained global recognition as a multidimensional development paradigm essential for inclusive economic growth and social progress. In India, despite the proliferation of government-led policy interventions targeting gender disparities, the extent to which these schemes have translated into tangible empowerment outcomes at the grassroots level remains a subject of scholarly concern. This study empirically evaluates women empowerment through government schemes in Goa, examining their impact on the social and economic empowerment of women beneficiaries, while investigating awareness levels, demographic influences, moderating effects and practical challenges encountered in scheme utilisation.

The study adopts a descriptive and quantitative research design. Primary data was collected from 603 women beneficiaries across North and South Goa between January 2023 and July 2024 through structured questionnaires, unstructured interviews, and focus group discussions. The schemes examined were categorised into welfare schemes, entrepreneurship schemes, health and maternity schemes. Social empowerment was measured through indicators of social status and security, personal independence and decision-making, while economic empowerment was assessed through financial independence, contribution to family expenses, and investment decisions. Statistical tools employed included descriptive analysis, one-way ANOVA, Structural Equation Modelling using SmartPLS 4, and the Analytic Hierarchy Process for prioritising challenges faced by beneficiaries.

The ANOVA results established that age, education, annual family income, residential area and district significantly influence women's awareness across all three categories of government schemes. Respondents aged 41–60 years demonstrated higher awareness of welfare and entrepreneurship schemes, while those aged 61 years and above recorded the highest awareness of health and maternity schemes. Education emerged as a consistent determinant of awareness across all scheme categories. Marital status significantly influenced awareness of welfare and health and maternity schemes but not entrepreneurship schemes, while occupational status was a significant predictor specifically for entrepreneurship scheme awareness. Annual family income and residential area significantly influenced awareness across all categories, highlighting the compounding disadvantage faced by lower-income and rural women. District-level

analysis confirmed significant differences in awareness between North and South Goa, pointing to intra-state regional disparities as a structural barrier to equitable outreach. Participation in schemes further positively influenced awareness levels, particularly for welfare and entrepreneurship schemes, suggesting that scheme engagement facilitates peer learning and information flow among beneficiaries.

The structural model analysis demonstrated that all three categories of government schemes significantly contribute to both social and economic empowerment. Findings confirmed that both social and economic empowerment significantly contribute to overall women's empowerment, with social empowerment exerting a substantially stronger influence than economic empowerment. This indicates that dimensions such as decision-making ability, personal independence, social security, and self-confidence play a more decisive role in shaping empowerment outcomes than financial independence alone, underscoring the primacy of social transformation in the empowerment process.

The moderation analysis revealed that age and annual family income significantly moderate the relationship between social empowerment and women's empowerment, while their effects on the economic empowerment pathway were insignificant. Marital status, occupation, and education did not emerge as significant moderators for either empowerment dimension. The Analytic Hierarchy Process identified insufficient financial assistance as the most critical barrier to scheme utilisation, followed by inadequate knowledge, delays in disbursement, inadequate institutional support, and limited family support, while political interference and documentation issues were ranked least significant.

The study concludes that government schemes in Goa have meaningfully improved women's social status, decision-making capacity, and economic independence. However, persistent variations in awareness and empowerment outcomes across demographic and geographic groups underscore the need for targeted outreach, simplified procedures, and context-sensitive policy design. The findings offer empirically grounded, region-specific contributions to the academic literature on gender and development, while providing actionable recommendations for policymakers to enhance the inclusivity, accessibility, and sustainability of women's empowerment initiatives in Goa.

TABLE OF CONTENTS

Chapter	Title	Page No.
Chapter 1 : Introduction		**1**
1.1 Introduction		**1**
1.2 Meaning of Empowerment		**2**
1.3 Definitions of Women Empowerment		**2**
1.4 Movement for Women Empowerment in the Indian Context		**4**
1.5 Constitutional Provisions for Protection of Women		**4**
1.6 Legislative Acts for Promoting Women Empowerment		**5**
1.6.1 Legislative Acts for Social Empowerment		5
1.6.2 Legislative Acts for Economic Empowerment		5
1.7 Government Initiatives for the Upliftment of Women		**5**
1.8 Women Empowerment in Goan Context		**6**
1.9 Government Schemes for Women in Goa		**7**
1.9.1 State Schemes for Women		7
1.9.2 Central Schemes for Women		8
1.10 Structural Barriers Faced by Women in India		**8**
1.10.1 Health and Nutrition		8
1.10.2 Education		9
1.10.3 Gender Inequality		9
1.10.4 Economic Participation and Unemployment		9
1.10.5 Violence and Crimes Against Women and Safety Concerns		10
1.10.6 Cultural and Social Barriers		10
1.10.7 Decision Making		10
1.11 Statement of Research Problem		**11**
1.12 Research Questions		**12**
1.13 Research Objectives		**13**
1.14 Significance of the Study		**14**
1.15 Scheme of Chapterisation		**15**
Chapter 1: Introduction		15
Chapter 2: Review of Literature		15
Chapter 3: Research Methodology		16

Chapter 4: Evaluation of Women's Awareness towards Government Schemes.....16
Chapter 5: Analysis of Government Schemes in the Empowerment of Women.....17
Chapter 6: Moderating Effect of Demographics on Women Empowerment through Government Schemes 17
Chapter 7: Challenges Faced by Women Beneficiaries in Availing Government Schemes 17
Chapter 8: Findings, Conclusions and Suggestions.....18
1.16 Chapter Summary 18

Chapter 2 : Review of Literature.....19
2.1 Introduction.....19
2.2 General Studies on Women Empowerment.....20
2.2.1 Conceptualising Women's Empowerment: Definitions and Dimensions 20
2.2.2 Education, Media Exposure, and Socio-Cultural Determinants of Empowerment 21
2.2.3 Economic Empowerment: Employment, Self-Help Groups and Livelihoods.....22
2.2.4 Financial Inclusion, Microfinance, and Digital Banking.....24
2.2.5 Government Policy, Social Assistance and Structural Enablers 25
2.2.6 Health, Nutrition and Wellbeing as Dimensions of Empowerment.....26
2.2.7 Cross-Cutting Themes and Research Gaps.....27
2.3 Demographic Characteristics, Beneficiary Status and Awareness of Government Schemes among Women 28
2.3.1 Demographic Characteristics and Awareness of Government Schemes.....28
2.3.2 Beneficiary Status and Awareness Levels.....30
2.3.3 Empowerment Outcomes and Service Utilisation 34
2.4 Social Empowerment through Government Schemes 36
2.5 Economic Empowerment through Government Schemes 38
2.5.1 Economic Empowerment through Financial Inclusion and Microfinance 39
2.6 Moderating Role of Demographic Attributes in the Relationship between Social and Economic Empowerment and Women Empowerment 40
2.6.1 The Role of Microfinance and Collective Financial Participation 41
2.6.2 Socio-demographic Variables as Moderators of Empowerment.....41
2.7 Challenges faced by Beneficiaries and Implementation of the Schemes 43
2.8 Network Analysis 46

2.8.1 Density Visualisation -All Keywords 47
2.8.2 Network Visualisation - Author Keywords Co-occurrences.....48
2.8.3 Network Visualisation-Countries.....49
2.9 Identification of Research Gap 50
2.9.1 Knowledge Gap 50
2.9.2 Geographical Gap 51
2.9.3 Empirical Gap 51
2.9.4 Methodological Gap.....52
2.10 Chapter Summary 52
Chapter 3 : Research Methodology.....54
3.1 Introduction.....54
3.2 Nature of the Study.....54
3.3 Period of Study 55
3.4 Sources of Data 55
3.4.1 Primary Data 55
3.4.1.1 Structured Questionnaire 56
3.4.1.2 Unstructured Interviews.....56
3.4.1.3 Focus Group.....58
3.4.2 Secondary Data 58
3.4.2.1 Government Reports and Publications.....58
3.4.2.2 Official Websites.....58
3.4.2.3 Academic Literature.....58
3.5 Sampling Design.....58
3.5.1 Study Area.....58
3.5.2 Universe of the Study.....59
3.5.3 Sample Size.....60
3.5.4 Sampling Techniques 61
3.6 Questionnaire Design 64
3.6.1 Questionnaire Layout 64
3.6.2 Constructs Used in the Study.....64
3.6.3 Measurement Scale 66
3.6.4 Content Validity.....67
3.6.5 Pilot Study.....67

3.7 Final Data Collection 72
3.7.1 Data Screening 72
3.7.2 Data Coding 72
3.7.3 Data Validation 73
3.7.4 Response Rate 73
3.8 Theoretical Framework 73
3.9 Conceptual Model 74
3.10 Hypotheses Development 76
3.11 Data Analysis Tools and Techniques 84
3.11.1 Frequency Distribution 84
3.11.2 Descriptive Statistics 85
3.11.3 One Way ANOVA 85
3.11.4 Structural Equation Modeling 86
3.11.5 Analytic Hierarchy Process 88
3.12 Softwares used for Data Analysis 89
3.12.1 Microsoft Excel 89
3.12.2 IBM SPSS Statistics 26.0 89
3.12.3 Smart PLS 4 89
3.13 Government Schemes 90
3.14 Operational Definitions 92
3.14.1 Women Empowerment (WE) 92
3.14.2 Economic Empowerment (EE) 92
3.14.3 Social Empowerment (SE) 92
3.14.4 Government Schemes 93
3.15 Chapter Summary 93

Chapter 4 : Evaluation of Women's Awareness towards Government Schemes 94
4.1 Introduction 94
4.2 Data Analysis and Interpretation 95
4.2.1 Profile of the Respondents 95
4.2.2 Common Method Bias 98
4.2.3 Awareness Level of Government Schemes among Women Beneficiaries 98
4.2.4 Sources of Awareness 103
4.3 Analysis of Variance (ANOVA) 106

4.3.1 Data Analysis of Objective 1a 107
4.3.2 Data Analysis of Objective 1b 119
4.3.2.1 Participation in Welfare Schemes and Awareness 119
4.3.2.2 Participation in Schemes for Entrepreneurship and Awareness 120
4.3.2.3 Participation in Health and Maternity Schemes and Awareness 122
4.4 Chapter Summary 123
Chapter 5 : Analysis of Government Schemes in the Empowerment of Women 124
5.1 Introduction 124
5.2 Data Analysis and Interpretation 125
5.2.1 Assessment of Measurement Model 125
5.2.1.1 Assessment of Internal Consistency, Reliability and Convergent Validity 126
5.2.1.2 Multicollinearity 126
5.2.1.3 Assessment of Discriminant Validity 128
5.2.2 Assessment of Structural Model 132
5.3 Chapter Summary 136
Chapter 6 : Moderating Effect of Demographics on Women Empowerment through Government Schemes 137
6.1 Introduction 137
6.2 Moderation in Structural Equation Modeling (SEM) 138
6.3 Moderation Analysis 138
6.3.1 Interaction Effect of Age 139
6.3.1.1 Simple Slope Analysis of Age as a Moderator between Social Empowerment and Women Empowerment 140
6.3.1.2 Simple Slope Analysis of Age as a Moderator between Economic Empowerment and Women Empowerment 141
6.3.2 Interaction Effect of Marital Status 143
6.3.2.1 Simple Slope Analysis of Marital Status as a Moderator between Social Empowerment and Women Empowerment 144
6.3.2.2 Simple Slope Analysis of Marital Status as a Moderator between Economic Empowerment and Women Empowerment 145
6.3.3 Interaction Effect of Annual Family Income 147
6.3.3.1 Simple Slope Analysis of Annual Family Income as a Moderator between Social Empowerment and Women Empowerment 148

6.3.3.2 Simple Slope Analysis of Annual Family Income as a Moderator between Economic Empowerment and Women Empowerment 149
6.3.4 Interaction Effect of Occupation 151
6.3.4.1 Simple Slope Analysis of Occupation as a Moderator between Social Empowerment and Women Empowerment 152
6.3.4.2 Simple Slope Analysis of Occupation as a Moderator between Economic Empowerment and Women Empowerment 153
6.3.5 Interaction Effect of Education 155
6.3.5.1 Simple Slope Analysis of Education as a Moderator between Social Empowerment and Women Empowerment 156
6.3.5.2 Simple Slope Analysis of Education as a Moderator between Economic Empowerment and Women Empowerment 157
6.4 Chapter Summary 159

Chapter 7 : Challenges Faced by Women Beneficiaries in Availing Government Schemes 160
7.1 Introduction 160
7.2 Theoretical Framework and Justification 161
7.3 Methodological Framework and Data Collection 162
7.3.1 Operationalisation of the AHP Methodology 162
7.3.2 Sampling Strategy and Participant Selection 162
7.3.3 Data Collection Protocol 162
7.4 Analytical Significance and Policy Implications 164
7.5 Process of Identification of Perceived Challenges 164
7.6 Enumeration of Identified Challenges 164
7.7 Data Analysis and Interpretation 166
7.8 Chapter Summary 174

Chapter 8 : Findings, Conclusions and Suggestions 176
8.1 Results and Discussion 177
8.1.1 Relationship between Demographic Characteristics and Awareness Levels among Women Beneficiaries across the Categorised Government Schemes 177
8.1.1.1 District and Awareness 179
8.1.1.2 Age and Awareness 180
8.1.1.3 Education and Awareness 181

8.1.1.4 Marital Status and Awareness 182
8.1.1.5 Occupation and Awareness 182
8.1.1.6 Annual Family Income and Awareness 183
8.1.1.7 Residential Area and Awareness 184
8.1.2 Influence of Participation in Schemes on Awareness Levels among Women Beneficiaries across the Categorised Government Schemes. 185
8.1.3 Impact of Social and Economic Empowerment through Government Schemes on Women Empowerment 187
8.1.4 Moderating Effect of Demographic Attributes on the Relationship between Social and Economic Empowerment with Women Empowerment 189
8.1.5 Challenges Faced by the Women Beneficiaries in Availing the Schemes 190
8.2 Conclusions 191
8.3 Suggestions 194
8.4 Theoretical Contributions 195
8.5 Practical Implications of the Study 195
8.6 Limitations of the Study 196
8.7 Scope for Further Research 197
References 198
Annexures 228
Appendix A : Success Stories 228
Beneficiary of Laadli Laxmi Scheme 229
Beneficiary of Griha Aadhar Scheme 230
Beneficiary of Dayanand Social Security Scheme 231
Beneficiary of Chief Minister's Rojgar Yojana 232
Beneficiary of Prime Minister's Employment Generation Programme 233
Beneficiary of Mamta Scheme 234
Beneficiary of Pradhan Mantri Matru Vandana Yojana 235
Beneficiary of Janani Suraksha Yojana 236
Appendix B : Survey Questionnaire 237
Appendix C : Questionnaire for Challenges Faced by Women Beneficiaries 243
Appendix D : Publications and Papers Presented 244

LIST OF TABLES

Table	Title	Page No.
Table 1.1: Definitions of Women Empowerment		3
Table 3.1: Government officials who provided information about the schemes		57
Table 3.2: Categories of Government Schemes		60
Table 3.3: Final Data Collection		61
Table 3.4: Objective-wise Sample Size		61
Table 3.5: Sample Size Distribution		62
Table 3.6: Constructs and the Statements Used		64
Table 3.7: Measurement Scale		66
Table 3.8: Demographic Profile of the Respondents (N=110)		68
Table 3.9: Reliability and Validity Test of Measurement Model		69
Table 3.10: Coding of Data		72
Table 3.11: Government Schemes		90
Table 4.1: District-wise distribution of Respondents (N=603)		95
Table 4.2: Age Group of Respondents (N=603)		95
Table 4.3: Education of Respondents (N=603)		96
Table 4.4: Marital Status of Respondents (N=603)		96
Table 4.5: Occupation of the Respondents (N=603)		97
Table 4.6: Annual Family Income of Respondents (N=603)		97
Table 4.7: Residential Area of Respondents (N=603)		98
Table 4.8: Awareness Level about the Government Schemes (N=603)		99
Table 4.9: Descriptive Statistics of Government Schemes		100
Table 4.10: Sources of Awareness of Government Schemes		103
Table 4.11: Government Schemes availed by Women Beneficiaries		105
Table 4.12: ANOVA - Age Group and Awareness of Government Schemes		107
Table 4.13: Tukey Post Hoc Results for Age Group across Categories of Government Schemes		108
Table 4.14: ANOVA - Education and Awareness of Government Schemes		109
Table 4.15: Tukey Post Hoc Results for Education across Categories of Government Schemes		110
Table 4.16: ANOVA - Marital Status and Awareness of Government Schemes		111

Table 4.17: Tukey Post Hoc Results for Marital Status across Categories of Government Schemes 111
Table 4.18: ANOVA - Occupation and Awareness of Government Schemes 112
Table 4.19: Tukey Post Hoc Results for Occupation across Categories of Government Schemes 113
Table 4.20: ANOVA - Annual Family Income and Awareness of Government Schemes 114
Table 4.21: Tukey Post Hoc Results for Annual Family Income across Categories of Government Schemes 115
Table 4.22: ANOVA - Residential Area and Awareness of Government Schemes 116
Table 4.23: Tukey Post Hoc Results for Residential Area across Categories of Government Schemes 116
Table 4.24: ANOVA - District and Awareness of Government Schemes 117
Table 4.25: Tukey Post Hoc Results for District across Categories of Government Schemes 118
Table 4.26: Number of Welfare Schemes Adopted by Beneficiaries 119
Table 4.27: ANOVA - Participation in Welfare Schemes and Awareness 120
Table 4.28: Number of Schemes for Entrepreneurship Adopted by Beneficiaries 121
Table 4.29: ANOVA - Participation in Schemes for Entrepreneurship and Awareness ... 121
Table 4.30: Number of Health and Maternity Schemes Adopted by Beneficiaries 122
Table 4.31: ANOVA - Participation in Health and Maternity Schemes and Awareness .. 122
Table 5.1: Internal Consistency Reliability 127
Table 5.2: Fornell-Larcker Criteria 129
Table 5.3: HTMT Ratio 130
Table 5.4: Cross Loadings 130
Table 5.5: Result of Path Coefficient 132
Table 5.6: Results of R^2, Q^2 and f^2 134
Table 6.1: Moderating Effect of Age on the Relationship between Social and Economic Empowerment with Women Empowerment 139
Table 6.2: Moderating Effect of Marital Status on the Relationship between Social and Economic Empowerment with Women Empowerment 143
Table 6.3: Moderating Effect of Annual Family Income on the Relationship between Social and Economic Empowerment with Women Empowerment 147
Table 6.4: Moderating Effect of Occupation on the Relationship between Social and Economic Empowerment with Women Empowerment 151

Table 6.5: Moderating Effect of Education on the Relationship between Social and Economic Empowerment with Women Empowerment 155
Table 7.1: Satty's Scale of Relative Importance 163
Table 7.2: Challenges Faced by Women Beneficiaries and their Description 165
Table 7.3: Saaty-Scale Reciprocal Matrix 167
Table 7.4: Normalised Matrix 169
Table 7.5: Consistency Values 170
Table 7.6: Final AHP Ranking of Challenges 171
Table 7.7: Categorised Challenges 174

LIST OF FIGURES

Figure	Title	Page No.
Figure 2.1: Density Visualisation -All Keywords		47
Figure 2.2: Network Visualisation - Author Keywords Co-occurrences		48
Figure 2.3: Network Visualisation -Countries		49
Figure 3.1: Exponential Discriminative Snowball Sampling Technique		63
Figure 3.2: Conceptual Model of Women Empowerment through Government Schemes		75
Figure 4.1: Awareness about the Government Schemes		102
Figure 4.2: Awareness Sources of Government Schemes		104
Figure 5.1: Structural Model using Smart PLS 4.0		135
Figure 6.1: Simple Slope Analysis of Age x SE →WE		140
Figure 6.2: Simple Slope Analysis of Age x EE →WE		141
Figure 6.3: Moderating Effect of Age on the Relationship between Social and Economic Empowerment with Women Empowerment		142
Figure 6.4: Simple Slope Analysis of Marital Status x SE →WE		144
Figure 6.5: Simple Slope Analysis of Marital Status x EE →WE		145
Figure 6.6: Moderating Effect of Marital Status on the Relationship between Social Economic Empowerment with Women Empowerment		146
Figure 6.7: Simple Slope Analysis of Annual Family Income x SE →WE		148
Figure 6.8: Simple Slope Analysis of Annual Family Income x EE →WE		149
Figure 6.9: Moderating Effect of Annual Family Income on the Relationship between Social and Economic Empowerment with Women Empowerment		150
Figure 6.10: Simple Slope Analysis of Occupation x SE →WE		152
Figure 6.11: Simple Slope Analysis of Occupation x EE →WE		153
Figure 6.12: Moderating Effect of Occupation on the Relationship between Social and Economic Empowerment with Women Empowerment		154
Figure 6.13: Simple Slope Analysis of Education x SE →WE		156
Figure 6.14: Simple Slope Analysis of Education x EE →WE		157
Figure 6.15: Moderating Effect of Education on the Relationship between Social and Economic Empowerment with Women Empowerment		158
Figure 7.1: Relative Magnitude of the Challenges Faced by the Women Beneficiaries		173

LIST OF ABBREVIATIONS

AHP	Analytical Hierarchy Process
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AVE	Average Variance Extracted
BBBP	Beti Bachao Beti Padhao
BPL	Below Poverty Line
CAS	Common Application Software
CDPO	Child Development Project Officer
CEDAW	Convention on the Elimination of All Forms of Discrimination Against Women
CHC	Community Health Centre
CI	Consistency Index
CMRY	Chief Minister's Rojgar Yojana
CR	Composite Reliability
DBT	Direct Benefit Transfer
DIC	District Industries Centre
DITC	Directorate of Industries, Trade and Commerce
DM	Decision Making
DSSS	Dayanand Social Security Scheme
DWCD	Directorate of Women and Child Development
EDC	Economic Development Corporation
EE	Economic Empowerment
FD	Financial Independence
FE	Family Expenses
GAS	Griha Aadhar Scheme
GKVIB	Goa Khadi And Village Industries Board
HTMT	Heterotrait-Monotrait
ICDS	Integrated Child Development Services
IIPS	International Institute for Population Sciences

INV	Investments
IPC	Indian Penal Code
JSY	Janani Suraksha Yojana
KVIC	Khadi and Village Industries Commission
LLS	Laadli Laxmi Scheme
LMP	Last Menstrual Period
MGNREGS	Mahatma Gandhi National Rural Employment Guarantee Scheme
MoHFW	Ministry of Health and Family Welfare.
MS	Mamata Scheme
MSME	Ministry of Micro, Small and Medium Enterprises
NGOs	Non-Governmental Organisations
NHM	National Health Mission
PCM	Pairwise Comparison Matrix
PI	Personal Independence
PMEGP	Prime Minister's Employment Generation Programme
PMMVY	Pradhan Mantri Matru Vandana Yojana
SC	Scheduled Caste
SD	Standard Deviation
SDGs	Sustainable Development Goals
SE	Social Empowerment
SHGs	Self-Help Groups
SSS	Social Status and Security
ST	Scheduled Tribe
UN	United Nations
VIF	Variance Inflation Factor
WE	Women Empowerment

Chapter 1

Introduction

1.1 Introduction

Empowerment of women has gradually emerged as a central concern within the global and national development agendas and has been widely regarded as indispensable for promoting inclusive growth and social justice (Kabeer, 1999; Malhotra & Schuler, 2005). Contemporary development initiatives worldwide increasingly prioritise reducing gender disparities by expanding women's access to education, healthcare, and economic opportunities (Ahmed et al., 2001). International organisations, especially the United Nations (UN), have consistently emphasised the importance of women empowerment in advancing gender equality. The UN has made considerable strides during recent years for the promotion of this cause through the establishment of the Commission on the Status of women and other landmark frameworks, including the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), the Beijing Declaration and Platform for Action (United Nations, 2020). Sustainable Development Goal (SDG) 5 further provides a comprehensive global framework exclusively committed to achieving gender equality and empowerment of women.

Rooted in historical advocacy movements, the concept of women empowerment has evolved from a welfare-oriented approach to the one that places greater emphasis on equity, rights and control of women over resources and their autonomy across social, economic and political spheres (Mahendrawada, 2018). Due to diverse historical milestones, identifying a single origin for this concept remains difficult.

Feminism has developed through four waves, shifting from securing property and voting rights (Norquay & Park, 2006) to advocating for legal equality, and ultimately focusing on individual diversity and intersectional digital activism (Chen, 1995; Xie, 2023). Major global milestones, such as the 1975 International Women’s Year and the 1995 Beijing Conference, further institutionalised commitments to education, health, and political participation (United Nations, 1995; Gemelli, 2018). Currently, empowerment includes economic independence and protection against violence, yet longstanding structural and socio-cultural barriers remain (Poonam et al., 2024). Therefore, achieving complete gender

equality is a complex, multifaceted challenge that requires ongoing, collaborative global efforts across all sectors of society.

1.2 Meaning of Empowerment

The term 'Empowerment' has been widely discussed and examined in academic literature by researchers and other stakeholders in various ways. Yet, arriving at a precise and universally accepted definition remains difficult. This challenge is reflected in the well-known observation by Rappaport (1985), who noted that empowerment is somewhat hard to define explicitly; however, its presence becomes clear when it is observed in practice. This perspective highlights the complex and multidimensional nature of empowerment, which often manifests through changes in individuals' capacities, opportunities, and overall well-being rather than in a single, well-defined concept. As Rowlands (1997) stated, "Empowerment is more than participation in decision-making; it must also include the processes that lead people to perceive themselves as able and entitled to make decisions." Empowerment occurs when individuals can fully utilise the opportunities available to them without facing limitations. It must include not only increased awareness and self-perception but also active steps towards achieving tangible change.

1.3 Definitions of Women Empowerment

Women empowerment is the process of enabling women to gain power, autonomy and agency to actively engage in all areas of society. It focuses on fostering an environment where women can make independent decisions, take control of their lives, and access opportunities, resources, and rights on an equal footing (Kabeer, 1999). The goal of women empowerment is to address and dismantle systemic barriers, discrimination and gender-based inequalities that restrict women's progress and potential. Women empowerment enables autonomy, dismantling inequalities (Batliwala, 1993; shaped by choice (Nussbaum, 1999; Riger, 2002; Ibrahim & Alkire, 2007; Bhattarai & Pant, 2013; Mukherjee, 2015) and supporting gender equality (Hornset & Soysa, et al., 2021; Singh & Das, 2025; Besnier, 2023; Gawel et al., 2024).

Definitions of Women Empowerment have been presented in the **Table 1.1** :

Table 1.1: Definitions of Women Empowerment

Definitions	Source
"A series of experiences in which individuals learn to see a closer correspondence between their goals and a sense of how to achieve them, gain greater access to and control over resources and where people, organisations, and communities gain mastery over their lives".	Zimmerman (1995)
"The expansion in women's ability to make strategic life choices in a context where this ability was previously denied".	Kabeer (1999)
"Empowerment is the capacity to make planned life choices through three inter-related components: resources, agency and achievements".	Kabeer (2001)
"A multi-dimensional process of achieving basic capabilities, legal rights, and participation in key social, economic, political, and cultural domains".	Moghadam & Senftova (2005)
"Presumably if we want to see women empowered, we consider them to be currently dis-empowered i.e. disadvantaged by the way power relations presently shape their choices, opportunities and well-being".	Mosedale (2005)
"Empowerment is central to the processes of maintaining the benefits of women at individual, household, community and broader levels".	Malhotra et al., (2009)
"Empowerment refers to a range of socio-economic activities that focus on strengthening the economic position of poor women, creating confidence among them and extending full support for their all-round development".	Lokhande (2010)
"Women's empowerment is through terms such as options, choice, control, power, decision-making ability, autonomy over one's life and resources, the capacity to influence one's well-being, and the ability to make strategic life decisions".	Mishra & Tripathi (2011)
"Empowerment captures the numerous ways in which envisioned and unintentional changes can enhance the ability of individual women to exercise greater control over their own lives".	Kabeer (2012)
"Empowerment in woman's development is a way of defining, challenging and overcoming barriers in her life through which she increases her ability to shape her life".	Dandona (2015)
"The expansion of choice and strengthening of voice through the transformation of power relations, so women and girls have more control over their lives and futures".	Eerdewijk, et al. (2017)
"Empowerment transforms choices into effective actions that achieve desired outcomes through capability building and decision-making skills".	Sharaunga et al., (2018)
"The creation of an environment for women where they can make decisions of their own for their benefit as well as for society".	Mahara (2022)

Definitions	Source
"The process of increasing women's sense of self-worth, their ability to make their own decisions, and their right to influence change for themselves and others".	Karmakar & Adhikari (2023)

Source: Author's Compilation

1.4 Movement for Women Empowerment in the Indian Context

Women's empowerment in India is a complex journey marked by significant progress alongside ongoing systemic challenges. Currently, women make up about 48.50 percent of the population, a figure expected to increase to 48.80 percent by 2036 (Women & Men in India, 2023). While constitutional mandates and government efforts have promoted education and workforce participation (IIPS & MoHFW, 2021; Ministry of Women and Child Development, 2024), issues such as gender-based violence continue to obstruct full equality (National Crime Records Bureau, 2023). Genuine empowerment requires profound structural changes to enhance overall well-being (Kabeer, 1999; Princy, 2023; Geeta, 2024).

Historically, the status of Indian women has fluctuated. The Vedic era provided educational opportunities, but rising patriarchy eventually confined women to domestic roles (Nogia, 2024). During the medieval period, practices such as sati and purdah intensified marginalisation, despite the efforts of leaders such as Rani Lakshmibai (Roy, 1999; Rani & Parihar, 2021). The colonial period saw reformers such as Raja Ram Mohan Roy and Jyotirao Phule enact landmark laws, including the Sati Abolition Act (1829) and the Widow Remarriage Act (1856) (Chatterjee, 1993). Post-independence, Articles 14–16 of the Constitution established a legal framework for equality, though social and structural barriers persist (Pandey & Parthasarathy, 2019). This evolving commitment reflects India's ongoing quest for a genuinely equitable society.

1.5 Constitutional Provisions for Protection of Women

In modern India, the Constitution includes several provisions to promote gender equality and empower women. It authorises the state to undertake affirmative actions to tackle socio-economic, educational, and political challenges faced by women. Key constitutional protections include equality before the law for women (Article 14), the ban on discrimination based on religion, race, caste, sex, or birthplace (Article 15(1)), and special provisions favouring women and children (Article 15(3)). Additionally, the Constitution guarantees equal opportunity in employment or public office (Article 16), directs policies

to ensure equal rights to an adequate livelihood for all (Article 39(a)), and mandates equal pay for equal work regardless of gender (Article 39(d)). The 73rd and 74th Amendments (1993) reserved seats in local bodies for women. These measures work to reduce systemic barriers and promote women's socio-economic and political progress.

1.6 Legislative Acts for Promoting Women Empowerment

The statutory provisions aimed at promoting women empowerment are as follows:

1.6.1 Legislative Acts for Social Empowerment

Legislative initiatives such as the Hindu Marriage Act (1955) established equality in matters of marriage and divorce, while the Dowry Prohibition Act (1961) sought to address and prevent dowry-related violence, Protection of Women from Domestic Violence Act (2005), Indian Penal Code having sections for crimes against women, Prohibition of Child Marriage Act, (2006) raises the legal age of marriage for girls to 18 years and Commission of Sati (Prevention) Act (1987) are some of the acts that promote social empowerment of women.

1.6.2 Legislative Acts for Economic Empowerment

Legislative initiatives such as the Minimum Wages Act (1948), which establishes minimum wage standards for all workers, including women, across various industries and sectors; the Equal Remuneration Act (1976), which guarantees equal pay for equal work by prohibiting wage and salary discrimination based on gender, thereby promoting workplace gender equality; the Maternity Benefit Act (1961), which grants maternity leave and associated benefits to women employed in various organisations, supporting their health and well-being; and the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act (2013), which provides a legal framework to prevent and address sexual harassment at workplaces, covering both public and private sectors, thus fostering a safer and more equitable work environment.

1.7 Government Initiatives for the Upliftment of Women

The Government of India has repeatedly launched various programs and schemes to improve the status of women across the country. Initiatives such as the Integrated Child Development Services (ICDS) and vocational training schemes have been introduced. The Ministry of Women and Child Development established the Working Women Hostel to provide safe, accessible accommodation for working women, including daycare services for their children, in urban, semi-urban, and rural areas where women have employment

opportunities. The Beti Bachao Beti Padhao (BBBP) focuses on improving the child sex ratio and promoting education and empowerment for girls. Additionally, measures to increase women's access to education and jobs have been implemented. The Pradhan Mantri Matru Vandana Yojana is a maternity benefit scheme that offers direct financial support to pregnant and lactating women to combat undernourishment and support women's socio-cultural progress.

The 2001 National Policy for Empowerment of Women and the National Mission for Empowerment of Women aimed to strengthen processes that promote gender equality, justice, and the comprehensive development of women. Initiatives like the Support to Training and Employment Programme for Women, launched in 1986-87, focus on marginalised, assetless rural women and urban poor. The Mahila E-Haat scheme provides an online platform for women entrepreneurs to market their products. The Stand-Up India Scheme encourages women from scheduled castes, tribes, and minority communities to pursue entrepreneurship by providing bank loans. The Pradhan Mantri Jan Dhan Yojana promotes financial inclusion by improving access to basic banking services for women.

All these efforts aim to economically empower women (Murthy, 2020). Social protection remains crucial for reducing poverty and enhancing economic resilience (Spasova & Ward, 2019). According to Moser (1993) and Duflo (2012), government welfare programs serve a redistributive role, helping marginalised groups and women access resources and opportunities that structural and socio-cultural barriers might otherwise restrict. Thus, policy interventions are not just service providers but also mechanisms to promote inclusive development.

In India, despite post-independence advancements, historical subordination and cultural norms continue to impede progress (Mosse, 2018). Achieving true empowerment requires addressing structural barriers and focusing on education and societal transformation (Murthy, 2020).

1.8 Women Empowerment in Goan Context

Women Empowerment in Goa has developed within a unique socio-cultural context characterised by high literacy rates, improved health indicators, and significant female participation in social and economic spheres (Vignitha et al., 2024). Progressive policy frameworks encompassing education, welfare provision, and livelihood development, implemented through government-civil society partnerships, have driven progress towards

gender equality. Women's involvement in education, formal employment, entrepreneurial activities and community governance reflects ongoing changes in gender norms. However, structural inequalities still exist, evident in unfair employment practices, limited asset ownership, income gaps and increased vulnerabilities among rural and economically marginalised groups (De Souza & Pai, 2012). Therefore, Goa's journey towards women's empowerment highlights a complex interplay between advances and persistent systemic barriers, emphasising the need for continuous policy efforts and locally tailored strategies to strengthen women's agency across the state.

The inclusion of the Goan scenario in the analysis of scheme beneficiaries is crucial as it underscores the regional significance of the research. While national policies provide the overarching framework, the true impact of these schemes can be fully understood only through an examination of their implementation in Goa. Focusing on Goa enriches the discussion by addressing region-specific challenges, patterns of adoption, and the socio-economic effects on women, thereby offering a more nuanced and contextually grounded evaluation of government initiatives. By situating the study within the Goan context, the research enhances its justification, demonstrates the practical implications of policy implementation in a specific regional setting, and renders the findings more pertinent and actionable.

1.9 Government Schemes for Women in Goa

1.9.1 State Schemes for Women

The State government has launched various schemes to enhance women's empowerment by addressing both social and economic development aspects. These include the Laadli Laxmi Scheme (LLS), Griha Aadhar Scheme (GAS), Internship Scheme for students in counselling, psychology, social work, or home science, Goa Village & Municipal Child Committee Grants and Awards Scheme 2014, Foster Care Scheme (Vatsalaya), Goa Scheme for Technical/Vocational Training for Sex Workers and Sexually Abused Women (2013, Prabhat), Mamta—financial incentives for mothers who have girls, Grant-In-Aid Scheme supporting Mahila Mandals/Women’s Self-Help Groups (Swawlambhan), Retirement Benefits for Anganwadi Workers and Helpers, Shelter Home for Women, Scheme for Welfare of Children in Need of Care and Protection, Goa Non-Governmental Organisations Accreditation Guidelines, 2014.

1.9.2 Central Schemes for Women

The Government of India has established a comprehensive framework of centrally sponsored schemes to promote women's empowerment through targeted initiatives in education, health, economic security, and social protection. The schemes include BBBP, ICDS, Pradhan Mantri Matru Vandana Yojana (PMMVY), the Scheme for Adolescent Girls, formerly known as the Rajiv Gandhi Scheme for Empowerment of Adolescent Girls – "Sabla", Child Protection Services / Integrated Child Protection Scheme, Working Women's Hostel, Sakhi-One Stop Centre, the Universalisation of Women Helpline 181, the State Resource Centre for Women, the National Creche Scheme, Swadhar Greh, among many others. Collectively, these Central and State schemes exemplify the nation's and the states' commitment to creating an enabling environment for women to improve their social status, achieve financial independence, and enhance their decision-making capacity.

1.10 Structural Barriers Faced by Women in India

Over recent decades, India has made commendable progress in promoting women's empowerment through constitutional guarantees, legislative reforms, and targeted government initiatives such as BBBP, Ujjwala Yojana, and Mudra Yojana, alongside 33 percent reservations in local governance (Ministry of Women and Child Development, 2024). These measures have implicitly enhanced women's access to education, healthcare, and economic opportunities. Nevertheless, deeply ingrained patriarchal norms, gender-based violence, limited resource access, and persistently low rural labour force participation continue to undermine women's autonomy, particularly among socially disadvantaged groups (Niti Aayog, 2023). Addressing these structural barriers remains crucial for unlocking the full potential of women throughout Indian society. The structural impediments confronting women in India include:

1.10.1 Health and Nutrition

Health is a fundamental determinant of human well-being and economic development; however, gender significantly influences access to healthcare and the quality of experience within health systems. Women frequently encounter substantial obstacles in seeking care, which stem from limited control over financial resources, mobility restrictions, and diminished participation in household decision-making. Furthermore, women face distinct health concerns (Key, 1987; Christopoulos & Tsarna, 2024). The insufficient training of healthcare providers regarding these gender-specific requirements further exacerbates women's vulnerability to serious health risks such as unintended pregnancies, cervical

cancer, malnutrition, child marriage, and adolescent fertility (Kalidhasan & Arumugam, 2020). An inclusive lifecycle approach integrating nutrition, preventive care, and reproductive health services is therefore imperative for enhancing women's overall well-being (Trivedi et al., 2025).

1.10.2 Education

Women make up nearly half of India's population, emphasising the importance of their empowerment (Agnihotri & Malipatil, 2017). Despite advancements in literacy, a significant gender gap persists. Literacy rates have increased, reducing the gender gap from 18.20 percent in 2007–08 to 14.40 percent in 2017–18, but obstacles like poverty, early marriage, and patriarchal norms still hinder girls' education (Women and Men in India, 2023; Psaki et al., 2021). Overall literacy increased from 43.60 per cent in 1981 to 77.70 per cent in 2017, with rural women experiencing notable literacy improvements between 2011 and 2017. Economic disparities persist, with women encountering greater financial hardship and discrimination in education across all age groups (Calvi, 2019; Kingdon, 2007; Gogoi, 2025). While government schemes and microfinance initiatives offer some financial support, accessing resources remains a considerable challenge (Abebe & Kegne, 2023).

1.10.3 Gender Inequality

Gender inequality remains a deeply rooted challenge in India, limiting women's access to education, healthcare, employment, and decision-making opportunities. Structural barriers, wage disparities, and patriarchal norms continue to restrict women's autonomy and participation in the labour force (Desai & Andrist, 2010; Klasen & Pieters, 2015; Arora et al., 2024). However, demographic trends offer cautious optimism. India's sex ratio is expected to increase from 943 in 2011 to 952 in 2036, indicating gradual progress towards gender parity (Women and Men in India, 2023). Achieving genuine gender equality requires inclusive policy measures, expanded educational opportunities, and meaningful societal transformation to ensure women enjoy equal rights, responsibilities, and opportunities at every stage of life.

1.10.4 Economic Participation and Unemployment

Women's increasing labour force participation holds significant potential for boosting India's economic growth and productivity. The Female Labour Force Participation Rate increased notably from 23.30 percent in 2017–18 to 37 percent in 2022–23, yet a significant

gender gap remains, especially in urban areas where the female Worker Population Ratio is just 18.70 percent compared to 55.60 percent for men (Women and Men in India, 2023). These disparities mainly hinder overall development and productivity improvements (Klasen & Pieters, 2015). Tackling these structural inequalities requires targeted policy measures, skill development programmes, and the creation of safe, supportive workplace environments that break down deep-rooted barriers to women's meaningful economic participation (Klasen & Lamanna, 2009).

1.10.5 Violence and Crimes Against Women and Safety Concerns

Gender-based violence continues to represent one of the most serious violations of women's fundamental rights and poses a significant obstacle to the attainment of true gender equality. Practices such as domestic abuse, forced marriage, and child marriage severely limit women's autonomy and undermine both individual well-being and broader societal development (Heise & Kotsadam, 2015). In India, data from the National Family Health Survey indicate that nearly one-third of married women aged 18–49 have experienced emotional, physical, or sexual violence by their spouses, with a modest decline from 33.30 percent in 2015–16 to 31.9 percent in 2019–21. However, this reduction remains substantially inadequate (International Institute for Population Sciences & Ministry of Health and Family Welfare, 2021). These enduring patterns reflect deeply rooted patriarchal attitudes, which necessitate urgent and ongoing legal reforms alongside substantive cultural transformation (Sardinha et al., 2018).

1.10.6 Cultural and Social Barriers

Societal expectations and cultural norms often restrict women to traditional roles, limiting their freedom to pursue education, careers, or personal ambitions. Overcoming these barriers is crucial for achieving gender equality (Ali, et al., 2010; Menhas, 2013). Women frequently lack autonomy over their reproductive health, with decisions about family planning and childbirth often influenced by societal or familial pressures (Berer & Ravindran, 1996; Merali, I. 2001). This absence of agency affects their physical and mental well-being.

1.10.7 Decision Making

Women's involvement in decision-making is crucial for a nation's progress and overall development. Greater participation of women in decision-making processes drives significant societal improvements, positively influencing laws, policies, services,

institutions, and social norms. Women remain underrepresented in political leadership and decision-making roles, both nationally and locally. Data on the percentage of women in the central council of ministers shows that women's representation has fluctuated around 12 percent, reaching its peak in 2015 at 17.8 percent. However, the current percentage in 2023 is 13.7 (Women and Men in India, 2023). This limits their ability to influence policies that directly impact their lives. Achieving gender equality in representative politics is essential not only for ensuring social justice and protecting women's rights but also as a key prerequisite for effective democracy and good governance. This progress strengthens and enhances the democratic system as a whole.

1.11 Statement of Research Problem

Women make up nearly half of India's total population (Census of India, 2011), yet they continue to face deeply rooted inequalities that limit their meaningful participation in economic, social, and political life. As Agnihotri and Malipatil (2017) argue, a country's holistic development remains fundamentally incomplete without addressing women's needs and ensuring equal opportunities across all sectors. While the Global Gender Gap Report 2020 recognises measurable progress in educational and health-related gender parity alongside modest advances in political representation, economic disparities between men and women have paradoxically widened over time (World Economic Forum, 2019). Calvi (2019) also notes that women in India experience significantly greater financial vulnerability than men at various life stages, with economic insecurity becoming particularly acute in old age. In response, the Government of India has introduced various policy initiatives, microfinance programmes, and welfare schemes to improve women's access to financial resources, entrepreneurial opportunities, skill development, and social security. These efforts are designed not only to provide financial support but also to meaningfully enhance women's capabilities, decision-making autonomy, and long-term self-reliance (Kabeer, 2001; Tanima et al., 2020). However, their transformative potential largely depends on access, affordability, and the extent to which beneficiaries can channel available resources towards productive purposes. Despite the expanding reach of these programmes, awareness of schemes and access to financial resources remain significant obstacles, especially for women pursuing entrepreneurial ventures (Abebe & Kegne, 2023).

At the state level, the Government of Goa implements several welfare, health, entrepreneurship, and social security schemes through key departments, including the Directorate of Women and Child Development, Social Welfare, Industries, Trade and

Commerce, Health Services, and the Economic Development Corporation with the explicit aim of improving women's quality of life and promoting gender equality. Nevertheless, substantial gaps persist in awareness, accessibility and utilisation of these schemes across different demographic groups. Low financial literacy, limited household decision-making authority, and prevailing socio-cultural norms further restrict women's ability to fully benefit from available initiatives. Existing scholarly literature has primarily examined women's empowerment through isolated lenses, focusing on either social or economic dimensions independently, without sufficiently exploring their combined influence or the moderating role of demographic variables, such as age, income, education, occupation, and residential area, in shaping empowerment outcomes. Women's empowerment is increasingly recognised both as an important objective in itself and as a crucial pathway for broader economic development. Policymakers and researchers are increasingly interested in identifying programmes that effectively promote women's empowerment. Particular focus has been placed on evaluating whether the growing range of initiatives that allocate resources and support to women are truly successful in improving their social and economic status.

Against this backdrop, the present study seeks to examine women beneficiaries' awareness and utilisation of government schemes in Goa, analysing their contribution to social and economic empowerment, and generating evidence-based insights to help policymakers improve the effectiveness, inclusiveness, and sustainability of women's empowerment initiatives across the state.

1.12 Research Questions

Research questions form the foundation of any study, guiding the investigation and shaping its overall direction (Willis, 2023). They are designed to address specific knowledge gaps, clarify objectives, and provide a structured framework for analysing complex issues (Barroga & Matanguihan, 2022). A research question guides a study's analysis and scope, previewing its variables while providing clear, comprehensive answers in the final discussion (Parathasarathy et al., 2023). In this study, the research questions focus on the impact of government schemes on the social and economic empowerment of women, their awareness of these schemes, and the challenges and barriers women beneficiaries face in accessing them. The research questions were as follows:

RQ 1. Are the women aware of the different schemes offered by the Government?

RQ 2. Are there any steps taken by the government to implement the schemes and to increase awareness about the schemes in the State of Goa?

RQ 3. Which schemes have been availed by majority of women?

RQ 4. Do the demographic variables such as age, education, income, marital status, place of residence, occupation have an impact on the awareness level of women?

RQ 5. Do the awareness levels differ among women beneficiaries based on the number of government schemes adopted?

RQ 6. Is there an impact of the government schemes on the social and economic empowerment of women beneficiaries?

RQ 7. Is there an impact of social and economic empowerment of women on overall women empowerment?

RQ 8. Do the demographic variables play a moderating role between social empowerment, economic empowerment and women empowerment?

RQ 9. Are there any challenges faced by the women in availing the schemes?

RQ 10. Do women have easy access to information on the various schemes of the government?

1.13 Research Objectives

The current research aims to systematically examine the role of government financial schemes in fostering the social and economic empowerment of women in Goa. In view of the persistent challenges women face in achieving equality in opportunities, income, and decision-making, it becomes imperative to analyse how State and Central government initiatives contribute to their upliftment. The objectives of the study are to assess women's awareness of various schemes, evaluate the social and economic empowerment derived from these schemes, examine the moderating role of demographic factors and identify the challenges that hinder effective implementation. These objectives serve as the guiding framework for the research and help in deriving meaningful conclusions and policy suggestions.

Based on the research questions, the following objectives were framed:

Objective 1: To analyse the relationship between demographic characteristics, women beneficiary status and awareness levels among women beneficiaries across different categories of government schemes.

a. To examine the effect of demographic characteristics on awareness levels among women beneficiaries across various categories of government schemes.
b. To assess the impact of women beneficiaries' status on their awareness levels across different categories of government schemes.

Objective 2: To assess the impact of social and economic empowerment through government schemes on women empowerment.

a: To assess the impact of government schemes on the social empowerment of women beneficiaries.

b: To assess the impact of government schemes on the economic empowerment of women beneficiaries.

c: To assess the impact of social and economic empowerment on women empowerment.

Objective 3: To evaluate the moderating effect of demographic attributes on the relationship between social and economic empowerment with women empowerment.

Objective 4: To identify various challenges faced by the women beneficiaries in availing the schemes.

1.14 Significance of the Study

The significance of the present study lies in its focus on assessing the role of government schemes in enhancing the social and economic empowerment of women in Goa. Women's empowerment is widely recognised as a key driver of inclusive growth, poverty reduction, and sustainable development (Kabeer, 2005). Despite multiple welfare and entrepreneurship initiatives, disparities in awareness, access and impact persist, particularly across demographic groups. The study contributes to a deeper understanding of how policy interventions translate into real outcomes for women by analysing both social and economic dimensions of empowerment and examining the moderating role of demographic variables. Furthermore, the research is significant in the context of India's commitment to the Sustainable Development Goals, particularly Goal 5, which emphasises achieving gender equality and empowering all women and girls (United Nations, 2015). Insights will help policymakers strengthen programs and design inclusive strategies.

National progress in India depends on increasing women's participation, with estimates suggesting gender equality could contribute USD 700 billion to the GDP by 2025 (Woetzel et al., 2015). Although Goa boasts superior literacy and human development indicators, structural barriers and insufficient awareness of welfare schemes still restrict women's potential (Government of Goa, 2021). This research evaluates the efficacy of government interventions in translating these indicators into tangible empowerment.

Academically, the study enriches literature by utilising Structural Equation Modeling (SEM) to examine social and economic dimensions, alongside demographic moderators. Practically, it offers evidence-based insights to help policymakers refine scheme delivery and dismantle barriers to access. Ultimately, the findings bridge the gap between academic theory and policy reform, fostering a more inclusive society.

1.15 Scheme of Chapterisation

The study has been organised into eight chapters in order to ensure a systematic presentation of the research. Each chapter is structured to provide clarity and continuity, beginning with the theoretical foundation and review of literature, followed by the research design, analysis of government schemes, and assessment of women's empowerment. The subsequent chapters focus on the moderating effects of demographic variables, challenges faced by women beneficiaries, and finally, the findings, suggestions and conclusion. This logical arrangement facilitates a comprehensive understanding of the study objectives and outcomes.

Chapter 1: Introduction

The chapter provides an overview of the study by introducing the framework of Women Empowerment (WE), including Social Empowerment (SE) and Economic Empowerment (EE). The chapter discusses various definitions of WE, highlighting the challenges and issues faced by women in India, such as limited access to resources, socio-cultural constraints, and economic dependence. It also presents the research problem, research questions, objectives of the research, scope and significance of the study and the chapterisation scheme.

Chapter 2: Review of Literature

The chapter presents a comprehensive review of the existing literature on WE in India, with special reference to government welfare, entrepreneurship, and health and maternity

schemes aimed at improving the social and economic status of women. The chapter synthesises theoretical perspectives to build a strong conceptual foundation for the present study. It discusses key studies that have examined various dimensions of WE, social, economic, and psychological and their interlinkages with government interventions. These identified research deficits establish the rationale for this study, which contributes to academic knowledge by yielding fresh empirical insights and developing an analytical lens applicable to both policy and programmatic contexts.

Chapter 3: Research Methodology

The chapter provides a detailed explanation of the methodology adopted for the research, including the research design, sampling framework and data collection procedures. It elaborates on the target population of women beneficiaries across various government schemes in Goa and describes the sampling technique used to ensure representative, reliable data. It also presents the development and structure of the questionnaire, detailing the variables used to measure SE and EE, awareness levels, and challenges faced by beneficiaries. Furthermore, the chapter discusses the statistical and analytical tools applied in the study, including descriptive statistics, One-way ANOVA to examine differences across demographic groups, Structural Equation Modeling (SEM) to test relationships among constructs, and the Analytic Hierarchy Process (AHP) for prioritising challenges faced by women beneficiaries. The research objectives and hypotheses are clearly articulated, providing a structured foundation for the subsequent chapters and establishing the rationale and direction of the investigation. Additionally, the chapter introduces the study's proposed conceptual framework.

Chapter 4: Evaluation of Women's Awareness towards Government Schemes

The chapter includes a detailed overview of the selected government schemes implemented in Goa, categorised into welfare, entrepreneurship, and health and maternity schemes. The chapter provides descriptive insights into each scheme, including its objectives, target beneficiaries, and benefits. It further examines women beneficiaries' awareness of these schemes. The chapter analyses differences in awareness levels across various demographic groups such as age, education, income, and residential area and across the different categories of schemes by using statistical tools such as descriptive analysis and One-way ANOVA. It lays the groundwork for understanding beneficiaries' knowledge and highlights potential gaps in scheme dissemination and outreach, providing a foundation for

exploring the impact of these schemes on SE and EE in the subsequent chapters.

Chapter 5: Analysis of Government Schemes in the Empowerment of Women

The chapter focuses on the impact of selected government schemes on the empowerment of women beneficiaries by examining both social and economic dimensions. The chapter evaluates SE by considering indicators such as social status, personal independence, and decision-making authority within households, while EE is assessed through financial independence, control over family expenses, and investment decisions. Using statistical tools such as the SEM, the chapter investigates the relationships between scheme participation and empowerment outcomes. It is demonstrated that involvement in welfare, entrepreneurship, and health and maternity schemes has enhanced the overall SE and EE of women beneficiaries, providing empirical evidence of the effectiveness of government interventions.

Chapter 6: Moderating Effect of Demographics on Women Empowerment through Government Schemes

The chapter examines the moderating role of demographic variables in the relationship between social, economic, and WE. The chapter investigates how factors such as age, annual family income, marital status, education, and occupation influence the strength and direction of these relationships, providing insights into differential empowerment outcomes among women beneficiaries. Statistical analysis, including moderation tests within the SEM framework, are employed to determine whether variations in SE and EE translate into significant differences in overall empowerment across demographic categories. The findings of this chapter highlight how empowerment outcomes are shaped not only by participation in government schemes but also by demographic characteristics, thereby offering a nuanced understanding of the contextual factors that facilitate or constrain women's social and economic advancement.

Chapter 7: Challenges Faced by Women Beneficiaries in Availing Government Schemes

The chapter focuses on identifying the practical difficulties and challenges faced by women beneficiaries in accessing and utilising government schemes. The chapter examines a range of barriers, including financial constraints, lack of awareness or information, administrative hurdles, and socio-political factors that limit effective participation in

government schemes. Insights are drawn from respondents' experiences and perceptions, highlighting real-world obstacles encountered during scheme application, implementation and utilisation. The chapter provides a comprehensive understanding of the gaps between policy intent and on-ground execution, offering valuable inputs for improving scheme design, outreach, and delivery mechanisms to enhance the impact of schemes.

Chapter 8: Findings, Conclusions and Suggestions

This chapter presents a comprehensive summary of the study's key findings, linking the empirical results directly to the established research objectives. It highlights the overall impact of government schemes on the social and economic empowerment of women beneficiaries in Goa. The chapter offers practical recommendations for policymakers and stakeholders to enhance scheme design, improve accessibility, and address the practical challenges identified in earlier chapters. It examines the broader practical implications and outlines the study's theoretical contributions and limitations. The chapter concludes with well-rounded conclusions and proposes meaningful directions for future research.

1.16 Chapter Summary

The chapter overviews women's empowerment as part of inclusive development and social justice, tracing its evolution from welfare to rights-based approaches within global milestones like CEDAW, Beijing, and SDG 5. It examines women's historical and current status in India, highlighting constitutional and legislative measures, and contextualises empowerment within Goa's unique socio-cultural landscape, noting both progress and persistent barriers. Key issues include health, education, violence, economic participation, and cultural norms. The chapter identifies gaps in awareness and use of government schemes among women, formulates ten research questions and four objectives to explore their role, and emphasises its importance for policy and gender equality in Goa.

Chapter 2

Review of Literature

The chapter presents a comprehensive review of the existing literature on women empowerment in India, with special reference to government welfare, entrepreneurship, and health and maternity schemes aimed at improving the social and economic status of women. The chapter synthesises theoretical perspectives to build a strong conceptual foundation for the present study. It discusses key studies that have examined various dimensions of women empowerment, social empowerment and economic empowerment and their interlinkages with government interventions. These identified research deficits establish the rationale for this study, which contributes to academic knowledge by yielding fresh empirical insights and developing an analytical lens applicable to both policy and programmatic contexts.

2.1 Introduction

A literature review represents a methodical and critical analysis of extant academic sources relevant to a specified research area. As articulated by Snyder (2019), an effectively organised literature review not only encapsulates previous research but also integrates and rigorously assesses it to establish a cohesive knowledge foundation. A literature review can be comprehensively understood as a systematic procedure for identifying, appraising, and amalgamating existing research in order to construct a coherent understanding of the established knowledge surrounding a particular subject (Baumeister & Leary, 1997; Tranfield, et al. 2003). It acts as an independent scholarly quest and also as a basic element of bigger research endeavours which enable the scholars to conceptualise their investigations within the framework of established academic area. The basic aim of literature review is to outline the gaps in present knowledge, decrease the unnecessary repetition of previous studies, refine inquiries and also guide the selection of suitable methodological strategies. It also facilitates the development of theoretical frameworks (Webster & Watson, 2002) and strengthens the research arguments through evidence-based support. The integration and synthesis of earlier findings help in the creation of innovative practices which ultimately improve the quality and pertinence of emergent research (Torraco, 2005).

The increasing significance of women empowerment at global and national level has attracted sustained scholarly focus. Academicians, financial institutions, researchers and policy makers have collectively acknowledged the multidimensional nature of empowerment which encompasses economic autonomy, social equity and civic engagement. The current review scrutinises selected articles and scholarly studies to bring to light key findings and investigate the women empowerment theoretical frameworks.

Referencing prior research ensures that hypothesis development is anchored and research parameters are distinctly articulated. The broad literature is scrutinised to obtain statistical insights, identify the methodological frameworks employed by preceding researchers and build connections between past and present research. The combination of existing scholarship reveals the gaps in research and promotes nuanced comprehension of the subject matter. The current review establishes a strong foundation for the current study, highlighting its unique and original contributions to the academic field by critically engaging with empirical findings, theoretical constructs and descriptive analysis.

2.2 General Studies on Women Empowerment

2.2.1 Conceptualising Women's Empowerment: Definitions and Dimensions

Women's empowerment is a multi-dimensional, contested, and context-sensitive construct that resists any single universal definition. Scholars across decades have consistently argued that empowerment must be understood as a process rather than a static outcome. (Tyagi & Upadhyay, 2023). offers one of the more expansive conceptualisations, defining women's empowerment as an ongoing process aimed at eliminating gender-based discrimination across all facets of Indian society and fostering women's participation in policy and decision-making at both private and public levels. This process-oriented view aligns with (Priya, et al., 2021), whose bibliometric analysis of 916 articles published between 1999 and 2019 reveals that the field is inherently multidisciplinary, with empowerment understood through the interrelationship between gender equity, measurement, and its diverse consequences which underscores that empowerment cannot be reduced to any single domain.

Across the literature, empowerment is consistently broken down into multiple dimensions. Gupta & Yesudian (2006), drawing on Indian Demographic and Health Survey (DHS) data, construct four indices household autonomy, mobility, attitude towards gender, and attitude towards domestic violence to capture this multidimensionality. Similarly, Kazembe (2020)

develops five indices (self-esteem, decision-making, contraception use, sexual relations, and occupation and earnings) for Namibia, while Rettig, Fick and Hijmans (2020) introduce the Female Empowerment Index (FEMI), covering six domains including violence against women, employment, education, reproductive healthcare, decision-making, and access to contraceptives. Ishfaq, et al., (2023), working from the Pakistan Rural Household Panel Survey, construct an even more granular Rural Women's Composite Empowerment Index (RWCEI) spanning nine domains, fourteen sub-domains, and eighty-nine indicators. Together, these measurement frameworks reflect a shared scholarly commitment to capturing the complexity of empowerment, even as they differ in their specific operationalisations.

A key area of methodological debate concerns how these indices are constructed and whether they reliably capture empowerment as lived experience. Peterman et al. (2021), conducting survey experiments in Ecuador, Yemen, and Uganda, caution that slight variations in indicator construction can produce meaningfully different rankings of women in decision-making and can alter conclusions about program impacts. Their findings raise concerns about social desirability bias and the absence of standardised guidance in the field. Habibov, et al., (2017) further complicate measurement by demonstrating, through data from the Azerbaijan Demographic and Health Survey, that the relationship between sources of empowerment (education, relative earnings) and settings of empowerment (age, community wealth) can be contradictory particularly for women who attain equal or superior educational or earning status compared to their partners. These cautions serve as important reminders that measurement tools must be sensitive to context and intra-household dynamics.

2.2.2 Education, Media Exposure, and Socio-Cultural Determinants of Empowerment

Across diverse geographic and cultural contexts, education emerges as one of the most robust and consistent predictors of women's empowerment. Gupta & Yesudian (2006) find that women's educational level is a crucial predictor across all four dimensions of empowerment in the Indian context. This finding is corroborated in Pakistan by Abbas et al. (2021), who identify education as a key determinant among a broader set of demographic, economic and social variables. Kazembe (2020), analysing DHS data from Namibia, similarly associates education level with improved empowerment outcomes. In Ghana, Boateng et al. (2012) find that tertiary education significantly influences married women's involvement in household decision-making. The cross-national consistency of

education as a predictor is notable, suggesting that investments in girls' education are foundational to any empowerment strategy a point explicitly recommended by Naseer et al. (2021) in the context of Pakistan's Benasir Income Support Program.

Media exposure is another widely documented enabler of empowerment. Gupta and Yesudian (2006) identify media access as a significant predictor for specific empowerment dimensions in India. Baig et al. (2018), in their study of rural Punjab, Pakistan, identify access to television as a significant empowerment factor, while Kazembe (2020) links newspaper access and frequent television viewing to improved empowerment in Namibia. Ishfaq and Kouser (2023) similarly point to mass media exposure as a positive determinant of empowerment in rural Pakistan. These findings collectively position media particularly television as an informal educational tool that can expand women's awareness, aspirations, and ability to challenge restrictive social norms.

Yet education and media exposure cannot be viewed as universal panaceas, as socio-cultural and structural constraints persistently mediate their effects. Zafarullah & Nawas (2019), studying women's empowerment in Bangladesh, note that social and cultural constraints alongside overt conservatism pose significant challenges even as formal employment and microfinance expand opportunities. Rajagopal & Mathur (2000), analysing the Women Development Programme in Rajasthan, emphasise that gender interests cannot be generalised universally, they must be understood within specific cultural and political contexts as part of an ongoing process of identity development and conscientisation. This tension between universal determinants and contextual specificity runs throughout the literature and underscores the need for localised, context-sensitive policy design. Prasad & Dwivedi (2026) and Singh et al., (2019) add a further nuance by demonstrating that language and culture play a crucial role in understanding regional variations in the impact of gender interventions in India.

2.2.3 Economic Empowerment: Employment, Self-Help Groups and Livelihoods

Economic participation whether through formal employment, self-employment, or engagement in livelihood programmes is widely regarded as a critical pathway to women's empowerment. Kandpal & Nautiyal (2023) argue that economic independence is essential for empowering women, while Peresnieto & Taylor (2014), drawing on a review of 70 evaluations of development interventions, define economic empowerment as a transformative process in power, agency, and economic advancement. The consensus

across studies is that income-generating activities enhance not only material well-being but also women's decision-making power and social status within households and communities.

The evidence from formal employment is particularly strong in the South Asian context. Zafarullah & Nawas (2019) document how Bangladeshi women's increasing participation in the ready-made garment manufacturing sector represents consistent strides toward empowerment. Pankaj & Tankha (2010) demonstrate that the National Rural Employment Guarantee Scheme has significantly empowered women across Bihar, Jharkhand, Rajasthan, and Himachal Pradesh through paid employment opportunities, improving economic gains, intra-household dynamics, and addressing gender wage disparities. Similarly, Hazarika & Goswami (2016), examining women engaged in the handloom sector in Assam, find that handloom activities significantly improve intra-household power relations in favour of women and reduce incidents of domestic violence. These studies collectively illustrate the transformative potential of productive employment, particularly in home-based and rural industries, for women who might otherwise be excluded from formal labour markets.

Self-help groups (SHGs) represent another important vehicle for economic and social empowerment. Chatterjee & Ghosh (2012), studying SHGs in West Bengal's North 24 Parganas district, find that self-employment within SHGs offers greater continuity of employment than wage labour, and that training plays a significant role in driving empowerment and employability among group members. Badejo et al. (2017), examining women's self-help groups in Nigeria, find that groups emphasising social, physical, and psychological health strongly encourage women's participation and demonstrate commitment to positive livelihood change. These findings suggest that collectivised, group-based approaches to economic empowerment may be more sustainable and transformative than individual-targeted interventions a point reinforced by Gurney (2022), who, drawing on the Pacific Women Shaping Pacific Development Program, advocates for approaches that include care distribution, leadership, and collective organising as part of a broader, non-financial conception of women's economic empowerment.

Employment in the context of agriculture and natural resources management also attracts scholarly attention. Nath & Athinuwat (2021), focusing on organic farming in Chiang Mai, Thailand, find a moderate level of empowerment among women engaged in organic

farming and stress the importance of addressing all relevant factors comprehensively. Benjamin, et al. (2018), studying agroforestry schemes incorporating payments for ecosystem services in Africa, find that women's participation reduces profit inefficiency, with larger farm owners deriving even greater empowerment benefits. Their recommendation to prioritise impoverished female smallholders reflects a broader equity concern evident across the literature.

2.2.4 Financial Inclusion, Microfinance, and Digital Banking

Financial inclusion encompassing access to credit, microfinance, digital banking, and formal financial services occupies a central and contested place in the women's empowerment literature. Many scholars regard financial access as transformative: Singh & Singh (2022), studying beneficiaries of government social assistance schemes in Punjab's urban slums, find that access to basic credit and financial services substantially enhances household quality of life. Ishfaq et al., (2023) identify access to credit as one of the primary factors associated with high empowerment status among rural women in Pakistan. Hendriks (2019), examining the Bill & Melinda Gates Foundation's financial inclusion strategy, argues that closing the gender gap in financial inclusion is a crucial element of advancing women's economic empowerment globally.

In the specific context of urban working women, Rohatgi, et al. (2023), drawing on 286 responses from women in Delhi-NCR's formal sector, find that digital banking usage is the most significant contributor to women's economic empowerment a finding that positions digital finance as an increasingly important lever in the contemporary urban Indian context. Meanwhile, Datta & Sahu, (2021), studying microcredit borrowers in West Bengal, affirm that engaging with microfinance and utilising credit can positively transform the economic status and empowerment levels of beneficiaries. Alaghbari, et al. (2023), using Structural Equation Modelling (SEM) with data from Yemen, find a significant positive impact of Islamic financial inclusion particularly access and quality of Islamic financial services on women's economic empowerment, though they do not observe a positive effect of usage alone.

Importantly, however, the relationship between financial inclusion and empowerment is not uniformly positive, and several scholars caution against uncritical optimism. Zafarullah & Nawas (2019) acknowledge the microfinance sector's expansion as an opportunity for Bangladeshi women while simultaneously noting that cultural constraints limit its

transformative reach. More critically, Goel & Ravishankar (2022) and Garikpati (2013) find that microcredit loans to women exhibit a significant negative impact on women's participation within the household, suggesting that socio-cultural traditions interact unfavourably with financial inclusion measures when they place women in positions of relative power. This finding challenges the conventional narrative and highlights that financial interventions must be accompanied by broader social and normative change to realise their empowerment potential. Naseer et al. (2021) echo this concern by noting that the majority of Benasir Income Support Program beneficiaries in Pakistan were illiterate rural women, suggesting that cash transfers alone may be insufficient without complementary investments in education and awareness.

2.2.5 Government Policy, Social Assistance and Structural Enablers

The role of the state in enabling or constraining women's empowerment is a recurrent theme across the literature. Singh & Kumar (2012) articulate a nuanced position: while government policies can facilitate the process, reduce structural hurdles, and create an enabling environment for transformation, ultimately it is women themselves who must drive their own empowerment. This perspective aligns with Rajagopal & Mathur (2000), who emphasise that state-sponsored women's programmes in Rajasthan must reckon with the contextual specificity of gender interests rather than applying universal prescriptions. Konwar (2019) traces the evolution of India's Five-Year Plans in addressing women's issues, arguing that science and technology programmes have had a distinctive impact through gender-sensitive, innovative approaches, particularly in empowering rural women.

Cash transfer and social protection programmes represent a particularly active area of policy research. Singh & Singh (2024) find that social assistance schemes in India's urban slums have a direct and substantial impact on poverty alleviation and quality of life. Naseer et al. (2021) explore Pakistan's BISP, finding broad beneficiary support for increased assistance and for women's household decision-making roles, while recommending more generous allowances and expanded girls' education programmes. Pankaj & Tankha (2010) underscore the NREGS as a pathway to greater gender equality and economic empowerment for rural women, particularly through collective mobilisation. Taken together, these studies suggest that well-designed government programmes can serve as catalysts for empowerment but their effectiveness depends heavily on adequate resourcing, inclusive design, and attention to structural inequalities.

The political economy of empowerment is also addressed by Topal (2019), who critically analyses Saudi Arabia's Vision 2030 and argues that the concept of women's empowerment has been strategically deployed as a facade to enhance economic competitiveness and foster foreign integration, rather than to achieve genuine emancipation. This critique that empowerment rhetoric can serve instrumental economic purposes without advancing substantive gender equality resonates with Gurney's (2022) critique of the 'smart economics' rationale in Pacific development programming. These critical perspectives caution against equating women's economic participation with empowerment, and call for deeper attention to the non-financial dimensions of women's lives, including care work, collective agency, and political voice.

2.2.6 Health, Nutrition and Wellbeing as Dimensions of Empowerment

A strand of the literature examines the relationship between women's empowerment and health or nutritional outcomes a relationship that is acknowledged as significant but often ambiguous and context-specific. Narayanan et al. (2021), drawing on in-depth interviews with women in rural Bangladesh and India, found that the factors enabling satisfactory nutritional outcomes for women and their children extend beyond standard empowerment measures. To address this gap, they introduced the concept of 'women's nutritional empowerment' and developed the Women's Empowerment in Nutrition grid a novel framework that formalises nutrition-focused definitions of empowerment and provides tools for policy design. This represents an important conceptual contribution that extends the scope of empowerment beyond economic and social domains to include bodily wellbeing.

The link between empowerment and health service utilisation is examined by Sebayang et al. (2022) in the Indonesian context, where they found that labour-force participation and women's knowledge level are associated with postnatal care utilisation, and that decision-making power is associated with early postnatal care though these associations are moderated by place of birth and infant characteristics. Similarly, Boateng et al. (2012) find that wealthier married Ghanaian women are more likely to participate in healthcare decision-making. These findings collectively indicate that empowerment and health outcomes are mutually constitutive: empowerment facilitates health-seeking behaviour, and improved health and knowledge deepen women's agency. Winther et al. (2017), examining the relationship between electricity access and women's empowerment across a range of methodologies, found that while electricity benefits both men and women, its

specific impact on gender relations remains unclear, highlighting the need for frameworks that can tease apart the gender-differentiated effects of infrastructure investments.

2.2.7 Cross-Cutting Themes and Research Gaps

Several cross-cutting themes emerged from the foregoing synthesis. First, there is near-universal agreement that empowerment is multidimensional and must be measured accordingly and single-indicator approaches risk obscuring the complexity of women's agency and the trade-offs between domains. Second, despite the breadth of contexts examined from urban India (Rohatgi et al., 2023; Gupta & Yesudian, 2006) to rural Pakistan (Ishfaq & Kouser, 2023; Abbas et al., 2021), Ghana (Boateng et al., 2012), Nigeria (Badejo et al., 2017), the Pacific (Gurney, 2022), Namibia (Kazembe, 2020), Saudi Arabia (Topal, 2019), and beyond, certain determinants recur with notable consistency: education, access to income, media exposure, and social networks. Third, there is broad agreement that structural conditions including cultural norms, patriarchal institutions, and inadequate policy implementation can substantially limit the empowerment potential of even well-designed interventions (Zafarullah & Nawas, 2019; Garikpati, 2013 ; Singh & Kumar, 2012).

Methodologically, the field has advanced considerably, with researchers employing exploratory and confirmatory factor analysis (Rohatgi et al., 2023; Singh &Singh, 2024; Ishfaq & Kouser, 2023), structural equation modelling (Alaghbari et al., 2023), multilevel regression (Kazembe, 2020), binary and ordinal logistic regression (Abbas et al., 2021), and mixed methods (Peresnieto & Taylor, 2014). Yet as Peterman et al. (2021) caution, methodological choices in indicator construction are consequential and the field lacks standardised guidance. There is also a need for greater attention to sub-national variation addressed by Rettig et al.'s (2020) female empowerment index, which demonstrates substantial geographic heterogeneity within Nigeria and to the intersectional dynamics of caste, class, religion, and age that mediate empowerment outcomes.

Finally, several scholars highlight the importance of moving beyond economic metrics to capture the full breadth of women's empowerment. Gurney (2022) and Narayanan et al. (2022) similarly push for frameworks that go beyond market participation to include care, nutrition, and collective agency. These calls suggest that the next frontier in empowerment research lies in developing more holistic, intersectional, and justice-oriented frameworks

capable of capturing what it means for women to thrive not merely to participate in economic and social life.

2.3 Demographic Characteristics, Beneficiary Status and Awareness of Government Schemes among Women

Women's empowerment through government schemes is fundamentally influenced by the extent to which women are aware of such schemes and are able to access their benefits. Awareness acts as the first gateway to participation and utilisation and it is shaped by a range of demographic and socio-economic factors. The literature highlights that demographic characteristic such as age, education, marital status, occupation, income, and social background significantly influence women's awareness levels and beneficiary status across different categories of government schemes. Understanding this relationship is crucial for evaluating the effectiveness of policy interventions aimed at empowering women.

2.3.1 Demographic Characteristics and Awareness of Government Schemes

Demographic attributes play a critical role in determining women's exposure to information and their ability to comprehend and navigate government welfare and financial schemes. Various studies highlight the role of factors such as age, gender, education, and socioeconomic status in shaping awareness levels. These variables can either facilitate or hinder the dissemination of information about government initiatives, impacting their overall effectiveness and reach. The following sections delve into specific demographic factors and their impact on awareness of government schemes.

Education has consistently emerged as one of the most influential factors affecting awareness levels. Women with higher educational attainment are more likely to access information through formal channels, understand eligibility criteria, and engage with institutional processes required for scheme enrolment. Studies conducted in the Indian context reveal that education enhances women's confidence in interacting with administrative systems and improves their awareness of social protection and financial schemes (Pal et al., 2022; Raj et al., 2025). In Andhra Pradesh, literacy status was a major determinant of awareness about Rythu Bharosa Kendra's programs (Raja et al., 2024). Higher educational attainment often correlates with better access to information and understanding of scheme benefits. Gender disparities in awareness are evident in several contexts.

Age is another important demographic determinant influencing awareness. Younger women, particularly those exposed to digital platforms and formal education, tend to have greater access to information related to government initiatives. Conversely, older women, especially in rural or informal settings, often rely on interpersonal networks and local intermediaries for information, which may limit both the accuracy and reach of scheme-related knowledge (Besamusca et al., 2015). In Moradabad, older individuals (aged 60+) exhibited greater awareness of the Pradhan Mantri Jan Arogya Yojana than younger age groups (Jain et al., 2019). Similarly, in West Bengal, the elderly population showed significant awareness of old age pension schemes (Mondal et al., 2024). This trend suggests that older individuals may have more interest or need for certain government schemes, leading to higher awareness levels. This age-based disparity suggests that awareness campaigns need to be tailored to different life stages to ensure inclusivity.

Marital status further affects women's awareness and access to schemes. Married women often gain information through spouses, self-help groups, or community networks, while unmarried, widowed, or single women may face informational isolation. Research indicates that single-parent or female-headed households experience unique barriers in accessing welfare information due to social stigma and reduced institutional engagement (Bogoni, 2023). These findings underscore the intersection between demographic status and social norms in shaping awareness levels.

Occupation and income also significantly influence awareness. Women engaged in formal employment or entrepreneurial activities are more likely to encounter information related to financial inclusion, entrepreneurship schemes, and social security programs. In contrast, women working in informal or unpaid roles often remain excluded from information dissemination mechanisms tied to workplaces or financial institutions (Kumar & Srivastava, 2024). Empirical studies on financial inclusion in India suggest that income stability and occupational status enhance women's interactions with banks and government agencies, thereby increasing their awareness of schemes (Pal et al., 2022).

It was also observed that awareness of schemes differed by gender. In Pakistan, female awareness of e-Government services was notably lower than that of males, highlighting gender-based barriers in accessing information (Zaidi et al., 2017). Conversely, in Delhi, females utilised social welfare schemes more than males, indicating that awareness does not always translate to utilisation (Goswami et al., 2019).

It was evident that socio-economic status played a crucial role in awareness levels. In West Bengal, individuals with higher socioeconomic status were more likely to be aware of their eligibility for PMJAY (Parisi et al., 2022). Similarly, in Telangana, socio-economic class was a significant factor in awareness and utilisation of social welfare schemes among the elderly (Bogam et al., 2023). These findings suggested that economic resources can facilitate access to information and services.

Regional differences also affected awareness levels. Awareness of the Pradhan Mantri Jan Arogya Yojana varied significantly across states in India, with lower levels in Meghalaya and Tamil Nadu (Parisi et al., 2022). Such variations may be due to differences in local government outreach efforts or cultural factors affecting information dissemination. While demographic variables such as age, education, gender, and socio-economic status significantly impact awareness of government schemes, it is essential to consider the broader context. Factors like regional differences and local government initiatives also play a crucial role in shaping awareness levels. Addressing these disparities requires targeted outreach and education efforts to ensure equitable access to information and benefits across all demographic groups.

2.3.2 Beneficiary Status and Awareness Levels

Beneficiary status is both an outcome and a determinant of awareness. Women who have previously benefited from government schemes tend to show greater awareness of other related programmes due to repeated interactions with administrative systems and peer networks. This cumulative advantage creates a cycle wherein beneficiaries become more informed and better positioned to access additional schemes. However, non-beneficiaries, particularly first- time applicants, often face informational and procedural barriers that prevent them from entering the system. The relationship between awareness and beneficiary status is neither linear nor automatic. Conceptually, becoming a beneficiary involves multiple stages: exposure to information about a scheme, comprehension of eligibility criteria and application procedures, navigation of administrative systems, and sustained engagement to receive benefits. Each stage is mediated by individual characteristics (education, literacy, economic status), social structures (caste, community networks, household dynamics), and institutional factors (frontline worker capacity, documentation requirements, program design). This review adopts a socio-ecological framework to understand how these multilevel factors interact to shape both awareness and effective access.

The literature on beneficiary status and awareness has evolved from descriptive facility-based studies documenting utilisation rates to more rigorous evaluations employing randomised designs and national datasets to identify causal determinants and equity gaps. Early studies focused on measuring awareness levels and utilisation patterns for specific schemes in localised settings. More recent work has shifted toward understanding structural barriers, particularly caste-based discrimination, wealth inequities, and implementation failures that prevent awareness from translating into beneficiary status. This review synthesises these diverse strands of evidence to present a coherent narrative of what is known, where findings converge or diverge, and which critical questions remain unanswered.

Studies examining maternity benefit schemes, such as Janani Suraksha Yojana, reveal that awareness among beneficiaries is significantly higher than among non-beneficiaries, primarily due to direct engagement with health workers and institutional support structures (Abrar & Malik, 2022). Similarly, evaluations of pro-poor maternity schemes in Tamil Nadu indicate that women who accessed benefits were more informed about entitlements and related health services than those who did not participate (Balasubramanian & Ravindran, 2012).

However, beneficiary status is not uniformly distributed across demographic groups. Women from marginalised communities, including those with lower education levels, irregular incomes, or belonging to socially disadvantaged groups, are less likely to become beneficiaries despite eligibility. This highlights a critical gap between policy intent and actual outreach, where awareness acts as a mediating factor between demographic characteristics and beneficiary inclusion. Empirical measurement of awareness and beneficiary status reveals substantial heterogeneity across schemes, populations, and geographic contexts. Studies employ varied methodologies facility-based surveys, community household surveys, and program administrative data each with distinct strengths and limitations.

Manjula et al. (2016) conducted a facility-based study among postnatal women at a tertiary care centre in Bengaluru, measuring awareness and utilisation across four maternity benefit schemes. Their findings illustrate the scheme-specific nature of awareness, wherein a wide variation in awareness levels and scheme utilisation within a single facility and population

underscores that awareness and utilisation are not uniform constructs but depend heavily on program visibility, communication strategies, and perceived benefit value.

A critical distinction emerges between nominal awareness recognising a scheme's name and procedural knowledge of eligibility, application processes, and entitlements. Khes et al. (2017) studied JSY beneficiaries in urban slums of Raipur and found that while most mothers knew about the cash benefit component, they lacked knowledge of other services bundled under JSY, such as free transport and postnatal care. This partial awareness limits women's ability to claim full entitlements and suggests that information campaigns often emphasise financial incentives at the expense of comprehensive service packages.

Population-level studies reveal further complexity. Harsha et al. (2024) in their study through a community survey in Bapatla district, Andhra Pradesh, reported an overall awareness index of approximately 60 percent for women and child development programs, with most respondents classified at a "medium" awareness level. This finding suggests substantive but incomplete reach in rural settings, where information flows may be constrained by limited literacy, media exposure, and frontline worker capacity.

The gap between awareness and actual beneficiary status is starkly illustrated by Sahoo, et al., 2023) through a household survey of the Biju Swasthya Kalyan Yojana health insurance scheme in Khordha, Odisha. While 79.30 percent of sampled households possessed scheme cards, only 12.6 percent of cardholders had actually used the card, and merely 10.67 percent received benefits. This dramatic attrition from entitlement to utilisation highlights that possession of documentation does not guarantee effective access, and that operational barriers at the point of service delivery can nullify awareness gains.

Perhaps most compelling is experimental evidence from a randomised evaluation of trained outreach agents in South India (Berg et al., 2017). The study found that incentivised agents significantly increased household awareness of multiple schemes but did not increase overall application submissions or benefit receipt. Scheme-specific effects occurred only for a few newer or specially targeted programs. The study by Reddy et al. (2022) found that there is a large exclusion error in targeted programmes, which have mostly excluded the poor and the needy. This finding challenges the assumption that awareness is the primary bottleneck and suggests that administrative complexity, documentation requirements, and perceived costs of application may be equally or more important barriers to becoming a beneficiary.

Taken together, these measurement studies establish several key patterns. First, awareness levels vary widely by scheme, ranging from near-universal recognition of flagship programs to minimal knowledge of smaller or newer initiatives. Second, awareness is often partial, focusing on monetary benefits rather than comprehensive entitlements. Third, the conversion rate from awareness to beneficiary status is highly variable and mediated by operational factors. Fourth, experimental evidence indicates that information provision alone is insufficient to drive uptake, pointing to the need for interventions that address administrative and structural barriers.

The literature suggests that awareness levels vary significantly across different categories of government schemes. Welfare schemes that provide direct cash transfers or food security benefits tend to have greater visibility due to their immediate relevance to household survival. In contrast, entrepreneurship and financial schemes often require greater informational and procedural engagement, resulting in lower awareness among women with limited institutional exposure (Sajna & Dharmaraj, 2024).

Health and maternity schemes generally exhibit higher awareness levels, particularly in regions where frontline health workers actively disseminate information. Evidence from maternal health programs indicates that institutional outreach through healthcare systems is effective in increasing awareness and utilisation among women beneficiaries (Shrivastava et al., 2023; Bhatt et al., 2018). Nonetheless, awareness remains uneven across regions and demographic groups, suggesting that outreach mechanisms are not uniformly effective.

Entrepreneurship and livelihood schemes, although central to economic empowerment, often suffer from low awareness among women, especially those outside formal education or business networks. Studies focusing on awareness of entrepreneurship schemes among students and MSME beneficiaries indicate that even educated groups may lack comprehensive knowledge of available government support (Dhanapal et al., 2024; Sajna & Dharmaraj, 2024). This gap is further amplified for women in informal and rural settings.

The reviewed literature clearly establishes that demographic characteristics significantly influence women beneficiaries' awareness levels. Factors such as education, age, marital status, occupation, and income shape women’s access to information and their ability to engage with government schemes. Additionally, beneficiary status itself plays a crucial role

in enhancing awareness. Women who have already accessed schemes are more likely to be informed and empowered to utilise additional benefits.

Despite these insights, the literature also reveals significant shortcomings. Most studies focus on individual schemes or specific demographic groups, with limited comparative analysis across government scheme categories. Regional disparities remain underexplored, particularly in smaller states such as Goa. There is also a lack of integrated empirical models that simultaneously examine demographic characteristics, beneficiary status, and awareness levels across multiple scheme categories.

2.3.3 Empowerment Outcomes and Service Utilisation

A central question in the literature is whether scheme awareness and beneficiary status translate into broader empowerment outcomes for women, including improved health, economic security, decision-making power and social status. The evidence is mixed, with some schemes demonstrating measurable improvements in service utilisation and intermediate outcomes, while others show limited impact on deeper empowerment dimensions.

Service utilisation improvements are the most consistently documented outcome. The Pradhan Mantri Matru Vandana Yojana evaluation (Banerjee et al., 2025) found that women beneficiaries had significantly higher odds of completing four or more antenatal visits, registering the birth, and ensuring child immunisation than non-beneficiaries. These findings suggest that enrolment in maternal health schemes is associated with improved engagement with the health system, likely through a combination of financial incentives, increased contact with health workers, and heightened awareness of service availability. Similarly, Janani Suraksha Yojana has been credited with increasing institutional delivery rates at the population level, though equity gaps persist (Mohan & Ramanathan, 2023).

Economic outcomes are less well documented. Participation in the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGA) provides wage income and employment security, thereby enhancing women's economic status and bargaining power within households. However, the literature reviewed here does not provide rigorous estimates of MGNREGA's causal impact on women's income, savings, or consumption. Conditional cash transfers for girls may improve educational enrolment and delay marriage, but the Haryana evaluation (Krishnan et al., 2014) found limited evidence of sustained behaviour change or shifts in gender norms.

Decision-making power and autonomy are critical dimensions of empowerment but are rarely measured systematically in scheme evaluations. Sabherwal et al. (2019) note that even when cash reaches women's bank accounts through the Direct Benefit Transfer (DBT) system, their control over spending may be limited by household dynamics. Qualitative evidence from the PMMVY evaluation similarly indicates that women did not always control how cash incentives were used, with funds sometimes diverted to non-health household expenses. This suggests that financial transfers alone do not automatically enhance women's autonomy; complementary interventions addressing household gender relations and women's confidence are necessary (Jagannath & Chakravarthy, 2025; Nawale et al., 2020)

Social status and empowerment outcomes are the most difficult to measure and demonstrate. The Haryana CCT evaluation found that despite some improvements in intermediate indicators, there was no clear shift in societal mindset regarding girls' value. This finding underscores the limitations of cash transfers as tools for social change in the absence of broader normative interventions. Schemes that aim to change deep-rooted cultural practices such as son preference, early marriage, or restrictions on women's mobility require sustained, multi-pronged approaches that engage communities, religious leaders, and social institutions (Biswas & Das, 2023).

Government schemes demonstrate measurable improvements in service utilisation and some intermediate outcomes, but evidence of deeper empowerment effects particularly regarding autonomy, decision-making power, and social status is limited and mixed. Realising the empowerment potential of welfare schemes requires attention to program design features (conditionalities, benefit levels, delivery mechanisms), complementary interventions (financial literacy, gender sensitisation, community mobilisation), and structural barriers (household dynamics, social norms, institutional discrimination) that mediate the translation of benefits into empowerment.

This synthesised narrative review examines the complex relationship between beneficiary status and awareness of government welfare schemes among women in India. Drawing on facility-based studies, population surveys, randomised evaluations, and national datasets, the review reveals a multifaceted landscape in which awareness is necessary but insufficient for becoming a beneficiary, and in which socio-economic stratification systematically shapes both knowledge and access. While existing research underscores the importance of

demographic factors and beneficiary status in shaping awareness of government schemes, it also highlights substantial gaps in coverage, scope, and methodological rigour. These gaps justify a comprehensive, state-specific investigation into the relationships among demographic characteristics, beneficiary status, and awareness levels among women beneficiaries across different categories of government schemes, which serves as the foundation for the present study.

2.4 Social Empowerment through Government Schemes

Women's empowerment is widely understood as a multidimensional construct spanning economic, social, political, and psychological domains, with economic and social dimensions functioning as its foundational pillars (Mehdi et al., 2022; Malik, 2020). Central to this understanding is the concept of agency, the capacity to make strategic life choices which scholars consistently distinguish from mere resource access (Desai, 2018). Importantly, empowerment dimensions are deeply interconnected: economic gains strengthen household decision-making and social standing, while education and skills training simultaneously expand both economic and social opportunities (Namreen et al., 2023; Suresh & Sivakumar, 2024; Shah, 2024).

Within this multidimensional framework, government schemes have emerged as critical instruments for advancing women's empowerment by dismantling structural barriers and expanding agency. Across diverse geographical and programme contexts, evidence consistently demonstrates that targeted interventions, including cash transfers, employment programmes, financial inclusion initiatives, and skill development support, meaningfully improve women's status and well-being. However, scholars broadly agree that outcomes are neither uniform nor automatic, varying considerably by programme design, contextual factors, and implementation quality.

A central concern running through the literature is the gap between the existence of government welfare schemes and their meaningful impact on women's empowerment, a gap shaped by awareness deficits, implementation failures, and structural inequalities. Scholars converge on the view that policy design alone is insufficient without attention to access, literacy, and institutional delivery.

The problem of awareness is identified early in the discourse. Panakaje et al. (2021) found that minority women in rural India demonstrate critically low awareness and utilisation of government welfare schemes, arguing that this ignorance, rather than scheme inadequacy,

is a primary obstacle to empowerment. This finding resonates with the broader critique offered by Gurtoo & Jha (2014), who, examining India's performance relative to other Asia-Pacific nations, concluded that the country consistently underperforms on social welfare indicators despite robust economic growth. Crucially, they highlight that female participation and access to welfare programs remain disproportionately neglected, pointing to a systemic rather than incidental exclusion of women from these benefits.

This concern with access and effective delivery extends to specific programmatic evaluations. Husain et al. (2026), examining the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in Balrampur district, Uttar Pradesh, found that while beneficiaries showed modestly higher scores across economic, social, and political empowerment indices compared to non-beneficiaries, the overall differences remained small. The authors attribute these limited gains to low awareness, irregular work, delayed wage payments, and implementation gaps, conclusions that directly echo the structural critiques of Gurtoo & Jha (2014) and the awareness deficit documented by Panakaje et al. (2021). Together, these studies suggest a consistent pattern: schemes produce modest gains but fall short of transformative empowerment because of recurring institutional failures.

Beyond large-scale state programs, the literature also examines targeted financial assistance. Naseera et al. (2020), studying Pakistan's Benazir Income Support Program, found that a substantial majority of beneficiaries were rural, illiterate women dependent on labour income, precisely the demographic most vulnerable to disempowerment. Notably, respondents broadly agreed that financial assistance thresholds should be higher and that women should participate more actively in household decision-making, suggesting that while conditional cash transfers generate aspirational empowerment, their monetary value may be too low to produce substantive change. This parallels the MGNREGS findings of Husain et al. (2026), reinforcing a cross-national consensus that financial assistance schemes raise awareness of entitlements but require stronger financial commitments and stronger implementation infrastructure to deliver meaningful empowerment.

Microfinance and savings-based mechanisms represent an alternative strand within the literature, with somewhat more optimistic conclusions. The study on SHGs among Muslim and non-Muslim women in India found that microfinance delivered greater knowledge and social empowerment than economic empowerment, with outcomes manifesting as

increased confidence, skill development, and courage rather than measurable income gains. This is a nuanced finding: microfinance does not straightforwardly translate to financial independence but reshapes women's social and cognitive capacities. Pal et al. (2022) complement this view, demonstrating that participation in financial decision-making at the household level and access to social welfare schemes significantly affect women's empowerment through financial inclusion, though the safety of savings alone proved statistically insignificant. Kushwah & Singh (2021) further qualify the optimism by noting that women entrepreneurs who accessed loans experienced meaningful empowerment in some domains, yet continued to struggle with autonomous decision-making across personal, familial, and social spheres an observation that underscores the persistence of patriarchal norms even after financial access is secured.

A distinct contribution comes from Asif et al. (2023), who shifted the focus to savings-oriented instruments, particularly the Mahila Samman Savings Certificate and the Sukanya Samridhi Yojana. and highlight the design advantages of certain scheme architectures, implicitly suggesting that some instruments are structurally better suited to empowering women than others.

Taken together, the literature reveals a consistent set of tensions: between scheme design and scheme delivery; between economic empowerment and social or psychological empowerment; and between the modest gains that schemes demonstrably produce and the transformative outcomes that theory promises. Whether examining employment guarantees, conditional cash transfers, microfinance, or savings instruments, scholars broadly agree that financial access is a necessary but insufficient condition for women's empowerment, and that deeper institutional reform, sustained awareness campaigns, and culturally sensitive implementation are indispensable complements to any policy intervention.

2.5 Economic Empowerment through Government Schemes

Economic empowerment is commonly conceptualised as women’s ability to access income, employment, assets, credit, and financial decision-making. Government schemes promoting financial inclusion, entrepreneurship, self-employment, and livelihood generation are central to this dimension. The literature provides strong evidence that economic empowerment enhances women’s autonomy, reduces poverty, and contributes directly to women empowerment outcomes (Pal et al., 2022).

Financial inclusion initiatives such as access to bank accounts, credit facilities, and savings mechanisms have been shown to improve women's control over financial resources and household expenditure patterns. Empirical studies in India demonstrate that women who participate in formal financial systems exhibit higher levels of confidence, independence, and decision-making authority (Pal et al., 2022). Entrepreneurship-focused schemes further amplify these effects by enabling women to generate independent income and develop market-oriented skills (Rado & Thongmak, 2022).

Government-supported entrepreneurship programs also play a critical role in fostering economic empowerment by addressing barriers such as lack of capital, training, and market access. Research on women-owned microenterprises highlights that institutional support enhances business sustainability and income stability, thereby strengthening women's economic agency (Banu et al., 2024; Mishra et al., 2021). These outcomes are particularly significant in informal and rural economies, where women's employment options are otherwise limited.

Despite these positive impacts, several studies caution that economic empowerment through schemes may be constrained by structural inequalities. Limited asset ownership, unequal access to credit, and gender biases in financial institutions continue to restrict women's economic opportunities (Abdulai, 2025; Beketnova, 2020). Additionally, the effectiveness of economic schemes often depends on complementary factors such as financial literacy, education, and social support networks.

2.5.1 Economic Empowerment through Financial Inclusion and Microfinance

A substantial body of literature examines economic empowerment through financial inclusion and microfinance, with broad consensus that access to credit, savings, and financial services positively impacts women's economic autonomy. Pal et al. (2022), studying rural Gujarat, found that women's earning status, involvement in financial decision-making, and receipt of social welfare schemes significantly influenced empowerment through financial inclusion. Lal (2021) similarly demonstrated that financial inclusion directly and significantly impacts economic development among marginalised communities, mediated by socio-economic empowerment. Bhatia & Dawar (2023) extended this argument, finding that economic empowerment partially mediates the relationship between financial inclusion and women's social and political empowerment, underscoring the cascading effects of economic gains across empowerment dimensions.

Microfinance programmes across diverse contexts echo these findings. Islam (2021), examining Islamic microfinance in rural Bangladesh, found significant positive impacts across economic, socio-cultural, and familial empowerment dimensions. Al-shami (2018) and Al-Mamun et al., (2014), both studying Malaysia's Amanah Ikhtiar Malaysia programme, found positive associations between microcredit access and women's monthly income, household decision-making, and mobility. Mengstie (2022) further confirmed that microfinance substantially improves women's independent income, asset possession, savings, and entrepreneurship development. Ismail (2001), however, offered a more cautious assessment, noting that AIM loans were not universally successful in lifting households out of poverty, with success concentrated among women engaged in trading activities an early indication that programme impact is highly context-dependent.

This caution is elaborated more critically by Garikipati (2013), who argues that outcome-based measures of empowerment can be misleading and that understanding the processes of loan utilisation is equally essential. Mukherjee (2015) similarly found that while a government microfinance programme in West Bengal successfully influenced economic and political empowerment, it failed to extend socio-cultural spaces equitably across caste and religious communities. Kabonga et al. (2021), studying Internal Savings and Lending Schemes in Zimbabwe, identified both positive financial outcomes and unintended consequences of exclusion and polarisation highlighting the complex, sometimes contradictory, impacts of such programmes. These critical perspectives collectively challenge overly optimistic readings of microfinance and underscore the need for context-sensitive programme evaluation.

2.6 Moderating Role of Demographic Attributes in the Relationship between Social and Economic Empowerment and Women Empowerment

The empowerment of women in developing economies has become a central concern in development scholarship, with researchers broadly agreeing that empowerment is a complex, multi-dimensional construct shaped by intersecting institutional, household, social, and demographic forces. Scholars across diverse geographic contexts from Egypt and Iran to Mozambique, India, and other developing nations have consistently framed empowerment as simultaneously encompassing economic, social, psychological, political, and legal dimensions. This multi-dimensionality fundamentally shapes both theoretical approaches and methodological choices across the literature.

2.6.1 The Role of Microfinance and Collective Financial Participation

A prominent strand of inquiry examines how microfinance and collective financial engagement drive women's empowerment. Said et al. (2025), employing SEM in the Egyptian context, demonstrated that microfinance access has statistically significant direct effects on six empowerment dimensions: economic, socio-cultural, familial/interpersonal, political, legal, and psychological. These findings closely align with those of Basak & Chowdhury (2023), who studied SHG participation among rural women in West Bengal and similarly identified significant positive effects across economic, social, political, and psychological empowerment dimensions. Collectively, these studies affirm that structured financial inclusion whether through microfinance institutions or collective savings groups acts as a meaningful catalyst for empowerment across multiple domains, extending well beyond the economic sphere alone. Basak & Chowdhury (2023) further observe that the moderating influence of SHG membership is most pronounced in economic and social empowerment, implying that the type and intensity of financial participation may determine which empowerment domains benefit most.

2.6.2 Socio-demographic Variables as Moderators of Empowerment

Education: Among the sociodemographic variables examined in the literature, education emerges as one of the most consistently significant predictors of empowerment outcomes. Nikkhah (2010), drawing on data from NGO-facilitated empowerment programmes in Shiraz, Iran, found that among variables including age, occupation, family income, and marital status, only education and marital status produced statistically significant effects on empowerment. This finding is strongly echoed by Shah (2024), whose secondary data analysis across multiple contexts argues that quality education equips women with the skills, confidence, and civic capacity necessary for meaningful participation in economic, social, and political life functioning not merely as a correlate of empowerment but as a transformative mechanism enabling women to challenge entrenched norms and attain financial independence. Soharwardi & Ahmad (2020), working with Demographic and Health Survey data from 38 developing economies, further corroborate this position, finding that higher levels of education for both women and their husbands are positively associated with all five dimensions of empowerment namely work status, awareness, decision-making, self-esteem, and self-confidence.

However, the relationship between education and empowerment is not consistently strong across all contexts. Rathiranee & Semasinghe (2013), investigating microfinance recipients

in the Jaffna District of Sri Lanka, found that while education, occupation, and experience collectively exerted some influence on empowerment, the impact was weak and no significant differences in empowerment levels were observed across education categories. This apparent contradiction with Nikkhah (2010) and Shah (2024) can likely be attributed to the post-conflict socioeconomic conditions prevailing in Jaffna, as well as differences in how empowerment was operationalised and measured across studies.

Age: The role of age in shaping empowerment outcomes is equally nuanced. Said et al. (2025) found that age moderates the relationship between microfinance access and women's empowerment in Egypt, indicating that the benefits of financial inclusion are not uniformly distributed across different stages of a woman's life. Soharwardi & Ahmad (2020) offer a more granular perspective, finding that age differences relative to a woman's husband have directionally differentiated effects: positively associated with work status, awareness, and self-confidence, but negatively associated with self-esteem. Lopes et al. (2021), examining empowerment in Mozambique through Directorate of Health Services data, similarly identify age as a significant determinant of decision-making capacity. Together, these findings indicate that age does not function as a simple linear predictor of empowerment, but rather as a variable whose effect is moderated by relational, institutional, and domain-specific factors.

Marital Status: Marital status has also been identified as a significant moderator of empowerment outcomes, particularly in contexts where institutional barriers constrain women's participation. Nikkhah (2010) found marital status to be among the strongest predictors of empowerment in the Iranian context, partly because married women in that setting face institutional constraints including requirements for spousal permission that limit participation in empowerment programmes. This highlights the highly context-dependent nature of marital status as a moderating variable, cautioning against generalisations across national or regional settings.

Methodological Approaches: The literature reflects a strong consensus around quantitative methods, with SEM both covariance-based (Said et al., 2025) and partial least squares-based (Basak & Chowdhury, 2023) emerging as the predominant technique for testing complex, multi-dimensional empowerment models. Regression analysis (Nikkhah, 2010; Soharwardi & Ahmad, 2020) and logistic regression (Lopes et al., 2021) are also widely employed, while Rathiranee & Semasinghe (2013) rely on ANOVA and t-tests to

assess mean differences across demographic groups. Despite this methodological diversity, most studies share a common dependence on survey instruments and self-reported data, which carry inherent risks of social desirability bias a concern that is rarely addressed explicitly in the reviewed literature, yet is especially salient when measuring psychological empowerment and autonomy in decision-making.

The Importance of Context-Specificity: A significant conceptual contribution cutting across several studies is the imperative of context-sensitivity. Lopes et al. (2021) argue explicitly that women's empowerment is shaped by community- and context-specific characteristics including region, rurality, religion, exposure to intimate partner violence, and access to media such that no single universal model adequately captures its determinants. This observation resonates with Nikkhah's (2010) findings on marital status and with the broader lesson that conclusions drawn from any single national or regional context must be applied with caution elsewhere.

Synthesising the insights from across the reviewed literature, a coherent theoretical picture emerges in which women's empowerment is understood not as the product of any single intervention, but as an outcome of the dynamic interplay among institutional infrastructure, household dynamics, social capital, collective participation, and individual sociodemographic endowments. Financial inclusion and microcredit represent necessary but insufficient conditions for empowerment, with their effectiveness contingent upon the institutional channels through which they are delivered and the household contexts in which they are received. Social capital and collective structures such as self-help groups serve as critical amplifiers of individually achieved gains, while educational access and social circumstances establish the foundational conditions within which all other empowerment mechanisms operate. This integrated understanding calls for policy frameworks that move beyond singular, siloed interventions toward comprehensive, context-sensitive strategies addressing the full spectrum of determinants shaping women's empowerment trajectories.

2.7 Challenges faced by Beneficiaries and Implementation of the Schemes

The literature on women’s empowerment through government schemes and institutional interventions reveals a complex and multi-layered reality in which policy intent often diverges significantly from lived experience. Across developing contexts, particularly in India and South Asia, scholars consistently highlight a persistent gap between the design of empowerment programmes and their actual accessibility and impact, shaped by

structural, institutional, socio-cultural, and individual-level constraints (Priyadharshini et al., 2016; Javed & Mumtaz, 2023). Rather than isolated challenges, these constraints operate in an interconnected manner, limiting women's ability to fully benefit from such initiatives.

A dominant theme across studies is the role of *informational and capability-related barriers*. Limited literacy and financial awareness repeatedly emerge as foundational constraints that prevent women from engaging effectively with formal systems (Sinha et al., 2016; Saluja et al., 2023; Bishnoi, et al., 2026). This is further reinforced by broader patterns of low awareness and inadequate dissemination of information about schemes, particularly in rural areas (Rehman, 2024; Babulu & Maharajan, 2022). This suggests a strong consensus that empowerment programmes often assume a level of knowledge and capacity that many intended beneficiaries do not possess, thereby reproducing exclusion within inclusion-oriented policies.

Closely linked to these challenges are *institutional and procedural barriers* embedded within programme design and implementation. Multiple studies document bureaucratic inefficiencies, delays, and complex administrative requirements that hinder access to benefits (Sekher, 2010; Tiwari & Upadhyay, 2012; Massawe & Mhina, 2024). Issues such as lengthy documentation procedures, lack of coordination between departments, and weak grievance redressal systems further exacerbate these difficulties (Shankar et al., 2024). In some cases, these barriers extend beyond inefficiency to include corruption, elite capture, and exclusionary practices, which systematically divert benefits away from the most vulnerable (Javed & Mumtaz, 2023). Comparative evidence from cash transfer programmes also highlights how administrative processes, distance to service centres, and even the behaviour of frontline officials can reinforce marginalisation rather than alleviate it (Gibbs et al., 2018; Hunter & Murray, 2017).

Financial exclusion constitutes another critical dimension of the empowerment challenge. Studies consistently demonstrate that women face restricted access to credit, often due to collateral requirements, limited asset ownership, and structural biases within financial institutions (Koko et al., 2017; Chetiya, 2024). Even where financial schemes exist, delays in loan disbursement and limited financial literacy reduce their effectiveness (Massawe & Mhina, 2024). Cross-country evidence further indicates that broader legal and regulatory frameworks significantly influence women's financial inclusion, with more gender-

equitable environments facilitating greater participation in formal financial systems (Roy & Patro, 2022). This highlights an important point of convergence in the literature: financial empowerment is not merely a function of access to credit, but of the broader institutional ecosystem in which such access is embedded.

Beyond structural and institutional factors, *socio-cultural constraints* play a decisive role in shaping women's engagement with empowerment initiatives. Deeply embedded patriarchal norms, religious practices, and gendered expectations consistently limit women's mobility, decision-making power, and participation in public programmes (Nath et al., 2016; Rudramuni & Venkatesh, 2024; Bari et al., 2023). Household responsibilities further restrict women's time and ability to engage with schemes (Tiwari & Upadhyay, 2012). Evidence from health and social protection programmes similarly shows that gender norms, social exclusion, and lack of autonomy continue to impede women's access to essential services (Habib et al., 2021; Jehan, 2012). These findings collectively underscore that empowerment cannot be understood in isolation from the socio-cultural environments in which women are situated.

At the same time, the literature also identifies pathways through which empowerment can be meaningfully advanced. A strong area of agreement lies in the transformative potential of collective institutions such as self-help groups and community-based organisations. These platforms not only facilitate access to credit but also enhance skills, confidence, and social capital, thereby enabling women to engage in entrepreneurial activities (Paramanandam & Packirisamy, 2015). However, the sustainability of such gains depends heavily on continued institutional support, as weak group functioning can undermine long-term outcomes (Khan & Bibi, 2011).

The importance of supportive institutional ecosystems is further emphasised in studies that highlight the role of government, NGOs, and community actors in shaping empowerment outcomes. Trust in institutions, effective service delivery, and community involvement emerge as critical determinants of success (Rehman, 2024). At the same time, inadequate institutional orientation, bias, and lack of coordination can significantly dilute programme effectiveness (Babulu & Maharajan, 2022). This duality reflects a broader pattern in the literature: institutions can act as both enablers and barriers, depending on their design and implementation.

Another important strand of research focuses on the impact of social protection and cash transfer programmes. Evidence suggests that such interventions can improve women's socio-economic conditions, enhance decision-making power, and promote positive outcomes in education and health (Sripathi & Tembo, 2025; Freud, 2015). However, their effectiveness is often constrained by issues such as limited coverage, inadequate benefit levels and implementation challenges (Pradhan & Afrin, 2015; Jehan, 2012). Moreover, while increased service utilisation is frequently observed, evidence of long-term transformative impact remains inconclusive in many contexts (Sekher, 2010).

Importantly, several studies highlight the heterogeneity of women's experiences, drawing attention to the specific vulnerabilities of marginalised groups. Tribal women, rural women, and women entrepreneurs face distinct and overlapping challenges related to education, health, employment, and social exclusion (Heggade & Heggade, 2012; Bhadouria et al., 2024). This has led to a growing recognition that uniform policy approaches are insufficient and that empowerment strategies must be context-specific and inclusive of diverse needs.

Finally, the literature increasingly conceptualises empowerment as a multidimensional and dynamic process rather than a singular outcome. It encompasses cognitive, behavioural, and emotional transformation, as well as improvements in economic and social status Addelyan & Moula, 2015). Moreover, empowerment itself can act as a reinforcing factor, enhancing the effectiveness of other interventions such as financial inclusion and social protection (Priyadarshee et al., 2010). This relationship highlights the need for integrated approaches that simultaneously address multiple dimensions of empowerment.

While government schemes and institutional interventions hold significant potential to advance women's empowerment, their success depends on addressing a complex web of interrelated barriers. There is broad agreement among researchers that isolated interventions are insufficient. Instead, effective empowerment requires a holistic approach that integrates improvements in awareness, institutional design, financial inclusion, socio-cultural transformation, and individual capacity building. Without such an integrated framework, empowerment risks remaining a policy aspiration rather than a lived reality for many women.

2.8 Network Analysis

Network analysis in literature reviews maps and interprets relationships among authors, keywords, institutions, and cited references within a body of scholarship. By visualising

these connections, researchers can identify influential studies, thematic clusters, collaboration patterns, and emerging research fronts that may not be obvious through traditional narrative review methods. This approach strengthens a review by offering a systematic and transparent way to examine the intellectual structure of a field and trace how ideas evolve over time. It is especially useful in bibliometric studies because it supports both descriptive and relational analysis of scholarly communication (Donthu et al., 2021; Zupic & Cater, 2015).

2.8.1 Density Visualisation -All Keywords

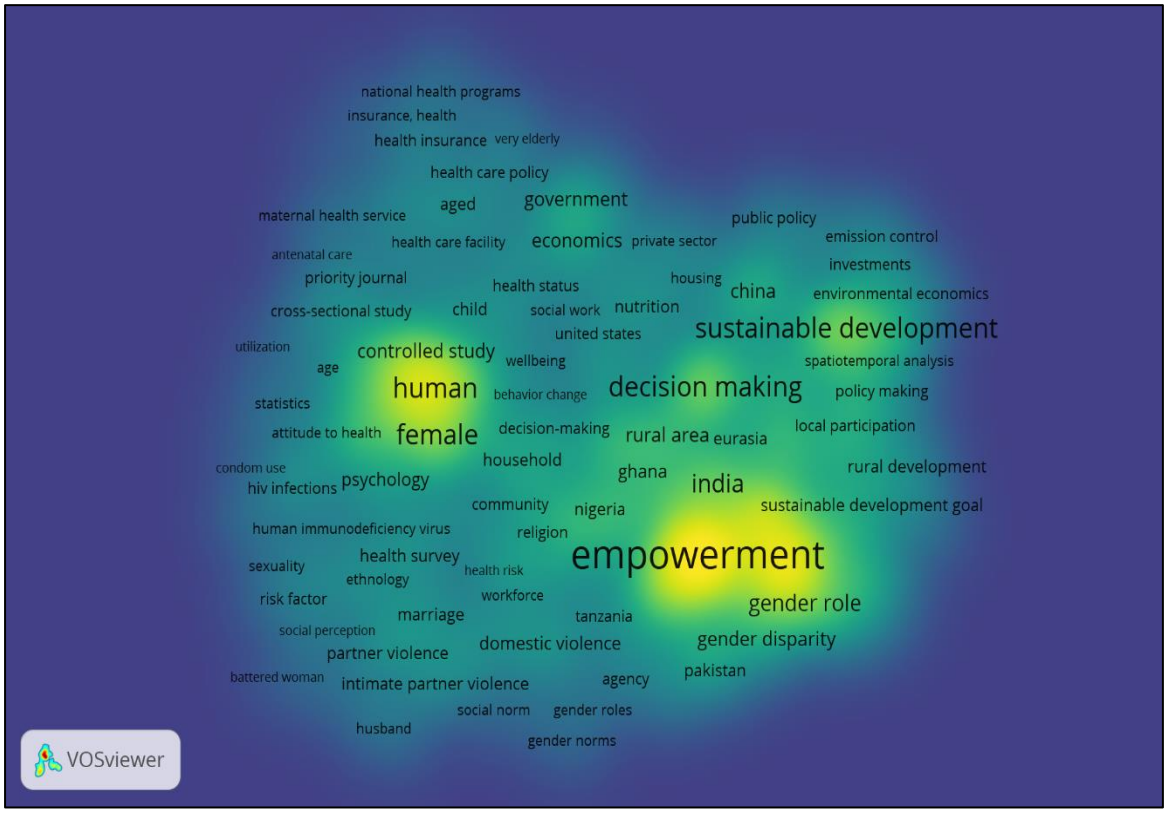


Figure 2.1: Density Visualisation -All Keywords

Source: Author's Compilation

The keyword density map shown as **Figure 2.1** visualises bibliometric data from academic literature, where keyword size reflects frequency and the yellow-green glow marks areas of highest research concentration. The brightest hotspot focuses on empowerment, with decision making, female and India closely following as the most recurring and interconnected themes. The map broadly captures a body of scholarship on women empowerment in developing countries, exploring its intersections with health, gender, policy, and socio-economic development.

Thematic clusters are visible on the keywords such as empowerment, sustainable development, decision making. A health cluster featuring maternal health, antenatal care, and health policy highlights women's healthcare access as a key empowerment lens. A development and governance cluster on the right including sustainable development, policy making, and government links empowerment to broader policy frameworks, particularly SDG 5. Lastly, terms such as wellbeing, behaviour change and attitude to maternal health point to research into the individual and community dimensions of empowerment.

Overall, the map reflects multidisciplinary work examining female empowerment across health, social, and policy domains.

2.8.2 Network Visualisation - Author Keywords Co-occurrences

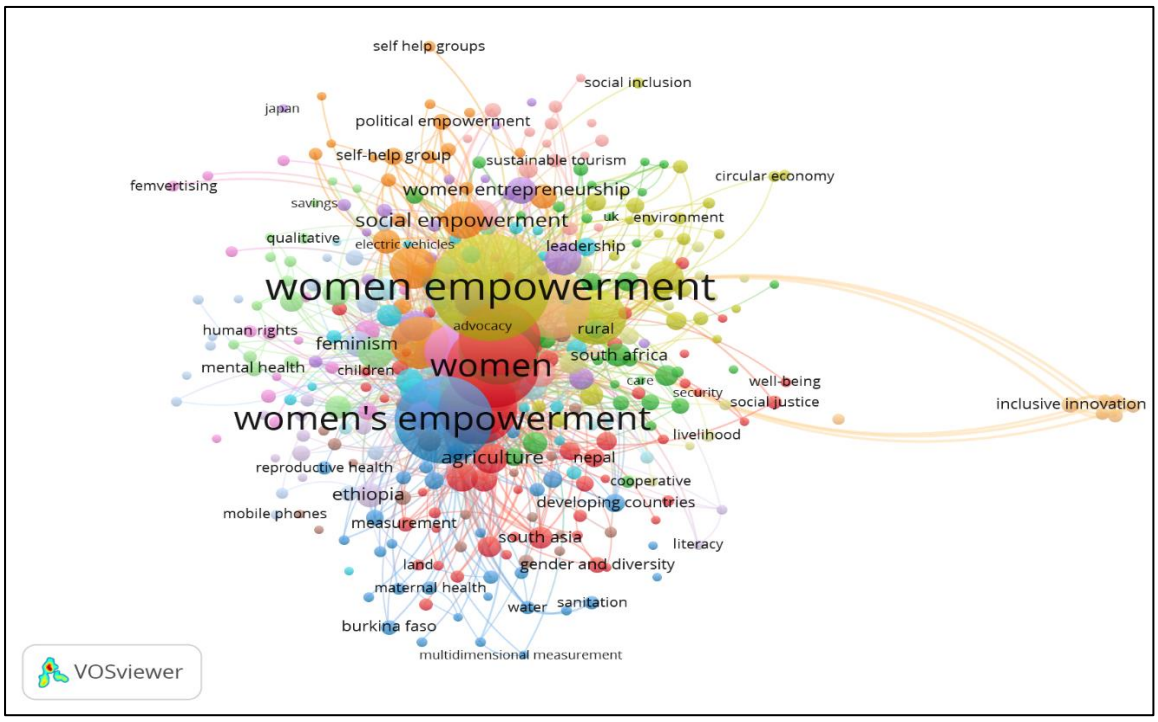


Figure 2.2: Network Visualisation - Author Keywords Co-occurrences

Source: Author's Compilation

The author keyword co-occurrence network map in **Figure 2.2** illustrates how frequently used keywords relate to one another across academic literature on women's empowerment. Node size reflects keyword frequency, line thickness indicates the strength of co-occurrence between terms, and different colours represent distinct thematic clusters. The three largest and most centrally positioned nodes women's empowerment, women empowerment, and women form the conceptual core of the literature, with all other themes radiating outward from them.

Several thematic clusters are evident. An economic cluster featuring women's entrepreneurship, self-help groups, agriculture, co-operatives, savings, and livelihoods reflects research on women's financial inclusion and economic agency.

A political and social cluster encompassing feminism, political empowerment, human rights, advocacy, leadership, and social justice highlights scholarship that frames empowerment within governance and equity contexts.

A health and development cluster including reproductive health, maternal health, mental health, water, sanitation, and developing countries underscores the link between empowerment and access to basic services.

Geographically, keywords such as Ethiopia, Nepal, South Asia, South Africa, and Burkina Faso confirm the literature's strong grounding in low- and middle-income country contexts across Africa and Asia. Peripheral terms such as inclusive innovation and circular economy suggest nascent but growing research directions within the field.

Overall, the map depicts a comprehensive, multidisciplinary analysis of women's empowerment across economic, political, health, and social aspects.

2.8.3 Network Visualisation-Countries

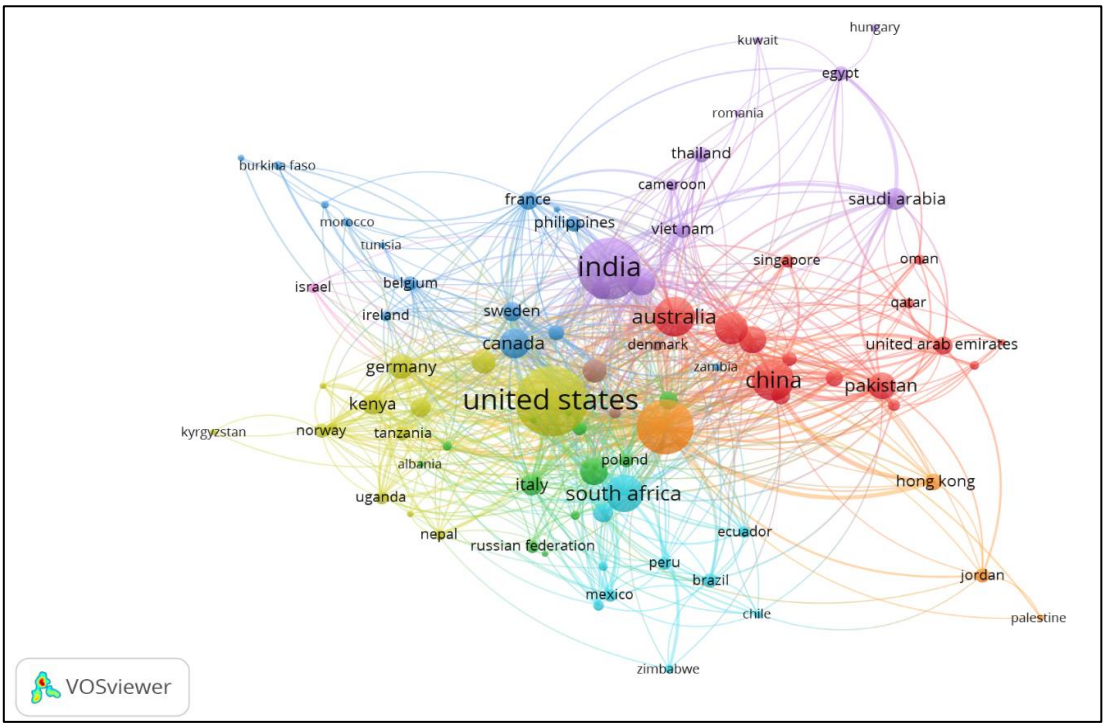


Figure 2.3: Network Visualisation -Countries

Source: Author's Compilation

The country co-authorship network map seen as **Figure 2.3**, illustrates international research collaboration patterns, where node size reflects each country's publication volume, connecting lines represent co-authorship ties, and colours denote distinct collaborative clusters. The United States, India, and China stand out as the largest and most centrally positioned nodes, identifying them as the leading research-producing countries and primary hubs of global collaboration in this field. Australia also emerges as a significant contributor, maintaining strong connections across both Asian and African networks.

Several regional clusters are visible throughout the map. Western nations, including Germany, France, Canada, Sweden, Norway, and Italy, form a cohesive European collaborative bloc. A Middle Eastern and North African cluster connects Saudi Arabia, the United Arab Emirates, Egypt, Pakistan, and Qatar, reflecting growing research engagement in that region. An African and South Asian grouping featuring Kenya, Tanzania, Uganda, South Africa, and Nepal points to development-oriented collaborative networks, while Latin American countries such as Brazil, Mexico, Peru, and Chile form their own emerging regional cluster. Southeast Asian nations, including the Philippines, Vietnam, Thailand, and Singapore, likewise appear as an interconnected grouping.

Overall, the map highlights the broad, cross-regional nature of scholarship in this field, with the United States, India, and China anchoring global networks while meaningful collaborative activity extends across Africa, Asia, the Middle East, Europe, and Latin America.

2.9 Identification of Research Gap

After thoroughly reviewing existing literature, the researcher pinpointed areas that remain unexplored, understudied, or inadequately addressed by previous studies on women's empowerment through government schemes in India, particularly from the perspective of individual beneficiaries. This process involves critically analysing current findings, contradictions and limitations in the field to determine where further investigation is needed to advance knowledge. The following are reasons for selecting and undertaking the research topic:

2.9.1 Knowledge Gap

Despite the expanding body of literature on women empowerment at the national level, a significant knowledge gap persists in understanding how government schemes contribute to women empowerment across economic, social, and political domains. Existing research

has yet to sufficiently capture the extent to which women beneficiaries are aware of available government schemes and whether such awareness effectively translates into meaningful empowerment outcomes in their daily lives. Information on critical aspects, such as procedural barriers to scheme access, actual beneficiary status and the multidimensional nature of empowerment outcomes, remains inadequately developed in current scholarship.

There is a notable deficiency in knowledge concerning the integrated influence of both social and economic empowerment dimensions when considered alongside the moderating roles of demographic attributes, including age, education, marital status, income, occupation, and social background, on overall empowerment outcomes. The existing body of knowledge primarily addresses these dimensions in a fragmented manner, thereby constraining a comprehensive understanding of the interplay between government schemes and women empowerment. This collective lack of understanding necessitates a systematic, contextually grounded investigation into the actual impact of government schemes on women's social and economic upliftment in Goa, where the unique socio-cultural and demographic landscape further emphasises the importance of generation of region-specific knowledge.

2.9.2 Geographical Gap

Most existing studies on women empowerment through government schemes are concentrated in larger states such as Rajasthan, Uttar Pradesh, Punjab and Tamil Nadu, leaving Goa, a small coastal state with a unique socio-cultural, demographic, and tourism-driven economic context, largely underrepresented and unstudied in the academic literature. The regional variations, too, are largely underexplored. The disconnect between national-level research and local realities further establishes the need for context-specific inquiries.

2.9.3 Empirical Gap

To the best of the researcher’s knowledge, while existing studies emphasise theoretical frameworks and microfinance efforts through self-help groups, there remains a scarcity of empirical research assessing the social and economic empowerment of individual women beneficiaries. There is a notable absence of comprehensive empirical models that simultaneously assess multiple demographic moderators within a unified analytical framework.

Although numerous government schemes in the categories of welfare, entrepreneurship and maternity have been designed to advance women empowerment in Goa through education, financial independence, and skill development, empirical evidence measuring their actual impact at the grassroots level remains notably scarce. Existing literature is largely descriptive and nationally oriented, with very few studies offering scheme-specific or district-level evidence from Goa on empowerment outcomes such as decision-making ability, income control and social mobility. The absence of comparative analyses between beneficiaries and non-beneficiaries further limits the assessment of scheme effectiveness, thereby justifying the need for the present empirical inquiry.

2.9.4 Methodological Gap

A significant methodological gap exists in the existing literature on women empowerment through government schemes, wherein studies have predominantly relied upon descriptive methods, secondary data, and general policy reviews, rather than employing rigorous, field-based, and mixed-method research designs. The limited integration of quantitative indicators such as income, literacy, and decision-making participation with qualitative dimensions, including self-confidence, social freedom, and beneficiaries' lived experiences, has constrained the depth and comprehensiveness of findings. Furthermore, the absence of a comprehensive beneficiary-based study, localised sampling across Goa's rural and urban areas and outcome-oriented methodologies underscores the need for a systematic, context-specific research design in the present study.

2.10 Chapter Summary

A literature review plays a significant role as the foundation of all research endeavours, serving as a basis for knowledge development, policy guidance, and the generation of new scholarly directions. This chapter presents a comprehensive and critical review of existing literature on women's empowerment through government schemes, systematically organised across key thematic domains. The review conceptualises women empowerment as a multidimensional construct covering economic, social, political, and psychological aspects. It examines how education, media, financial inclusion, microfinance, employment, and health schemes influence empowerment across different contexts. The analysis considers how demographic factors like age, education, marital status, occupation, and income affect awareness and beneficiary status, alongside structural and procedural challenges faced by beneficiaries. The chapter examines how social and economic empowerment interrelate and contribute to overall empowerment. Bibliometric

visualisations via VOSviewer reveal themes, networks, and research geography. This synthesis highlights key knowledge, geographical, empirical, and methodological gaps, especially in Goa, thereby establishing the rationale for the present contextually grounded and empirically rigorous investigation.

Chapter 3

Research Methodology

3.1 Introduction

Research methodology constitutes the systematic framework through which research problems are examined and addressed, encompassing the strategies, tools, and procedures employed throughout the investigative process (Kothari, 2004). A well-structured methodology is indispensable to any rigorous empirical inquiry, as it enhances the reliability, validity, and reproducibility of findings, thereby ensuring that conclusions drawn are both credible and scientifically defensible (Creswell & Creswell, 2018). Far from being a mere procedural formality, methodology serves as the epistemological and operational backbone of the entire study, forging a coherent and transparent bridge between theoretical constructs and empirical evidence.

This chapter outlines the methodological framework for evaluating how government schemes affect women's social and economic empowerment in Goa. By aligning research objectives with specific methods, the study ensures a systematic progression and logical coherence. It details the research paradigm, design, sampling strategy and data sources while operationalising key variables like scheme awareness and empowerment constructs. Both descriptive and inferential statistics are utilised to analyse relationships between demographics and empowerment outcomes. Adhering to rigorous standards of validity, reliability and ethics (Saunders, et al., 2019), this transparent framework provides a replicable foundation for future research.

3.2 Nature of the Study

The current study is descriptive in nature which systematically investigates how government schemes impact women's empowerment in Goa without manipulating variables (Kothari, 2004). By capturing current awareness and participation rates, this approach effectively documents real-world dynamics, providing a comprehensive baseline understanding of the phenomenon under investigation (Creswell & Creswell, 2018).

Further, the quantitative approach allows for precise measurement and statistical examination of key variables, including scheme awareness, beneficiary participation and indicators of social empowerment, such as decision-making autonomy, personal

independence, social status and security, as well as economic empowerment, encompassing income generation and asset ownership. Structured data collection facilitates hypothesis testing and inferential analysis, thereby ensuring objectivity and analytical rigour.

Integrating these approaches strengthens the study's empirical foundation, producing reliable, generalizable findings (Saunders, et al., 2019). This method provides measurable insights into the effectiveness of government initiatives while ensuring objectivity and replicability. Ultimately, these results offer valuable evidence for policy and academic discourse regarding women's empowerment in Goa.

3.3 Period of Study

The period of study was from February 2020 to February 2026 during which the data was collected, analysed and interpreted to achieve the research objectives effectively and systematically.

3.4 Sources of Data

The selection and use of appropriate data sources are critical in research, as they have an effect on quality, relevance and authenticity of findings (Kumar, 2024). Data sources are broadly classified into primary and secondary types, each serving different purposes (Saunders et al., 2019). Primary data refers to firsthand information collected by the researcher for a specific study, while secondary data consists of existing data gathered for other purposes. The choice depends on research objectives and availability of data. Primary data ensures relevance and accuracy, whereas secondary data provides broader context (Creswell & Creswell, 2018; Kothari & Garg, 2023; Sekaran & Bougie, 2011). Accordingly, this study relies basically on primary sources to assess government schemes' impact on the women beneficiaries' social and economic empowerment in Goa

3.4.1 Primary Data

Primary data for this study was collected from women beneficiaries of the categorised welfare, entrepreneurship, health and maternity schemes which were implemented by the Central and State government in the State of Goa. Multiple methods were adopted to ensure comprehensive coverage, reliability, and representation from both North and South Goa. The primary sources included:

3.4.1.1 Structured Questionnaire

A structured questionnaire was meticulously designed and administered through offline mode to a sample of 650 women beneficiaries across Goa who had availed at least one government scheme. The schemes under examination were systematically categorised into three distinct groups: welfare schemes encompassing the Laadli Laxmi Scheme (LLS), Griha Aadhar Scheme (GAS) and Dayanand Social Security Scheme (DSSS); entrepreneurship schemes comprising the Prime Minister's Employment Generation Programme (PMEGP) and Chief Minister's Rojgar Yojana (CMRY); and health and maternity schemes including Janani Suraksha Yojana (JSY), Mamata Scheme (MS), and Pradhan Mantri Matru Vandana Yojana (PMMVY).

The questionnaire was rigorously structured to capture quantifiable data pertaining to various dimensions of social and economic empowerment outcomes experienced by beneficiaries. This structured survey instrument enabled systematic measurement of critical empowerment indicators, including women's decision-making autonomy, contribution to family expenses, financial independence, investments, personal independence, and social status and security. The quantitative data thus generated provided robust empirical evidence to assess the efficacy of government scheme interventions in fostering tangible improvements in the socio-economic status and overall empowerment of women beneficiaries.

3.4.1.2 Unstructured Interviews

The present study also employed unstructured interviews as a primary qualitative data collection method to obtain an in-depth understanding of the lived experiences of women beneficiaries of government schemes in Goa. This flexible interview format enabled participants to freely articulate their perceptions regarding the impact of welfare, entrepreneurship and health and maternity schemes on their social and economic empowerment. The open-ended and conversational nature of the interviews facilitates the emergence of rich, nuanced themes, including challenges in scheme access, shifts in decision-making authority, financial independence and changes in social status, insights that are often inaccessible through structured questionnaires alone (Kumar, 2024).

Data was gathered through face-to-face interviews with women who had benefited from various welfare programs, such as the LLS, GAS and DSSS; entrepreneurship initiatives including PMEGP and CMRY; and health and maternity schemes such as JSY, MS and

PMMVY. Additionally, the data collection process was facilitated through collaborative engagement with key institutional stakeholders, namely the Directorate of Women and Child Development (DWCD), Social Welfare, Health Services, Directorate of Industries, Trade and Commerce (DITC) and the Economic Development Corporation (EDC), which provided essential support in information dissemination, beneficiary identification, institutional insights into the implementation processes and overall impact of these schemes.

This dual-mode data collection approach enhanced the accessibility of participants across diverse geographic locations and accommodated their preferences, thereby enriching the study's representativeness. The unstructured format encouraged beneficiaries to narrate their empowerment journeys in their own words, without being constrained by predetermined response categories. Simultaneously, engagement with departmental officials shown in **Table 3.1** provided essential perspectives on scheme design, delivery mechanisms, and administrative challenges. Collectively, this methodology facilitated a comprehensive exploration of how government schemes influence women's decision-making autonomy, financial independence, healthcare access, and quality of life.

Table 3.1: Government officials who provided information about the schemes

Name of the Official	Department/Organisation	Position
Mr. L.V. Naik Panvelkar	Khadi and Village Industries Commission Panaji	District Officer
Mr. Mukesh Kumar	Ministry of Micro, Small and Medium Enterprises (MSME) Margao	Joint Director, MSME
Mr. John D'Sousa	Economic Development Corporation, Panaji	Deputy General Manager, EDC
Ms. Pradnya Dessai	Directorate of Social Welfare, Panaji	Assistant Director
Dr. Uma Sadekar	Directorate of Health Services, Panaji	Lady Medical Officer
Mrs. Deepali Naik	Directorate of Women and Child Development, Panaji	Former Director
Mr. Prashant Kamat	Directorate of Industries, Trade and Commerce, Panaji	Functional Manager I

Source: Author's Compilation

3.4.1.3 Focus Group

Focus group discussions were conducted with members of Self-Help Groups (SHGs) and Anganwadi workers to gain insights into collective experiences, scheme awareness, and perceived empowerment outcomes.

3.4.2 Secondary Data

The secondary data was obtained from published sources. These sources provided the theoretical background and policy context essential for analysis. The secondary sources included:

3.4.2.1 Government Reports and Publications

Official documents from EDC, Panaji, Goa, DITC, Panaji, Goa, DWCD, Directorate of Social Welfare, Panaji, Goa, Directorate of Health Services, Panaji, Goa, Development and Facilitation Office, MSME, Margao, Goa, scheme guidelines, and annual reports from central and state departments such as the Ministry of Women and Child Development, Goa State Commission for Women, National Family Health Survey, Goa Economic Survey providing demographic and socio-economic information about women in Goa.

3.4.2.2 Official Websites

Information from government portals and official websites of Central and State government schemes implemented for women's welfare and empowerment.

3.4.2.3 Academic Literature

Research papers, theses, and dissertations focusing on WE, government welfare schemes, entrepreneurship promotion and socio-economic development, books addressing women's social security, financial inclusion, and gender equality in India and Goa, used for theoretical framing and contextual support.

3.5 Sampling Design

3.5.1 Study Area

Goa is recognised as one of India's more progressive states, owing to its steady socio-economic advancement and overall development. Goa has also demonstrated notable progress in sustainable development, ranking 4th in the SDG India Index 2023–24 with a composite score of 77, underscoring its strong commitment to inclusive and sustainable growth across sectors. The state has a distinctive socio-economic context characterised by a high literacy rate of 88.70 per cent, favourable health indicators and a near-balanced sex

ratio of 973 females per 1,000 males. However, it continues to face persistent challenges in the realm of women empowerment.

Despite implementing numerous gender-responsive policies, significant disparities persist in women's economic participation, decision-making autonomy, and awareness of government welfare schemes. Limited dissemination of scheme-related information, procedural complexities and inadequate institutional outreach collectively impede women's access to and effective utilisation of these programmes. The state's demographic distribution comprising 62.17 percent urban and 37.83 percent rural populations further necessitates an examination of variations in empowerment outcomes across different residential contexts (Economic Survey of Goa, 2019–2020).

Within this framework, the present study aims to systematically assess women's levels of awareness, accessibility, and engagement with welfare, entrepreneurship, health, and maternity schemes in Goa. It seeks to identify structural barriers and generate evidence-based recommendations to enhance the effectiveness and equity of gender-responsive policy implementation in the state.

3.5.2 Universe of the Study

The universe of the study refers to the complete population or entire set of elements relevant to the research objectives, defining the boundaries from which data will be drawn and analysed. It encompasses all individuals, groups, or units sharing specified characteristics, such as demographic traits or geographic scope, ensuring the study's scope aligns with its goals like examining women empowerment schemes in Goa.

The universe of the present study is delineated to encompass women beneficiaries aged 18 years and above residing in the state of Goa, who have availed at least one of the government schemes implemented by Central and State Government across three distinct programmatic categories: welfare, entrepreneurship, health and maternity. This age-based demarcation aligns with the constitutional definition of adulthood in India and corresponds to the eligibility criteria stipulated under the majority of state and centrally sponsored empowerment schemes targeting women, thereby ensuring that the study population comprises individuals who possess legal entitlement to access these policy interventions. The government schemes were categorised as shown in **Table 3.2**.

Table 3.2: Categories of Government Schemes

Categories of Government Schemes	Schemes
Welfare Schemes: provide financial aid and social protection to disadvantaged women, reducing vulnerabilities and enhancing security.	LLS, GAS, DSSS
Schemes for Entrepreneurship: boost economic participation via credit, subsidies and training.	CMRY, PMEGP
Health and Maternity Schemes: improve maternal nutrition and institutional delivery through cash.	MS, PMMVY and JSY

Source: Author's Compilation

The study universe encompasses beneficiaries from both residential contexts; urban and rural. The study ensures that respondents possess firsthand experiential knowledge of programme implementation processes, administrative procedures, accessibility challenges and benefit realisation outcomes. This facilitates a rigorous examination of awareness levels, procedural barriers, institutional responsiveness and utilisation patterns among actual beneficiaries, thereby generating empirically grounded insights into the operational effectiveness of existing policy frameworks within the state of Goa.

3.5.3 Sample Size

Sample size is defined as the number of observations, participants included in a study. It significantly influences the accuracy, reliability and generalisability of the research outcomes. An appropriately determined sample size enhances the statistical power of the study, its ability to detect true effects and improves the precision of estimates.

The sample size for the study was determined using the Krejcie and Morgan (1970) table, which exceeded the minimum requirement ensuring statistical power, reliability and generalisability. The Krejcie and Morgan is a widely used, pre-calculated guide for determining the minimum sample size for a given finite population aiming for a 95 percent confidence level and 5 percent margin of error. It streamlines the research by providing the recommended sample size which stabilises at 384 for large populations over 10,00,000. This table helps to eliminate complex calculations by providing a representative sample for categorical data. A final sample size of 650 was determined which exceeded the recommended size of 384 as shown in **Table 3.3** in order to attain broader coverage, boost representativeness and improve the reliability and robustness of the study.

Table 3.3: Final Data Collection

Data Collection through Questionnaires (Status)	Frequency	Percentage
Distributed	650	100.00
Returned	647	99.54
Rejected	47	7.23
Accepted and Retained for Analysis	603	92.77

Source: Author's Compilation

47 questionnaires were identified as incomplete due to missing values, inconsistent responses, or inadequate information that could compromise the integrity of the statistical analysis. These incomplete questionnaires were systematically excluded from further examination. Consequently, 603 valid and complete responses were retained for analysis, representing an effective response rate of 92.77 percent. The final sample size of 603 respondents was deemed statistically adequate for conducting comprehensive analyses and drawing meaningful, generalisable inferences about women's empowerment through government schemes in Goa.

Table 3.4: Objective-wise Sample Size

Objectives of the Study	Sample Size
1-3	603
4	78

Source: Author's Compilation

From **Table 3.4** it is seen that the first, second and third objectives of the study were examined using the sample of 603 respondents. For the fourth objective; to identify the challenges faced by women beneficiaries in availing government schemes, the Analytic Hierarchy Process (AHP) technique was employed. The AHP method is chiefly suitable for addressing complex decision-making problems and does not require a large number of participants (Schmidt et al., 2015; Ishizaka & Labib, 2009). Instead, the technique emphasises the quality, experience, and knowledge of respondents rather than the sample size (Takala et al., 2006). Accordingly, a subset of 78 respondents was selected from the total sample of 603 participants for the AHP analysis.

3.5.4 Sampling Techniques

The study employed a combination of stratified, snowball, and convenience sampling techniques to ensure comprehensive representation of women beneficiaries across a range of socio-demographic segments, including age, income, residential location, educational background, marital status, and occupation. The approach strengthens the research design

by aligning methodological choices with the study's objectives to comprehensively understand heterogeneous beneficiary populations.

Stratified sampling organised the population into homogeneous subgroups and sampled proportionally, reducing bias and improving representativeness (Creswell & Creswell, 2018; Thomas, 2023). Goa covers 3,702 sq. kms., divided into 2 districts. Scheme beneficiaries' data was obtained from the Government of India, Open Government Data, Parliamentary replies, the Economic Survey of Goa, and the Directorates responsible for scheme implementation.

Table 3.5: Sample Size Distribution

District	Number of Women Beneficiaries	Sample Size as per Formula	Questionnaires Distributed	Questionnaires Received	Valid Responses Received	Valid Response Rate
North	113602	153	325	323	309	
South	170404	231	325	324	294	92.77%
Total	**284006**	**384**	**650**	**647**	**603**	

Source: Authors' Compilation

Table 3.5 shows the sample size distribution using the Krejcie and Morgan formula. The sample size was taken as 650, higher than 384 to increase the accuracy of results, improve representativeness of the population and for higher robustness of the study.

Snowball sampling was particularly useful for accessing hard-to-reach participants through referrals within social networks, facilitating inclusion of marginalised or less accessible groups (Goodman, 1961). Snowball sampling begins by identifying initial participants, known as "seeds," or "sources", who meet the study's criteria. These individuals then influence their social networks to recruit additional eligible respondents, forming a chain-referral process. This progressive, participant-driven approach enables researchers to efficiently access hard-to-reach populations through trusted social connections (Faugier & Sargeant, 1997; Sadler et al., 2010). The study adopted the exponential discriminative snowball sampling as shown in **Figure 3.1** which is mostly used when screening participants according to specific criteria is vital to the research goals.

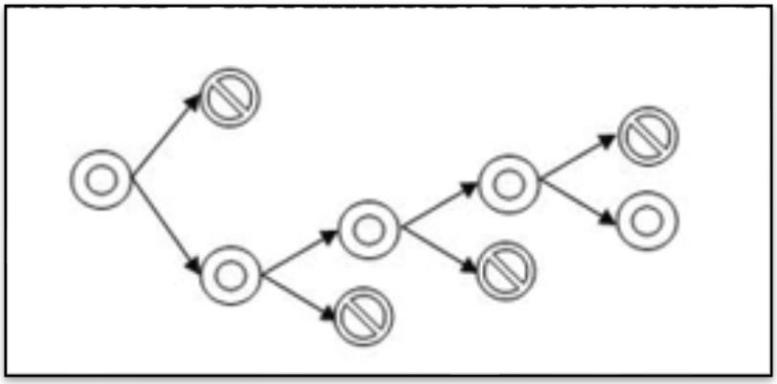


Figure 3.1: Exponential Discriminative Snowball Sampling Technique

Source: Adopted from Makwana, et al. (2023)

For implementing snowball sampling, the researcher started with a small number of beneficiaries selected using convenience sampling through known contacts and also through the members of SHGs who fit the research criteria and hence were invited to become participants within the research. The women who agreed to become research participants/respondents were then asked to recommend other contacts who fit the criteria. Of those who agreed, then in turn recommended other potential participants, which made it simpler to gather information. Social networking was used to establish initial links and build momentum, capturing an increasing pool of willing research participants in a chain-like fashion.

Convenience sampling enabled efficient data collection by engaging participants based on availability and willingness, which is practical in field settings where time and resources may be limited (Etikan et al., 2016; Straton, 2021). Respondents for the fourth objective were conveniently selected from the 603 women beneficiaries for the AHP technique. These respondents were chosen based on specific criteria, including their experience with the schemes, the duration for which they had been availing the benefits and their level of knowledge regarding the functioning of the schemes. This approach ensured that the evaluation of challenges was based on responses from respondents with adequate familiarity and practical experience with the schemes under study.

This integrated mixed-methods strategy balances methodological rigour with practical feasibility (Sylvester, 2023). By combining stratified, snowball, and convenience sampling, it captures diverse perspectives while addressing representativeness (Naderifar et al.,

2017). Although non-probability methods introduce potential selection biases, stratified sampling mitigates these risks, ensuring a comprehensive, demographic-rich dataset.

3.6 Questionnaire Design

3.6.1 Questionnaire Layout

The structured questionnaire was framed, which consisted of seven parts. **Section A** covered the 'criteria-based questions' giving details about the schemes availed by the women and the timely disbursal of money under the schemes. **Section B** covered the demographic profile of the women beneficiaries including their age, education, marital status, annual family income, residential area, occupation and district. **Section C** included questions on awareness about the schemes among the women beneficiaries and the sources of information. **Section D** examined the Economic Empowerment (EE), through the constructs of financial independence, contribution to family expenses and investments derived from previous works (Mehra, 1997; Mayoux, 2001; Klasen, 2018; Jagtap, 2021). **Section E** comprised the constructs of decision-making, personal independence and social status and security, developed based on prior studies (Kabeer, 2005; Malhotra et al. 2009; Duflo, 2012) which included the statements to measure the Social Empowerment. **Section F** focussed on the challenges faced by the women beneficiaries in availing these schemes. The final **Section G** gathered respondents' overall perceptions of Women Empowerment as influenced by their participation in government schemes.

3.6.2 Constructs Used in the Study

The constructs and statements for the final questionnaire were formulated based on the previous studies pertaining to social and economic empowerment of women beneficiaries through government schemes.

The constructs and the statements used for measuring the constructs are shown in **Table 3.6.**

Table 3.6: Constructs and the Statements Used

Higher Order Constructs	Lower Order Constructs	Statements	Sources
Economic Empowerment (EE)	Financial Independence (FD)	I can arrange funds for my marriage I support my family monetarily I have access to bank I am economically independent I can lend money to the needy I have access to government schemes and loans I can bear the cost of medicines for myself and my child	Lal, (2021); Ambarkhane et al., (2022); Aziz et al., (2022); Adera & Abdisa, (2023); Mahato & Jha, (2023)

Higher Order Constructs	Lower Order Constructs	Statements	Sources
	Family Expenses (FE)	I am providing healthy food to my family I participate in household financial decisions My family's purchasing power has increased I can spend on tuition fees of my children My standard of living has improved	Rajagopalan et al. (2017); Sultana et al., (2017); Duflo (2003); Lee et al. (2020)
	Investments (INV)	I can acquire household durables and other assets My savings have increased My investments have increased My standard of living has improved I could start my own entrepreneurial venture	Priya & Bose, (2020); Khursheed, (2022); Abebe & Kegne, (2023)
Social Empowerment (SE)	Social Status and Security (SSS)	My family's social status has improved I feel socially secure Traditional gender stereotype practices such as dowry have reduced Preference for male child has reduced I can create jobs for the society I can move independently There is increase in social responsibility My social network has improved	Kabeer, (2005); Jain & Jain, (2012); Dash et al., (2016)
	Decision Making (DM)	I do not feel I am a burden on my family My role in decision making in the family has increased I can solve my problems independently I feel free to share my views with others I am involved in decisions regarding my children's education and health I help other women	Addai, (2017); Chakrobarty, A. (2024)
	Personal Independence (PI)	I do not face domestic violence I feel less dependent on family members for personal needs I can choose to start my own business/venture I am involved in community works I can access government services and benefits without assistance I am able to take initiatives for improving my own well-being	Paramanandam & Packirisamy (2015); Chatterjee et al. (2018); Kapoor (2019)
Women Empowerment (WE)		There is an increase in economic independence There is improvement in my health and well-being There is social transformation and decision-making autonomy Enhanced participation in political and public life	Kondal (2014); Kodamarty (2016); Chatterjee et al. (2018); Prasad, (2018)

Source: Author's Compilation

EE and SE are conceptualised as higher-order constructs within the structural model, reflecting their inherently multidimensional nature. EE is operationalised through three underlying lower-order constructs: financial independence, investments, and family expenses. Similarly, SE is measured through social status and security, personal independence and decision-making. These first-order dimensions collectively represent the broader constructs and enable a comprehensive assessment of women's empowerment. The construct of women empowerment is measured with the help of the statements. The hierarchical modelling approach implemented in this study enables a nuanced understanding by integrating multiple dimensions into unified constructs, thereby capturing both the economic and social aspects of empowerment in a coherent analytical framework.

3.6.3 Measurement Scale

In this study, the measurement scales employed include both Likert scale and the dichotomous scale to capture respondent attitudes and categorical responses effectively. The five-point Likert scale was used to measure the intensity of opinions on all the statements ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree") allowing for nuanced data collection on subjective constructs such as awareness levels, SE, EE, WE. This scaling technique enabled the collection of nuanced data on subjective constructs, including awareness levels, SE, EE, and WE.

The Likert scale is particularly valuable in social science research as it quantifies respondents' levels of agreement or disagreement, thereby allowing sophisticated statistical analysis and comparisons across variables. The dichotomous scale was used to collect binary responses, providing straightforward responses as "yes/no" format that enable clear categorical distinctions.

Table 3.7: Measurement Scale

Scale	Awareness Level	Description
1	Completely Unaware	No knowledge of the scheme's existence
2	Slightly Unaware	Have heard of the scheme but lack detailed information
3	Moderately Aware	Understands the scheme's purpose and basic eligibility criteria
4	Aware	Well-informed about the scheme's benefits, eligibility and application process
5	Fully Aware	Possesses comprehensive knowledge of the scheme and has possibly assisted others in accessing it

Source: Author's Compilation

Table 3.7 presents the researcher-developed awareness scale to assess respondents' knowledge of government schemes. A five-point Likert scale is employed, ranging from "Completely Unaware" to "Fully Aware." Each point on the scale denotes a progressive rise in awareness, from no knowledge of the scheme's existence to comprehensive understanding, including the ability to guide others. The scale captures varying degrees of familiarity, from limited recognition to detailed knowledge of benefits, eligibility criteria, and application procedures. This structured measurement enables a systematic and nuanced evaluation of respondents' awareness levels, thereby enabling more precise analysis of their engagement with government schemes.

3.6.4 Content Validity

Custom-developed measurement scale was used to evaluate Goa's government schemes, necessitating rigorous testing for validity and reliability. Qualitative validity was established through expert consultations and literature reviews to ensure content relevance across constructs like social and economic empowerment (Gibbs, 2007). Experts evaluated items for relevance, coverage and representativeness of key constructs, including social empowerment, economic empowerment, awareness, and challenges faced by beneficiaries. Iterative refinements were undertaken to enhance conceptual clarity and suitability for the main survey. This comprehensive process, encompassing expert review, ensured the instrument's soundness, thereby strengthening the credibility, scientific rigour, and robustness of the study.

3.6.5 Pilot Study

Pilot testing is a vital quality-assurance step that uses a representative sample to evaluate instrument clarity, logical sequencing, and feasibility (Gani et al., 2020). This preliminary phase allows researchers to refine wording and rectify deficiencies, significantly enhancing the reliability and validity of the final study (Saunders et al., 2016).

The pilot study was conducted among 110 women beneficiaries across the categories of government schemes in State of Goa. Based on the feedback received, minor modifications were made to the wording and sequencing of certain questions to enhance understanding and precision before the questionnaire was used for final data collection.

The demographic profile of the respondents of the pilot study is as follows:

Table 3.8: Demographic Profile of the Respondents (N=110)

Variable	Classification	Frequency	Percentage
District	North	51	46.36
	South	59	53.64
Age Group	18-40 years	43	39.09
	41-60 years	32	29.09
	61 years and above	35	31.82
Education	Secondary	22	20.00
	Higher Secondary	33	30.00
	Graduation	25	22.73
	Post-Graduation	13	11.82
	Other	17	15.45
Marital Status	Married	52	47.27
	Unmarried	58	52.73
Occupation	Private Employee	21	19.09
	Government Employee	34	30.91
	Business	22	20.00
	Housewife	18	16.36
	Other	15	13.64
Annual Family Income	Less than 50,000	12	10.91
	Rs.50,000-Rs.1,50,000	22	20.00
	Rs. 1,50,000-3,00,000	41	37.27
	Above Rs. 3,00,000	35	31.82
Residential Area	Municipal	57	51.82
	Panchayat	53	48.18

Source: Author's Compilation

The **Table 3.8** presented the demographic profile of 110 women beneficiaries based on district, age group, educational qualification, marital status, occupation, annual family income, and residential area.

With respect to district-wise distribution, 53.64 per cent of the respondents belonged to the South district, while 46.36 per cent were from the North district, indicating a fairly balanced representation from both regions. In terms of age structure, the largest proportion of respondents (39.09 per cent) fell within the 18–40 years age group, followed by 31.82 per cent who were 61 years and above, and 29.09 per cent in the 41–60 years category. This revealed a diverse age representation, with a slightly higher concentration of younger respondents across different life stages. Regarding educational attainment, 30 per cent of the respondents had completed higher secondary education, which formed the largest group. This was followed by graduates (22.73 per cent) and those with secondary education (20 per cent). Post-graduates accounted for 11.82 per cent, while 15.45 per cent were in the 'other' category. The educational profile thus revealed a predominantly educated sample,

with concentration at intermediate to graduate education levels, indicating a moderate level of educational attainment among the respondents. In terms of marital status, 52.73 per cent of the respondents were unmarried, while 47.27 per cent were married, which reflected a nearly equal distribution with a slight predominance of unmarried respondents.

Occupationally, government employees formed the largest group at 30.91 per cent, followed by those engaged in business (20 per cent) and private employment (19.09 per cent). Housewives accounted for 16.36 per cent, while 13.64 per cent were under 'other' category of occupations. This distribution indicated occupational diversity among the respondents, with significant representation from the formal employment sector. With regard to annual family income, the highest proportion of respondents (37.27 per cent) had the income range of ₹1,50,000 to ₹3,00,000, followed by 31.82 per cent who earned above ₹3,00,000. About 20 per cent fell in the ₹50,000 to ₹1,50,000 category, while only 10.91 per cent reported an income of less than ₹50,000. This income distribution suggested that a majority of the respondents belonged to middle and higher-income groups, with lower-income segments being less represented. Finally, in terms of residential pattern, 51.82 per cent of the respondents resided in municipal areas, while 48.18 per cent lived in panchayat areas, indicating an almost equal urban–rural representation.

Table 3.9: Reliability and Validity Test of Measurement Model

Constructs	Variable Code	Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Decision Making (DM)	DM1	0.853	0.891	0.864	0.745
	DM2	0.834			
	DM3	0.855			
	DM4	0.873			
	DM5	0.899			
	DM6	0.862			
Economic Empowerment (EE)	EE	Higher Order Construct measured by FE, FD and INV	0.901	0.902	0.754
Family Expenses (FE)	FE1	0.794	0.894	0.914	0.753
	FE2	0.876			
	FE3	0.892			
	FE4	0.877			
	FE5	0.896			

Constructs	Variable Code	Factor Loading	Cronbach's Alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Financial Independence (FD)	FD1	0.848	0.887	0.936	0.677
	FD2	0.732			
	FD3	0.785			
	FD4	0.870			
	FD5	0.824			
	FD6	0.835			
	FD7	0.858			
Investments (INV)	INV1	0.876	0.893	0.922	0.703
	INV2	0.891			
	INV3	0.865			
	INV4	0.833			
	INV5	0.717			
Personal Independence (PI)	PI1	0.771	0.851	0.901	0.627
	PI2	0.861			
	PI3	0.886			
	PI4	0.891			
	PI5	0.894			
	PI6	0.767			
Social Status and Security (SSS)	SSS1	0.759	0.877	0.903	0.542
	SSS2	0.877			
	SSS3	0.773			
	SSS4	0.738			
	SSS5	0.850			
	SSS6	0.708			
	SSS7	0.770			
	SSS8	0.703			
Social Empowerment (SE)	SE	Higher Order Construct measured by DM, PI and SSS	0.911	0.923	0.381
Women Empowerment (WE)	WE1	0.793	0.892	0.925	0.757
	WE2	0.890			
	WE3	0.899			
	WE4	0.894			

Source: Author's Compilation

Table 3.9 presented the measurement model assessment that revealed varying degrees of construct validity and reliability across the latent variables examined in the study.

The *DM* construct exhibited very strong factor loadings ranging from 0.834 to 0.899, indicating that each indicator adequately represented the underlying construct. Both Cronbach's Alpha (0.891) and CR (0.864) exceeded the recommended threshold of 0.70,

indicating strong internal consistency. The *AVE* value of 0.745 was substantially above the acceptable threshold of 0.50, demonstrating excellent convergent validity.

The *EE* construct demonstrated high reliability, with Cronbach's Alpha (0.901) and CR (0.902) both indicating excellent internal consistency. The AVE value of 0.754 was also considerably strong, confirming robust convergent validity for the EE construct.

All items in *FE* construct loaded strongly on the construct, with factor loadings ranging from 0.794 to 0.896, supporting good indicator quality. Cronbach's Alpha (0.894) and CR (0.914) demonstrated excellent reliability, while the AVE value of 0.753 supported strong convergent validity, indicating that the construct explained a substantial proportion of variance in its constituent items.

Factor loadings for *FD* were strong, ranging from 0.732 to 0.870, suggesting that each item contributed meaningfully to the construct. Cronbach's Alpha (0.887) indicated high reliability, and CR (0.936) was exceptionally strong, thereby reinforcing internal consistency. The AVE value of 0.677 exceeded the 0.50 threshold, confirming adequate convergent validity for the Financial Independence construct.

Indicator loadings for the construct of *INV* were predominantly strong, ranging from 0.717 to 0.891. Although item INV5 exhibited the weakest loading (0.717), it remained within acceptable lim its. Cronbach's Alpha (0.893) and CR (0.922) indicated excellent reliability, while the AVE value of 0.703 was comfortably above the 0.50 threshold, supporting good convergent validity.

The construct *PI* demonstrated satisfactory item performance, with factor loadings ranging from 0.767 to 0.894. Reliability was strong, as evidenced by Cronbach's Alpha (0.851) and CR (0.901). The AVE value of 0.627 exceeded the 0.50 criterion, thus indicating satisfactory convergent validity.

Factor loadings for the construct of *SSS* ranged from 0.703 to 0.877, which were generally acceptable, though several indicators approached the lower threshold of 0.70, suggesting comparatively weaker item performance. Notwithstanding these concerns, Cronbach's Alpha (0.877) and CR (0.903) demonstrated strong reliability. The AVE value of 0.542, while exceeding the 0.50 threshold, was relatively weaker than that of most other constructs, indicating acceptable but modest convergent validity.

The *SE* construct exhibited excellent internal consistency, as evidenced by Cronbach's Alpha (0.911) and CR (0.923). However, the AVE value of 0.381 fell below the recommended threshold of 0.50, indicating poor convergent validity. This suggests that while the items demonstrated consistency with one another, they did not share sufficient common variance to adequately capture the underlying Social Empowerment construct.

The *WE* construct showed strong factor loadings ranging from 0.793 to 0.899, indicating good indicator representation. Cronbach's Alpha (0.892) and CR (0.925) indicated excellent reliability, and the AVE of 0.757 indicated excellent convergent validity.

The constructs satisfied the recommended thresholds for factor loadings, Cronbach's Alpha, CR, and AVE, thereby indicating a robust measurement model.

3.7 Final Data Collection

3.7.1 Data Screening

Before conducting the main statistical analysis, the collected data underwent rigorous screening to ensure accuracy, completeness, consistency, and reliability. Data screening in this study involved systematically examining the collected responses for potential issues that could compromise the validity of the findings. The process included checking the questionnaires for incomplete or inconsistent responses, which were excluded from the final data analysis.

3.7.2 Data Coding

Data coding in this study involved systematically organising and categorising the collected responses to facilitate accurate and efficient analysis. Coding the data facilitates a more structured and efficient input process, thereby reducing the likelihood of errors (Henseler et al., 2016). Each variable in the structured questionnaire was assigned numerical codes to enable data entry and processing in SPSS. The constructs were coded prior to the data entry as shown in **Table 3.10.**

Table 3.10: Coding of Data

Sr. No.	Constructs	Code
1	Women Empowerment	WE
2	Social Empowerment	SE
3	Economic Empowerment	EE
4	Social Status and Security	SSS
5	Personal Independence	PI
6	Decision Making	DM
7	Financial Independence	FD
8	Family Expenses	FE
9	Investments	INV

Source: Author's Compilation

3.7.3 Data Validation

Data validation was conducted to ensure the accuracy, completeness, and reliability of the collected data. Responses were meticulously examined for consistency, missing values, and outliers, thereby preserving the dataset's integrity and ensuring that only valid and reliable data were included in the statistical analysis.

3.7.4 Response Rate

The structured questionnaire was administered to a total of 650 women beneficiaries across Goa who had availed various government schemes selected for this empirical investigation. The response rate was 92.77 percent. This high response rate not only demonstrates the accessibility, relevance, and appropriateness of the research instrument but also establishes the robustness and representativeness of the sample.

3.8 Theoretical Framework

Women's empowerment is understood in this study as a dynamic and multidimensional process, encompassing resources, agency and outcomes drawing primarily from the foundational framework proposed by Kabeer (1999). This framework draws backing from a range of complementary theoretical traditions. **Human Capital Theory**, as articulated by Becker (1964), underscores the role of education, income, and employment in building individual capabilities and widening the scope of empowerment. Kanter's (1977) **Structural Empowerment Theory** establishes that access to institutional resources, information, support, and opportunity is central to producing meaningful empowerment outcomes. From a participatory standpoint, Simmerman's (1995) **Social Empowerment Theory** foregrounds autonomy, decision-making authority, and community engagement as foundational to empowerment processes. Chen (1995) complements this by emphasising **practical dimensions of empowerment**, including access to economic and educational opportunities and participation in household and community decision-making. A significant theoretical contribution to this discussion comes from Sen's (1999) **Capability Approach**, which argues that human development must be assessed not solely in terms of economic growth, but through the expansion of substantive freedoms and real opportunities. Malhotra & Schuler (2005) further direct attention to the mediating influence of contextual conditions social norms, cultural expectations and institutional structures on women's ability to translate resource access into concrete benefits.

Complementing these perspectives, welfare and development theories draw attention to the structural role of policy in redressing entrenched inequalities. Taken together, these theoretical traditions offer a rich and layered foundation for understanding women's empowerment as a process shaped simultaneously by individual capabilities and broader social and institutional conditions, highlighting the pathways through which women can achieve autonomy, influence decisions, and enhance their socio-economic and personal well-being. The framework of Kabeer (1999) serves as the primary theoretical basis for the present study which investigates how government schemes in Goa contribute to the social and economic empowerment of women.

Resources are conceived not as empowerment in themselves, but as enabling conditions that make empowerment possible. **Agency** refers to women's capacity to draw upon these resources in exercising choice, asserting autonomy and maintaining meaningful control over consequential life decisions. **Outcomes**, in turn, capture the tangible results of this process and improvements in well-being that emerge from the combined effect of resource access and the active exercise of agency (Kabeer, 1999). These components are given actual operational form within the specific context of this study.

3.9 Conceptual Model

A conceptual framework was developed in the present study as presented in Figure 3.1. Based on the theoretical foundation, ***Resources*** are reflected through awareness of women about government schemes, their access to associated benefits and their status as beneficiaries of such programmes. ***Agency*** is captured through indicators of social and economic empowerment, which collectively signal ability of women beneficiaries to make informed, purposeful decisions within their households and communities. ***Outcomes*** are expressed through overall empowerment of women beneficiaries, encompassing gains in autonomy, well-being, and socio-economic standing. Applied to the question of women's empowerment, this perspective directs attention toward enhancing capabilities across education, health, financial independence, and civic participation enabling women to pursue the kind of life they have reason to value.

The conceptual model assumes that the effectiveness of the government schemes depends not only on their availability but also on the level of awareness among women beneficiaries regarding their provisions and benefits. While availing the schemes, women may encounter various challenges, which can affect the extent to which they benefit from these initiatives.

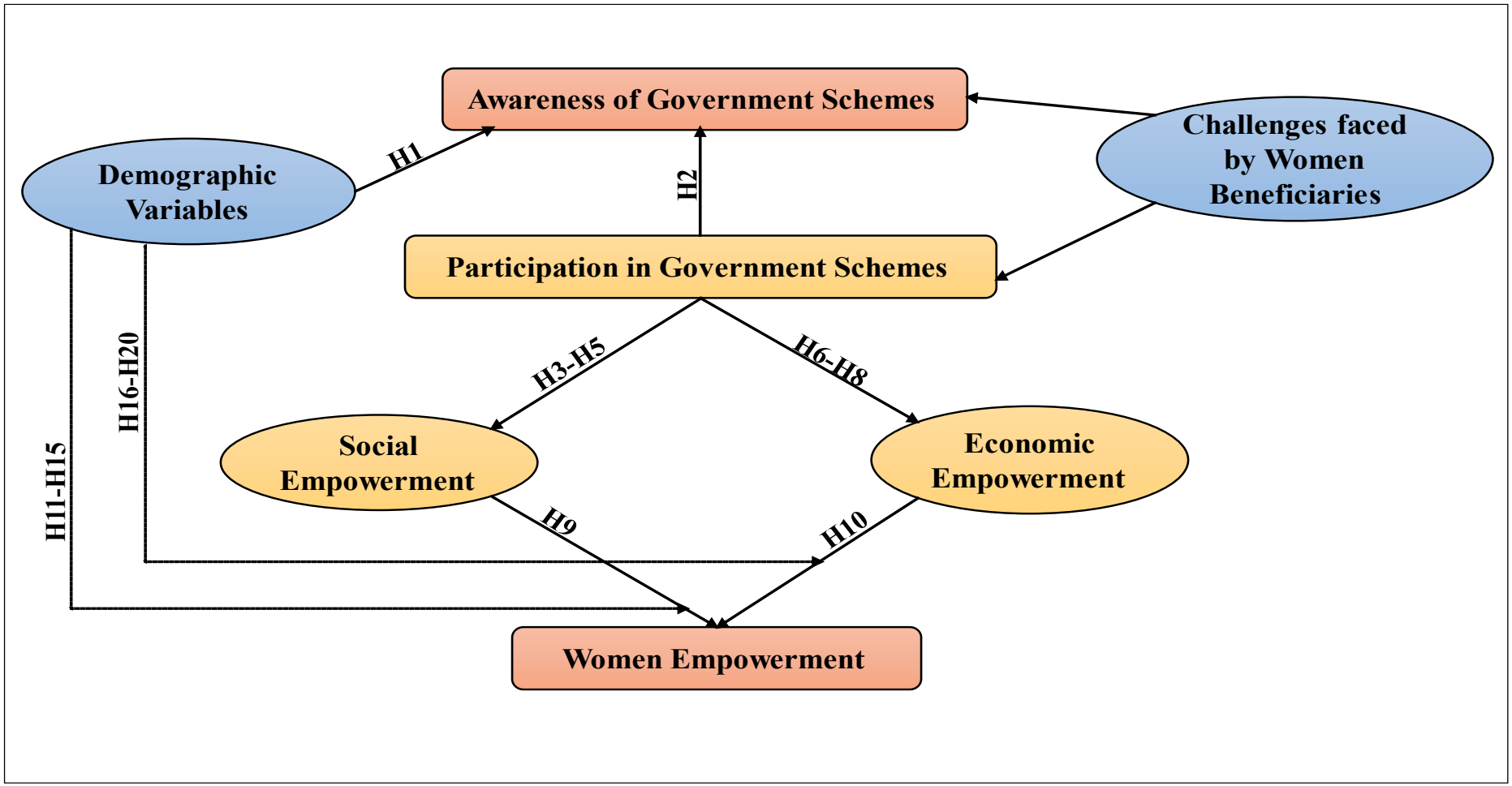


Figure 3.2: Conceptual Model of Women Empowerment through Government Schemes

Source: Author's Compilation

The conceptual model shown in **Figure 3.2** illustrates the relationship between government schemes, awareness, challenges in availing the schemes, and their subsequent impact on the two key dimensions of empowerment; social and economic empowerment, ultimately leading to overall women empowerment.

3.10 Hypotheses Development

A research hypothesis is a statement that predicts the outcome of a research study or experiment. In participant observation, analytic induction is commonly used as an important method of data analysis, where patterns emerging from the data may lead to the development or refinement of one or more hypotheses. Additionally, deductive reasoning is employed to formulate hypotheses that are empirically testable, capable of being falsified, and grounded in realistic assumptions (Saunders & Townsend, 2016).

Objective 1: To analyse the relationship between demographic characteristics, participation in schemes and awareness levels among women beneficiaries across the categorised government schemes.

The above objective is divided into two sub-objectives:

Objective 1a: To examine the effect of demographic characteristics on awareness levels among women beneficiaries across the categorised government schemes.

To test the above sub-objective, the following hypothesis is framed:

Demographic characteristics fundamentally shape women's awareness of government welfare schemes by influencing their access to information, exposure to communication channels, and capacity to engage with public services. Factors such as age, education, marital status, occupation, income, and place of residence affect literacy, social networks, mobility, and contact with institutions and frontline workers, all of which bear directly on awareness and uptake of social programmes (Kothari, 2004; World Bank, 2012).

Residential area plays a particularly substantial role. District of residence and rural–urban classification produces uneven access to services and information owing to differences in administrative outreach, local governance capacity, and infrastructure (World Bank, 2012; UNDP, 2016). Urban districts generally benefit from greater exposure to digital and print media, while rural populations depend more heavily on community engagement and traditional communication channels. The presence of proactive local administration, non-governmental organisations, and women's self-help groups tends to enhance awareness,

whereas conservative social norms, economic disadvantage and limited media penetration can constrain it (Ayugi et al., 2023; Asif et al., 2023; Tiwari & Upadhyay, 2013).

Age further intermediates awareness patterns. Younger women tend to be more technologically proficient, accessing information through digital platforms and social media, while older women typically rely on word-of-mouth and traditional media. Middle-aged women engaged in household management or formal employment may demonstrate higher awareness through direct interaction with financial and social programmes. Elderly women, particularly in rural settings often exhibit lower awareness owing to limited literacy, restricted mobility, and reduced engagement with outreach initiatives (Niehaves, 2010).

Education stands out as the most significant demographic variable, expanding women's human capital, strengthening their capacity to challenge discriminatory practices and enabling them to assert their rights within institutional contexts. The broader empirical literature confirms that educational attainment, socio-economic status, and geographical location consistently shape awareness, accessibility, and utilisation of welfare schemes (Murugan & Dhanasekaran, 2016; Mondal et al., 2024; Kumar et al., 2022; Goswami et al., 2019; Jadhav et al., 2023). The relationship between education and awareness of government schemes among women beneficiaries reveals important insights into how demographic characteristics influence policy outcomes. Education is often considered a vital determinant of awareness levels, as it provides individuals with the capacity to access, comprehend, and interpret information. According to Sowjanya & Hans (2016), education is a crucial tool for empowering women, as it equips them with the knowledge, skills, and self-confidence needed to actively contribute to the development process. Thao (2025) finds that increased education boosts women's empowerment by improving their involvement in household decisions, such as health, expenses, and family visits. Education enhances women's cognitive ability. Access to education helps women to challenge the traditional expectations from women in this area, which is largely contributing to ensure their empowerment (Riaz & Pervaiz, 2018).

Critically, intersectional analyses reveal that empowerment outcomes are not determined by any single attribute but emerge from the interplay of multiple demographic factors. Even when economic resources are made available, social exclusion and discrimination may continue to restrict women's agency, underscoring the importance of integrating

intersectional perspectives into both empowerment research and policy design (Rowland et al., 2022).

Based on this theoretical and empirical foundation, the study proposes the following hypotheses:

H_1: *There is a significant relationship between women beneficiaries' demographic characteristics (district, age, education, marital status, occupation, annual family income, and residential area) and their awareness of the categorised government schemes.*

The above hypothesis is further divided into three sub-hypotheses based on the categories of Government Schemes:

H_{1a}: *There is a relationship between demographic characteristics (district, age, education, marital status, occupation, annual family income and residential area) and awareness among women beneficiaries of welfare schemes.*

H_{1b}: *There is a relationship between demographic characteristics (district, age, education, marital status, occupation, annual family income and residential area) and awareness among women beneficiaries of schemes for entrepreneurship.*

H_{1c}: *There is a relationship between demographic characteristics (district, age, education, marital status, occupation, annual family income and residential area) and awareness among women beneficiaries of health and maternity schemes.*

Objective 1b: To assess the influence of participation in schemes on awareness levels among women beneficiaries across the categorised government schemes.

Awareness among beneficiaries plays a decisive role in determining the effectiveness of government schemes. It enables the individuals to understand programme objectives, benefits and eligibility conditions thereby facilitating increased participation and utilisation. Awareness levels are particularly significant in women's empowerment initiatives as it shapes the ability of women to access resources and make informed socio-economic decisions. Studies highlight that participation in government programmes enhances awareness by increasing exposure to information channels such as self-help groups, local institutions and community networks (Kabeer, 1999). Engagement with implementing agencies fosters improved knowledge of available benefits and support systems, while participation itself functions as a learning process that strengthens understanding of institutional mechanisms and rights (Sen, 1999). Actively involved

beneficiaries tend to possess higher awareness levels compared to non-participants, as participation enables information sharing and social learning (Duflo, 2012). However, this relationship is context-dependent. Mohapatra & Sahoo (2016) in their study found that minority women demonstrated persistently low awareness despite scheme availability while education and residence significantly influenced awareness in Rajasthan (Yadav, 2020). Overall, the effect varies by programme design and beneficiary characteristics (Iqbal et al., 2020). Therefore, examining the relationship between participation in government schemes and awareness among the women beneficiaries becomes essential for understanding how the engagement with such programmes contributes to their empowerment.

Based on the above, the following hypothesis is proposed:

H_2: *Participation in schemes influences awareness levels among women beneficiaries of the categorised government schemes.*

The above hypothesis is further divided into three sub-hypotheses based on the categories of Government Schemes:

H_{2a}: *The number of welfare schemes adopted affects awareness among women beneficiaries.*

H_{2b}: *The number of schemes for entrepreneurship adopted affects awareness among women beneficiaries.*

H_{2c}: *The number of health and maternity schemes adopted affects awareness among women beneficiaries.*

Objective 2: To assess the impact of social and economic empowerment through government schemes on women empowerment.

a: To assess the impact of government schemes on the social empowerment of women beneficiaries.

b: To assess the impact of government schemes on the economic empowerment of women beneficiaries.

c: To assess the impact of social and economic empowerment on women empowerment.

Government schemes targeting empowerment of women are theoretically grounded in empowerment and agency frameworks that link programme participation to enhanced mobility, decision-making and access to resources (Samanta & Chakraborty, 2024). Empirical evidence authenticates the social empowerment hypothesis with studies showing that cash transfer and welfare programmes significantly improve freedom of movement, household authority and community participation of women (Prennushi & Gupta, 2014; Iqbal et al., 2020). The economic empowerment hypothesis is also supported by microfinance theories and evidence showing that collateral-free loans and financial assistance increase female entrepreneurship, income generation and accumulation of assets (Agarwala et al., 2022; Latha et al., 2024). Research indicates that schemes such as Pradhan Mantri Jan Dhan Yojana, Mudra Yojana, and Stand-Up India initiative introduced by the Government of India for the advancement of women have significantly contributed in the improvement of socio-economic conditions of female beneficiaries despite the inherent challenges relating to awareness, documentation and institutional obstacles (Pal et al., 2022). Critically integrated empowerment models conceptualise social and economic dimensions as mutually reinforcing pathways to overall women empowerment, in which economic resources strengthen bargaining power while social participation enhances access to economic opportunities (Baird et al., 2013; Detras & Peksen, 2017). Cross-national and regional studies confirm that government welfare spending correlates with both labour force participation and political representation, while the awareness of schemes and their utilisation predict higher composite empowerment scores (Samanta & Chakraborty, 2024), thereby justifying the hypothesis of examining the individual and combined impacts of government schemes on women's social, economic and overall women empowerment.

To test the objective 2, following hypotheses have been proposed:

H_3: *There is an impact of welfare schemes on social empowerment of women beneficiaries.*

H_4: *There is an impact of schemes for entrepreneurship on social empowerment of women beneficiaries.*

H_5: *There is an impact of health and maternity schemes on social empowerment of women beneficiaries.*

H_6: *There is an impact of welfare schemes on economic empowerment of women beneficiaries.*

H_7: *There is an impact of schemes for entrepreneurship on economic empowerment of women beneficiaries.*

H_8: *There is an impact of health and maternity schemes on economic empowerment of women beneficiaries.*

H_9: *There is an impact of social empowerment on women empowerment.*

H_{10}: *There is an impact of economic empowerment on women empowerment.*

Objective 3: To evaluate the moderating effect of demographic attributes on the relationship between social and economic empowerment with women empowerment.

Age as a moderator: Age plays a key moderating role in determining how women benefit from social and economic empowerment initiatives. Younger women often exhibit greater adaptability, digital literacy, and openness to new opportunities, enabling them to leverage economic schemes more effectively. Conversely, older women may possess greater social capital, household authority, and experiential knowledge, which can strengthen the social empowerment-women empowerment linkage. Empirical evidence suggests that women's labour force participation and empowerment outcomes vary significantly across age groups, reflecting differing lifecycle responsibilities and opportunities (Besamusca et al., 2015). Studies also indicate that age influences women's ability to convert economic empowerment into sustained empowerment outcomes. Younger women may face social resistance despite economic gains, whereas older women may experience stronger empowerment effects due to enhanced decision-making authority within households. This highlights age as a critical moderator that conditions the effectiveness of government schemes. The following hypotheses are proposed:

H_{11}: *There is a moderating effect of age group on the relationship between social empowerment and women empowerment.*

H_{16}: *There is a moderating effect of age group on the relationship between economic empowerment and women empowerment.*

Marital status as a moderator: Marital status significantly moderates empowerment relationships by shaping women's roles, responsibilities, and bargaining power within households. Married women often experience empowerment outcomes differently than unmarried, widowed, or divorced women due to variations in household decision-making structures and social expectations. Research on family policy and social welfare indicates that married women may benefit more from social protection schemes due to spousal support and shared resources, while single women may rely more heavily on state support (Bogoni, 2023). Conversely, unmarried or single women may experience greater autonomy

in utilising economic resources but face heightened social constraints. These contrasting dynamics influence how social and economic empowerment translate into overall empowerment, highlighting marital status as a critical moderating variable.

The following hypotheses are proposed:

H_{12}: *There is a moderating effect of marital status on the relationship between social empowerment and women empowerment.*
H_{17}: *There is a moderating effect of marital status on the relationship between economic empowerment and women empowerment.*

Annual family income as a moderator: Annual family income and economic position strongly condition the empowerment effects of government schemes. Women from higher-income households are often better able to utilise scheme benefits effectively due to complementary resources such as education, social networks, and access to information. In contrast, women from lower-income households may experience immediate economic relief but limited long-term empowerment due to persistent vulnerabilities (Abdulai, 2025). Empirical studies on financial inclusion indicate that income stability enhances women's ability to convert economic empowerment into decision-making power and social recognition (Pal et al., 2022). However, the literature also cautions that income-based disparities may reinforce inequalities if schemes are not designed to account for differential starting points.

The following hypotheses are proposed:

H_{13}: *There is a moderating effect of annual family income on the relationship between social empowerment and women empowerment.*
H_{18}: *There is a moderating effect of annual family income on the relationship between economic empowerment and women empowerment.*

Occupation as a moderator: Occupation serves as another important moderator influencing empowerment outcomes. Women engaged in formal employment or entrepreneurial activities tend to experience stronger empowerment effects from economic schemes due to skill utilisation, income stability, and institutional recognition. In contrast, women in informal or unpaid roles may face constraints in translating economic benefits into sustained empowerment (Kumar & Srivastava, 2024). Studies on women

entrepreneurship highlight that occupational engagement enhances both economic and social empowerment by increasing visibility, confidence, and bargaining power (Rado & Thongmak, 2022). However, occupational status also interacts with other demographic factors such as education and income, creating layered moderating effects. The following hypothesis is proposed:

H_{14}: *There is a moderating effect of occupation on the relationship between social empowerment and women empowerment.*
H_{19}: *There is a moderating effect of occupation on the relationship between economic empowerment and women empowerment.*

Education as a moderator: Education is one of the most consistently identified moderators in empowerment research. Higher educational attainment enhances women's cognitive skills, awareness of rights, and capacity to engage with institutions, thereby strengthening the relationship between both social and economic empowerment and women empowerment. Education plays a pivotal role in improving women's status within the familial structure by strengthening their decision-making authority, increasing their bargaining power, and enabling greater participation in household affairs and resource allocation decisions (Borah et al., 2024). Thus, educational attainment represents a fundamental pathway through which women can achieve meaningful empowerment across social, economic, and personal domains, ultimately contributing to broader societal transformation and gender equity. Educated women are better positioned to understand scheme provisions, manage financial resources, and participate in community decision-making processes (Pal et al., 2022). However, the literature also reveals that education may have differential moderating effects across empowerment dimensions. While education strongly reinforces social empowerment outcomes such as autonomy, confidence, and public participation its influence on economic empowerment outcomes may be constrained by labour market conditions and gender norms (Ziqing, 2024). These findings suggest that education amplifies empowerment pathways but does not eliminate structural barriers. Based on the above, the following hypotheses are proposed:

H_{15}: *There is a moderating effect of education on the relationship between social empowerment and women empowerment.*
H_{20}: *There is a moderating effect of education on the relationship between economic empowerment and women empowerment.*

3.11 Data Analysis Tools and Techniques

The study employed a systematic and rigorous data analysis approach, utilising both descriptive and inferential statistical techniques to evaluate the social and economic empowerment of women beneficiaries of government schemes in Goa. Descriptive statistics, including frequencies, percentages, means, and standard deviation were used to summarise beneficiary characteristics and provide insights into awareness, accessibility and utilisation patterns. Inferential analyses such as Analysis of Variance (ANOVA) and regression analysis were applied to test hypothesised relationships and examine variations in empowerment levels across demographic groups. Additionally, Structural Equation Modeling (SEM) using Smart PLS 4 was employed to evaluate measurement and structural models, enabling assessment of direct, indirect and moderating effects among social empowerment, economic empowerment and overall women empowerment. The reliability and validity of constructs were confirmed through Cronbach's alpha, CR, AVE, and the Fornell Larcker criterion. This multifaceted analytical framework ensured robustness and empirical accuracy while facilitating a comprehensive interpretation of complex interrelationships among variables. The integration of Statistical Package for the Social Sciences (SPSS) for traditional statistical testing and Smart PLS for SEM reflects adherence to best practices in social science research, enabling both hypothesis testing and the exploration of latent constructs (Yogendrarajah, 2013).

3.11.1 Frequency Distribution

Frequency distributions were used to systematically assess categorical variables related to respondents' demographics, including age, educational qualification, marital status, occupation, annual family income, and residential area (urban or rural). This descriptive statistical method organises data by counting the observations in each category, offering an initial overview of the sample's makeup and helping identify patterns and trends within the dataset (Bhandari, 2023; Field, 2018). Additionally, frequency distributions were used to evaluate awareness levels among women respondents regarding various government schemes. This structured approach allowed for a comprehensive presentation of both demographic details and awareness patterns, laying the groundwork for further inferential analyses.

3.11.2 Descriptive Statistics

A descriptive analysis was performed to examine three fundamental statistical dimensions of interval and ratio scale variables incorporated in the study: measures of central tendency, measures of dispersion, and distributional characteristics. This comprehensive approach offers a robust characterisation of the data structure and facilitates the interpretation of response patterns among women beneficiaries (Pallant, 2020). *Firstly,* measures of central tendency were computed, with the mean score serving as the primary indicator of the average level of agreement or response magnitude across the sample. The mean provides a single representative value that summarises respondents' perceptions and attitudes across various dimensions of empowerment (Bhandari, 2023). *Secondly,* measures of dispersion were estimated using standard deviation, which quantifies the degree of variability or spread in responses around the mean. A lower standard deviation indicates greater consensus among respondents, whereas a higher standard deviation reflects heterogeneity in perceptions and experiences (Field, 2018). *Thirdly,* distributional characteristics were assessed through skewness and kurtosis coefficients to evaluate the normality and shape of the response distribution. Skewness measures the asymmetry of the distribution, indicating whether responses are disproportionately concentrated at the lower or higher end of the scale, while kurtosis assesses the degree of peakedness or flatness relative to a normal distribution, thereby revealing the presence of outliers or extreme values (Mishra et al., 2019).

These descriptive statistics were explicitly applied to interval-scale variables measuring respondents' levels of agreement on various facets of empowerment, such as economic autonomy, decision-making authority, social mobility, and access to resources. By examining central tendency alongside variability and distribution, the analysis illuminated the average perceptions held by women beneficiaries and also the extent of consensus and divergence within the sample. Furthermore, assessing the distributional shape provided critical insights into the normality of the data, which in turn influences the suitability and accuracy of subsequent inferential statistical procedures. Overall, this descriptive analytical framework yielded a nuanced understanding of empowerment perceptions, supporting sound interpretation and further statistical modelling in the study.

3.11.3 One Way ANOVA

A one-way analysis of variance (ANOVA) was utilised to assess whether statistically

significant differences in awareness of government schemes exist among demographic subgroups with more than two categories. ANOVA is a parametric statistical method employed to determine if there are notable differences between the means of three or more independent groups (Mishra et al., 2019), rendering it particularly appropriate for comparing mean awareness scores across multiple demographic segments concurrently. In this investigation, demographic variables, including age, educational attainment, occupation, annual income, and residential area, each consisting of multiple categorical levels, were considered as independent grouping variables, whereas the mean awareness scores for various government schemes (Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes) were designated as the dependent continuous variables. The application of one-way ANOVA was especially suitable given the research objective of identifying inter-group variation in awareness levels among women beneficiaries with diverse socio-demographic characteristics in Goa. This statistical test compares the variance between groups to the variance within groups, thereby evaluating whether the observed differences in group means exceed what could be attributed to chance (Field, 2018). Prior to conducting ANOVA, key statistical assumptions were meticulously verified to ensure the validity and reliability of the findings. These assumptions encompassed: (1) the normality of distribution, (2) homogeneity of variance across groups assessed via Levene's test and (3) independence of observations, maintained through the sampling design (Pallant, 2020). When violations of homogeneity of variance were identified, appropriate measures were taken. This analytical approach facilitated the identification of demographic determinants influencing awareness disparities, fostering a comprehensive understanding of how socio-demographic characteristics impact knowledge and access to government programmes.

3.11.4 Structural Equation Modeling

Structural equation modeling (SEM) served as the primary analytical technique for hypothesis testing and evaluation of government schemes' effects on social and economic empowerment among women beneficiaries in Goa. As a robust multivariate method, SEM facilitates the analysis of relationships between observed and latent variables (Schreiber et al., 2006), allowing simultaneous assessment of measurement and structural model components to thoroughly examine interdependencies among latent constructs (Kline, 2016).

Partial least squares SEM (PLS-SEM), operationalised using Smart PLS 4 software (Ringle et al., 2024), was selected for its efficacy in exploratory research aimed at theory extension and prediction within complex models (Hair et al., 2019). PLS-SEM demonstrates flexibility to non-normal distributions and optimises predictive accuracy by maximising variance explained in endogenous constructs, rendering it well-suited to social science inquiries (Sarstedt et al., 2021).

The model featured two second-order reflective-reflective constructs: economic empowerment and social empowerment. In such hierarchical configurations, the superordinate construct subsumes and accounts for variance in its first-order dimensions, analogous to reflective measurement paradigms (Sarstedt et al., 2019). Economic empowerment comprised three first-order factors financial independence, family expenses, and investment capability operationalising women's resource control and financial autonomy. Social empowerment encompassed social status and security, decision-making authority and personal independence, delineating women's agency and socio-familial positioning. This hierarchical approach enhanced model parsimony by consolidating paths and enhancing theoretical scope (Hair et al., 2024).

Estimation employed the disjoint two-stage procedure, acknowledged for its methodological rigour in higher-order PLS-SEM (Sarstedt et al., 2019; Becker et al., 2012). Stage one generated latent variable scores for first-order constructs via standard PLS-SEM, utilising their indicator variables. Stage two integrated these scores as indicators for the second-order constructs, enabling analysis of hypothesized paths from government scheme awareness to empowerment outcomes. This method ensures parsimony, interpretability, and estimation robustness (Sarstedt et al., 2019). Model validation adhered to established PLS-SEM protocols. The outer measurement model was appraised for internal consistency (CR, Cronbach's alpha), convergent validity (AVE), and discriminant validity (Fornell-Larcker criterion, HTMT). The inner structural model was evaluated via path coefficients (β), R^2, f^2 effect sizes, and Q^2 predictive relevance. Significance was determined through bootstrapping (10,000 subsamples), yielding standard errors and confidence intervals. The path estimation, default in Smart PLS, was applied to maximise endogenous R^2 values across specifications (Hair et al., 2022).

PLS-SEM's suitability stemmed from its capacity to accommodate multifaceted models with extensive indicators, non-parametric flexibility, integrated measurement-structural

estimation accounting for error, and emphasis on prediction over global fit aligning with the objective of quantifying government schemes' predictive influence on empowerment (Sarstedt et al., 2021; Hair et al., 2019). Through this methodological framework, the study was able to evaluate the magnitude, direction and significance of the relationships among constructs, thereby providing empirical insights into how government interventions contribute to the social and economic empowerment of women beneficiaries in Goa.

3.11.5 Analytic Hierarchy Process

The Analytic Hierarchy Process (AHP) method is one of the most used fussy logic methods, and in this study, it is used to establish the priorities for the given challenges with the help of discussion with the women beneficiaries. Efforts are made in the present study to understand the perceived challenges in availing the government schemes in Goa state by women beneficiaries. Fifteen challenges were identified faced by women beneficiaries in availing the government schemes with the help of literature review and discussion with the women beneficiaries. These perceived challenges were included in the study for AHP analysis.

The selected perceived challenges are included in the AHP questionnaire. The responses were used as the input (used 1-to-9-point scale) in providing the responses in the AHP questionnaire. The AHP matrix including the identified different perceived challenges in availing the government schemes in Goa state by women beneficiaries. The pairwise comparison of the included different perceived challenges in availing the government schemes in Goa state by women beneficiaries is done. The AHP matrix consists of two triangular matrices namely upper and lower triangular matrix where the upper triangular matrix needs the responses from the women beneficiaries according to the pairwise comparison of the cells. However, the lower triangular matrix does not need any response, thus, filled with X (as no responses is needed here). The main diagonal of the AHP matrix is filled with 1, representing that the same dimensions of included different perceived challenges in availing the government schemes in Goa state by women beneficiaries is equally important. The women beneficiaries were requested to compare the included different perceived challenges in availing the government schemes in Goa state by women beneficiaries mentioned in the upper triangular cells of the AHP matrix. The pairwise comparison is done using the 9-point rating scale. In the rating scale of 1 to 9, 1 indicates equally important and 9 means absolutely important.

3.12 Softwares used for Data Analysis

3.12.1 Microsoft Excel

Microsoft Excel (2021) was used for initial data management, organisation, and early analysis. Its structured environment ensured accuracy as raw survey responses from women beneficiaries were entered, coded, and categorised. Data cleaning, including addressing missing values, correcting errors, and verifying integrity, preceded advanced analysis (Hancock & Mueller, 2010). Features such as sorting, filtering, and conditional formatting helped organise demographic data and explore response patterns. Descriptive statistics, such as frequencies, percentages, means, and dispersion measures, provided initial insights, while visual tools, such as bar charts and histograms, helped identify distribution patterns and anomalies. Excel's compatibility with IBM SPSS and SmartPLS enabled seamless data transfer for further analysis (Field, 2018). This stage was vital for ensuring data quality and a reliable basis for hypothesis testing and multivariate analysis.

3.12.2 IBM SPSS Statistics 26.0

IBM SPSS Statistics Version 26.0 was used for data analysis in this study. It is reliable for social science research with various analytical procedures, user-friendly interface, and supports both descriptive and inferential analysis (Field, 2018; Pallant, 2020). The analysis included frequency distribution for sample demographics, descriptive statistics for scheme awareness and women empowerment variables, and one-way ANOVA to compare awareness levels across subgroups. SPSS 26.0 was chosen for its data management features like recoding, score computation, missing data handling, and its widespread use in empowerment and policy research, ensuring transparency and reproducibility (Pallant, 2020).

3.12.3 Smart PLS 4

Partial Least Squares Structural Equation Modeling (PLS-SEM) was conducted using SmartPLS 4, a specialised software extensively adopted in social science research for its capacity to handle exploratory analysis, theory development, and predictive modelling (Hair et al., 2019). PLS-SEM prioritises the explanation of variance in endogenous constructs, making it well suited to studies concerned with causal–predictive relationships (Sarstedt et al., 2021). Two second-order reflective–reflective constructs, economic empowerment and social empowerment, were specified using the disjoint two-stage approach. Latent variable scores obtained from first-order dimensions in the initial stage

served as indicators of their respective higher-order constructs in the structural model (Sarstedt et al., 2019). A bootstrapping procedure employing 10,000 subsamples was applied to determine the statistical significance of path coefficients and generate robust standard errors and confidence intervals (Hair et al., 2022). Measurement model evaluation drew on Cronbach's alpha, CR, and AVE, while discriminant validity was assessed through the Fornell–Larcker criterion and the HTMT ratio (Hair et al., 2019). Structural model assessment encompassed path coefficients (β), coefficient of determination (R^2), predictive relevance (Q^2), and effect sizes (f^2) (Sarstedt et al., 2021). The software's robustness to non-normal data distributions and its predictive orientation made it a suitable analytical tool for examining how awareness of government schemes shapes women's empowerment outcomes.

3.13 Government Schemes

The following government initiatives are designed to empower women through financial support, healthcare, educational and entrepreneurial opportunities, fostering social equity and sustainable economic independence across various sectors in the State of Goa.

Table 3.11: Government Schemes

Scheme	Inception and Administration	Objectives	Eligibility Criteria	Financial Assistance	Application Process
Welfare Schemes					
Laadli Laxmi Scheme	Inaugurated 6 July 2012; Directorate of Women and Child Development, Goa.	Advance gender equity, combat female foeticide, promote self-reliance via financial aid.	Girls born in Goa (15-year residency) or equivalent; family income ≤ ₹3 lakh; claims at 18 or 19–45 years.	₹1 lakh one-time (fixed deposit at 18, withdrawable for education/ business/ marriage).	Submit to Director with birth certificate, residence/ income proofs, Aadhaar, and self-declaration
Griha Aadhar Scheme	Launched 4 January 2013; Directorate of Women and Child Development, taluka centres.	Enhance economic independence for homemakers, counter living costs.	Women residents (18–60 years), married/widow/ separated/ divorced; 15-year residency;	₹1,500 monthly through direct benefit transfer (DBT).	Prescribed form with Aadhaar, age/ residence/ marital proofs, income certificate

Scheme	Inception and Administration	Objectives	Eligibility Criteria	Financial Assistance	Application Process
			income ≤ ₹3 lakh.		to Directorate /centres/ online.
Dayanand Social Security Scheme	January 2002; Directorate of Social Welfare, sanctioning committee, DBT via banks.	Social security net for vulnerable groups, poverty alleviation.	Permanent Goa residents: seniors >60, single women, disabled <60, HIV patients; no duplicate benefits.	₹2,000–₹4,000 monthly lifelong through DBT.	Forms to Directorate / Mamlatdar with age/ residence/ income proofs, Aadhaar, category certificates
Schemes for Entrepreneurship					
Prime Minister's Employment Generation Programme (PMEGP)	2008-09; KVIC, DICs, GKVIB, banks in Goa.	Generate micro-enterprises, self-employment in non-farm sectors.	≥18 years, SHGs/trusts; projects ≤ ₹50 lakh; special priority for women/SC/ST; excludes liquor/tobacco.	15–35percent margin subsidy on project cost; bank loans 90–95 percent.	Online pmegp. eportal.in with project report, certificates, training proofs.
Chief Minister's Rojgar Yojana (CMRY)	Revived 2023 (to 2026); EDC Ltd., DICs, Task Force.	Self-employment for educated youth, innovation, job creation.	18–50 years (relaxable), Goa residents 15 years, Class VIII; no defaults/high income.	Loans ≤ ₹25 lakh (15 percent margin), interest subsidy, 1-year moratorium.	Forms to EDC/DICs/ online with residence/ education/ Aadhaar/ project reports.
Health and Maternity Schemes					
Pradhan Mantri Matru Vandana Yojana (PMMVY)	1st January 2017; DWCD, Anganwadis, PMMVY-CAS.	Address wage loss, promote antenatal care, nutrition.	Pregnant/lactating ≥19 years; first child (₹5,000), second girl (₹6,000); registration ≤150 days LMP.	₹3,000 + ₹2,000 instalments through DBT.	Anganwadi /health centres/online with Aadhaar, pregnancy/ bank details.

Scheme	Inception and Administration	Objectives	Eligibility Criteria	Financial Assistance	Application Process
Mamta Scheme (MS)	1 April 2011 (amended 2015); DWCD, CDPOs, Anganwadis.	Promote girl child births, gender equality through incentives.	Mothers delivering live girl child (max 2) in institutions; apply within 45 days.	₹10,000 one-time DBT.	Form to CDPO via Anganwadi with birth certificate/ bank details.
Janani Suraksha Yojana (JSY)	April 2005; DHS, NHM Goa, PHCs/CHCs.	Reduce maternal/ neonatal mortality through institutional deliveries.	BPL/SC/ST women ≥19 years; first two births; Goa residency.	₹600–700 (urban/rural institutional), ₹500 home through DBT.	Early registration with ANM/ ASHA; post-delivery forms at PHCs with proofs.

Source: Government Websites of the Schemes, Author's Compilation

3.14 Operational Definitions

3.14.1 Women Empowerment (WE)

For the purpose of this study, WE is operationally defined as a multidimensional process that enables women to enhance their social and economic status by gaining access to resources, participating in decision-making, achieving financial independence and improving their overall quality of life (Kabeer, 1999).

3.14.2 Economic Empowerment (EE)

EE is defined as "the involvement of women in productive activities that provide financial independence. This can be assessed through improvements in income levels, asset ownership, financial decision-making, and other indicators" (Duflo, 2012).

3.14.3 Social Empowerment (SE)

SE is defined as "the process by which women gain greater autonomy, self- confidence, and social recognition through improved access to social security, personal independence, and participation in household and community-level decision-making" (Lal, 2021).

3.14.4 Government Schemes

Government schemes are operationally defined as “structured policy initiatives introduced by the Central and State Governments of India with the objective of promoting social welfare, economic development, and inclusive growth among citizens” (SATHEE (IIT Kanpur), n.d.).

3.15 Chapter Summary

This chapter delineates the comprehensive methodological framework adopted to evaluate the impact of government schemes on women's social and economic empowerment in Goa. The study is descriptive and quantitative, with primary data collected from 603 valid responses obtained through structured questionnaires, unstructured interviews, and focus group discussions conducted between February and April 2026. The study universe comprises women beneficiaries aged 18 years and above across welfare, entrepreneurship, and health and maternity scheme categories. A combination of stratified, snowball, and convenience sampling techniques was employed to ensure adequate representation across North and South Goa. The conceptual framework is grounded in Kabeer's (1999) resources-agency-outcomes model. The questionnaire incorporated six constructs: financial independence, family expenses, investments, social status and security, decision-making, and personal independence, measured through a five-point Likert scale. Reliability and validity were confirmed through Cronbach's alpha, composite reliability, and average variance extracted, thereby ensuring a robust, replicable, and empirically rigorous foundation for the study. Data analysis employed frequency distributions, descriptive statistics, one-way ANOVA, SEM using SmartPLS 4, and the Analytic Hierarchy Process to prioritise challenges. The final data collection process incorporated rigorous screening, coding, and validation, achieving a high response rate. An overview of focal welfare schemes such as LAS, GAS, and DSSS; schemes for entrepreneurship, including PMEGP and CMRY; and health and maternity schemes such as PMMVY, MS, and JSY highlights their contributions to beneficiaries' economic independence and social status. This robust methodology establishes a solid foundation for reliable, valid analysis and interpretation of findings in subsequent chapters.

Chapter 4

Evaluation of Women's Awareness towards Government Schemes

4.1 Introduction

Women empowerment has increasingly emerged as a chief pillar of contemporary development agendas. Governments worldwide, including India, have launched multifaceted schemes spanning education, entrepreneurship, health, financial independence, and social security all aimed at reducing gender inequalities and fostering inclusive growth. Despite substantial public investment, a critical barrier persists: potential beneficiaries often remain unaware of these programmes. The sheer multiplicity of schemes alongside poor publicity, inadequate dissemination mechanisms and limited outreach, results in many initiatives remaining underutilised or expiring before women even learn of their existence. The success of such programmes hinges not merely on design and funding, but on effective reach to intended beneficiaries. Women must possess adequate knowledge of scheme objectives, eligibility criteria, benefits and application procedures to meaningfully avail themselves of these opportunities. In Goa, these challenges are further amplified by geographical, infrastructural, and occupational factors, curtailing uptake even among well-designed initiatives.

Empirical evidence consistently links higher awareness to greater scheme participation and improved socio-economic outcomes. Awareness thus acts as a vital bridge between policy formulation and actual utilisation. Demographic variables such as age, income, marital status, and location significantly influence awareness levels, while deeper understanding of eligibility, documentation, and procedures proves especially essential for complex entrepreneurship schemes. Persistent awareness gaps therefore hinder the translation of policy intent into tangible results, undermining the broader developmental goals these schemes are designed to achieve. Streamlined and targeted communication strategies are essential to ensure welfare efforts fulfil their intended purpose.

Against this backdrop, this chapter systematically evaluates women's awareness of selected government schemes in Goa, focusing on welfare, entrepreneurship, health and maternity. By analysing awareness patterns and dissemination mechanisms, it aims to bridge policy

objectives with ground realities and strengthen the transformative potential of these empowerment initiatives.

4.2 Data Analysis and Interpretation

Awareness of government schemes varies significantly across demographic variables, including age, education, income, marital status, occupation, residential area, and district affiliation. These factors shape women's access to information and their ability to utilise available schemes. Understanding demographic influences is essential for equitable scheme implementation and for achieving meaningful outcomes in women' empowerment.

4.2.1 Profile of the Respondents

A comprehensive survey was conducted among 603 women beneficiaries of various government schemes with demographic profile data systematically collected to provide contextual insights into respondent characteristics. The demographic distribution of the sample population is delineated below:

Table 4.1: District-wise distribution of Respondents (N=603)

Variable	Classification	Frequency	Percentage
District	North	268	44.44
	South	335	55.56

Source: Author's Compilation

The **Table 4.1** shows a relatively balanced distribution of women beneficiaries across the two districts. 268 respondents (44.44 percent) from North Goa and 335 respondents (55.56 percent) from South Goa. South Goa constituted a slightly higher proportion of the sample (11 percent difference). The near-equitable geographic representation ensures that the findings are broadly generalisable across Goa's administrative divisions, providing a meaningful basis for district-wise comparative analysis.

Table 4.2: Age Group of Respondents (N=603)

Variable	Classification	Frequency	Percentage
Age Group	18-40 years	219	36.32
	41-60 years	205	34.00
	61 years and above	179	29.68

Source: Author's Compilation

Table 4.2 shows the age distribution, which reveals a heterogeneous sample spanning three distinct groups: the youngest being (18-40 years) constitutes the largest proportion (36.32

percent), followed closely by the middle-aged group (41-60 years; 34.00 percent) and the elderly (61 years and above; 29.68 percent). The balanced representation across age strata enables robust comparative analyses to identify intergenerational disparities and to design the schemes to suit the requirements of each age group ensuring equitable outreach and empowerment across life stages.

Table 4.3: Education of Respondents (N=603)

Variable	Classification	Frequency	Percentage
Education	Secondary	121	20.07
	Higher Secondary	137	22.72
	Graduation	112	18.57
	Post-Graduation	126	20.90
	Other	107	17.74

Source: Author's Compilation

Table 4.3 shows the educational profile of respondents, which reflects a heterogeneous distribution across qualification levels. The largest proportion of respondents had completed higher secondary education (22.72 percent), followed by those with post-graduate qualifications (20.90 percent), secondary education (20.07 percent), graduation (18.57 percent) and other forms of education included respondents with diploma courses, vocational training, certificate courses or distance education (17.74 percent). This distribution indicates that 42.79 percent of respondents possess secondary or higher secondary qualifications, while a substantial 39.47 percent have attained tertiary-level education (graduation or post-graduation). Such diversity in educational attainment provides a vigorous basis for examining education-based variations in awareness of government schemes.

Table 4.4: Marital Status of Respondents (N=603)

Variable	Classification	Frequency	Percentage
Marital Status	Married	305	50.58
	Unmarried	298	49.42

Source: Author's Compilation

Table 4.4 outlines the distribution of marital status, showing that married respondents make up 50.58 percent of the sample, while unmarried respondents account for 49.42 percent. Marital status is a key demographic factor influencing scheme awareness. This balanced

representation enhances the validity of comparative analyses, enabling the identification of differences in awareness and utilisation based on marital status. Such insights can guide targeted interventions, like campaigns focused on joint families or schemes for single women, to promote equitable scheme outreach.

Table 4.5: Occupation of the Respondents (N=603)

Variable	Classification	Frequency	Percentage
Occupation	Private Employee	118	19.57
	Government Employee	114	18.91
	Business	126	20.90
	Housewife	123	20.40
	Other	122	20.23

Source: Author's Compilation

Table 4.5 gives the occupational distribution, demonstrating a diverse and relatively balanced representation across five categories. The largest proportion of respondents is engaged in business activities (20.90 percent), followed closely by housewives (20.40 percent). Private-sector employees account for 19.57 percent of the sample, while government employees constitute the smallest group (18.91 percent). The other category, which accounted for 20.23 percent, included respondents who were unemployed, daily wage workers, retired, and students. This near-equitable distribution suggests that women from varied occupational backgrounds are accessing government schemes, thereby enabling a comprehensive comparative assessment of how employment type may influence scheme awareness, accessibility, and utilisation.

Table 4.6: Annual Family Income of Respondents (N=603)

Variable	Classification	Frequency	Percentage
Annual Family Income	Less than 50,000	155	25.70
	Rs.50,000-Rs.1,50,000	148	24.54
	Rs. 1,50,000-3,00,000	161	26.70
	Above Rs. 3,00,000	139	23.05

Source: Author's Compilation

Table 4.6 presents the annual family income of the respondents, wherein the largest proportion was within the income bracket of ₹1,50,000–₹3,00,000 (26.70 per cent), followed closely by those earning less than ₹50,000 (25.70 per cent) and those with annual

income between ₹50,000 and ₹1,50,000 (24.54 per cent). The smallest segment comprises households with an annual income exceeding ₹3,00,000 (23.05 percent). This distribution indicates that beneficiaries come from economically diverse backgrounds, with a slightly higher concentration in the lower-middle-income group.

Table 4.7: Residential Area of Respondents (N=603)

Variable	Classification	Frequency	Percentage
Residential Area	Municipal	306	50.75
	Panchayat	297	47.25

Source: Author's Compilation

Table 4.7 outlines the distribution of the 603 women beneficiaries based on residential area, revealing an almost equal representation of respondents from municipal (50.75 percent) and panchayat areas (47.25 percent). This near-parity indicates that government schemes in Goa are reaching women across both urban and rural jurisdictions, reflecting balanced geographic coverage in beneficiary participation.

4.2.2 Common Method Bias

Common method bias is a measurement error from using the same methods, sources, or contexts in data collection for both variables. It is particularly common in survey-based research, where respondents provide self-reported data on both independent and dependent variables in a single questionnaire. It can artificially inflate or distort relationships, especially in cross-sectional, self-reported surveys where responses may be influenced by motives for consistency, social desirability bias, or uniform scales. The data was collected through a cross-sectional survey and hence, common method bias was statistically addressed by employing Harman's single factor test. The largest factor accounted for 41.558 percent of the variance, which is below the 50 percent threshold (Podsakoff et al., 2003).

4.2.3 Awareness Level of Government Schemes among Women Beneficiaries

The study examines the levels of awareness among women respondents regarding various government schemes. Specifically, it considers their acquaintance with eight key initiatives categorised as: ***Welfare Schemes*** comprising of the Laadli Laxmi Scheme (LLS), Griha Aadhar Scheme (GAS) and Dayanand Social Security Scheme (DSSS), ***Schemes for Entrepreneurship*** comprising of the Chief Minister's Rojgar Yojana (CMRY) and Prime Minister's Employment Generation Programme (PMEGP) and ***Health and Maternity***

Schemes including the Mamta Scheme (MS), Pradhan Mantri Matru Vandana Yojana (PMMVY) and the Janani Suraksha Yojana (JSY). These schemes were selected to assess participants' awareness and identify gaps in outreach and understanding.

Table 4.8: Awareness Level about the Government Schemes (N=603)

Category of Government Schemes	Government Schemes	Count and Percentage	Completely Unaware	Slightly Unaware	Moderately Aware	Aware	Fully Aware
Welfare Schemes	LLS	Count	22	59	153	185	184
		Percentage	3.60	9.80	25.30	30.60	30.51
	GAS	Count	7	62	134	198	202
		Percentage	1.20	10.30	22.20	32.80	33.50
	DSSS	Count	9	61	129	191	213
		Percentage	1.50	10.10	21.40	31.60	35.32
Schemes for Entrepreneurship	CMRY	Count	45	73	155	166	164
		Percentage	7.50	12.10	25.70	27.50	27.19
	PMEGP	Count	57	90	145	160	151
		Percentage	9.40	14.90	24.00	26.50	25.04
Health and Maternity Schemes	MS	Count	58	72	97	198	178
		Percentage	9.60	11.90	16.10	32.80	29.52
	PMMVY	Count	54	69	105	191	184
		Percentage	8.90	11.40	17.40	31.60	30.51
	JSY	Count	99	87	135	150	132
		Percentage	16.40	14.40	22.40	24.80	21.89

Source: Author's Compilation

Table 4.8 presents the awareness levels of schemes among women beneficiaries across eight government schemes in Goa. Awareness was categorised into five levels: Completely Unaware, Slightly Unaware, Moderately Aware, Aware, and Fully Aware.

For *welfare schemes*, the data indicates relatively high awareness levels. The LLS shows that over 61 percent of respondents were either aware (30.60 percent) or fully aware (30.51 percent), with only 3.60 percent completely unaware. It showed that a total of 66.30 percent were either aware or fully aware of GAS. Similarly, 66.92 percent showed high awareness of DSSS. These results suggest that welfare-oriented schemes have achieved considerable penetration among women beneficiaries.

Among the schemes for entrepreneurship, awareness is comparatively lower. For the CMRY, 27.50 percent were aware and 27.19 percent fully aware, while for the PMEGP, only 26.50 percent were aware and 25.04 percent fully aware. Notably, these schemes also have higher proportions of respondents in the "Completely Unaware" and "Slightly Unaware" categories. The results show that the entrepreneurship schemes have not yet reached their potential beneficiaries indicating a need to improve information dissemination to potential beneficiaries.

For health and maternity schemes, awareness levels vary. The MS and PMMVY demonstrate relatively high awareness, with around 62 percent of respondents being aware or fully aware. Conversely, the JSY shows lower awareness, with only 46.70 percent aware or fully aware and a higher proportion of respondents reporting being completely unaware (16.40 percent). This shows that the scheme is yet to reach its potential and steps need to be taken in this respect.

Table 4.9: Descriptive Statistics of Government Schemes

Category of Government Schemes	Name of the Scheme	Mean	Standard Deviation (SD)	Skewness	Kurtosis
Welfare Schemes	LLS	3.75	1.103	-0.583	-0.403
	GAS	3.87	1.029	-0.571	-0.554
	DSSS	3.89	1.047	-0.630	-0.481
Schemes for Entrepreneurship	CMRY	3.55	1.219	-0.487	-0.677
	PMEGP	3.43	1.271	-0.386	-0.890
Health and Maternity Schemes	MS	3.61	1.284	-0.676	-0.635
	PMMVY	3.64	1.270	-0.682	-0.590
	JSY	3.22	1.373	-0.264	-1.137

Source: Author's Compilation

Table 4.9 reports descriptive statistics on women beneficiaries' perceptions of empowerment across eight selected government schemes in Goa, based on primary survey data collected from 603 respondents. The mean scores for all schemes range from 3.22 to 3.89, indicating that respondents showed a moderately positive perception of the government schemes. Since all mean values are above 3, it suggests that the schemes were viewed somewhat favourably, though the degree of positivity differs across schemes.

The DSSS recorded the highest mean score (3.89), among all the schemes followed closely by the GAS (3.87) and the LLS (3.75). This indicates that welfare schemes received

relatively better responses compared to the other categories. In contrast, the JSY had the lowest mean score (3.22), suggesting comparatively lower awareness, satisfaction, or perceived effectiveness among respondents.

Within the category of **Welfare Schemes** all the three schemes show relatively high mean values: LLS (3.75), GAS (3.87), DSSS (3.89). These findings suggest that welfare-oriented schemes were generally well received by the respondents. Their standard deviation values range from 1.029 to 1.103, which are comparatively lower than those of the other categories which means that opinions of the respondents were relatively more consistent for welfare schemes, with less variation in responses. The skewness values for these schemes are all negative, ranging from -0.571 to -0.630. Negative skewness indicates that responses were concentrated more on the higher side of the scale, meaning a larger number of respondents gave favourable ratings. The kurtosis values are also negative, suggesting a platykurtic distribution, or a flatter distribution than normal. This means responses were somewhat spread out rather than sharply concentrated around the mean.

The category of **Schemes for Entrepreneurship** showed lower mean scores with CMRY at 3.55 and PMEGP at 3.43. These values indicate a moderate level of agreement or satisfaction, but lower than those for welfare schemes. The standard deviations for these schemes are 1.219 and 1.271, showing greater variation in responses. This suggests that respondents were less uniform in their opinions regarding entrepreneurship-related schemes. Their skewness values are moderately negative (-0.487 and -0.386), which, again, imply that responses leaned somewhat toward the positive end, though less strongly than in welfare schemes. The kurtosis values are negative, particularly -0.890 for the PMEGP, indicating a flatter distribution and wider spread of opinions.

The mean values for **Health and Maternity Schemes** are: MS (3.61); PMMVY (3.64); and JSY (3.22). This category shows mixed responses. While MS and PMMVY have moderately positive mean scores, JSY stands out with the lowest mean. This may imply that respondents were less satisfied with or less aware of this scheme compared to others. The standard deviation is highest for JSY (1.373), indicating the greatest disagreement or variability in responses. This suggests that respondents' views about this scheme were more divided. The skewness values are again negative for all health and maternity schemes, especially for MS (-0.676) and PMMVY (-0.682), showing that many responses were still clustered toward the positive side. However, JSY has a less negative skewness value (-

0.264), indicating a weaker positive tilt and a more balanced spread of responses. The kurtosis values for all three schemes are negative, with JSY (-1.137) being the lowest. This suggests that the responses for this scheme were especially flat and dispersed, confirming that opinions were widely spread rather than concentrated.

Overall, respondents viewed government schemes favourably, with welfare schemes receiving the highest mean scores and the most consistent responses. Entrepreneurship schemes were also rated positively, though opinions were more varied. Health and maternity schemes showed mixed perceptions, with JSY receiving the lowest mean and greatest variability. Negative skewness across all schemes indicates a tendency toward positive responses, while negative kurtosis suggests flatter distributions, reflecting diversity of opinion rather than strong consensus among respondents.

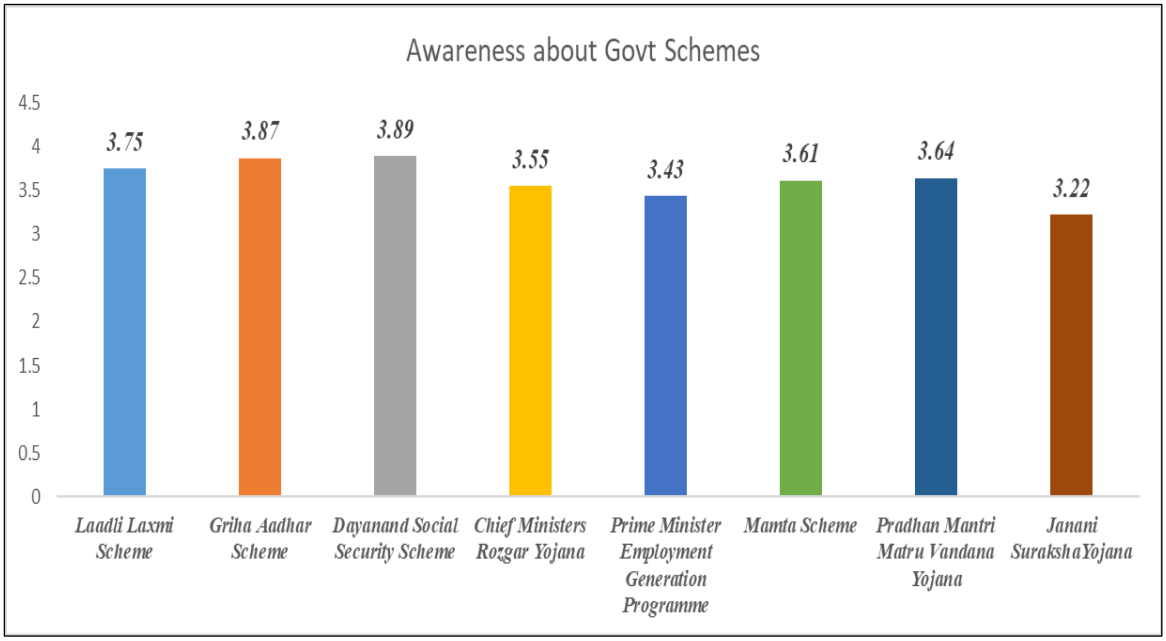


Figure 4.1: Awareness about the Government Schemes

Source: Author's Compilation

Figure 4.1 depicts the mean awareness levels among women beneficiaries regarding eight selected government schemes in Goa, measured on a five-point Likert scale (1=completely unaware; 5=fully aware). The results indicate moderate to high awareness of government schemes, with welfare schemes showing the greatest recognition among respondents. LLS, GAS and DSSS recorded the highest mean scores, suggesting stronger familiarity with welfare benefits.

Health and maternity schemes also showed reasonable awareness, supported by the outreach role of Anganwadi workers.

The awareness of entrepreneurship schemes, particularly PMEGP, remained comparatively lower, indicating the need for stronger information dissemination and motivation.

The results suggest that while awareness of government schemes is generally satisfactory, some schemes may require stronger outreach and publicity efforts to improve public knowledge.

4.2.4 Sources of Awareness

Participants in this empirical study were surveyed about their main sources of information concerning government schemes in Goa. Accordingly, the sources identified are presented.

Table 4.10: Sources of Awareness of Government Schemes

Sources of Awareness	Frequency	Percentage
Anganwadi Workers	515	85.41
Local Bodies	491	81.43
Awareness Programmes by Government Departments	436	72.31
Friends/Relatives/Neighbours	404	67.00
Electronic Media	367	60.86
Print Media	344	57.05
Public Hoardings	324	53.73
Social Media	259	42.95
Hospital Authorities	138	22.89
Non-Government Organisation (NGO)	101	16.75

Source: Author's Compilation

Table 4.10 shows the frequency distribution of sources of awareness. The dissemination of awareness about government welfare schemes targeted at women's empowerment predominantly occurs through accessible community-level channels, as evidenced by respondent data from Goa. Multiple responses were allowed while collecting the information. The results reveal that awareness of government schemes is spread primarily through grassroots and community-based channels including the Anganwadi workers and local bodies encompassing the municipalities and panchayats. Among the various sources, Anganwadi workers constitute the most prominent source of awareness, as reported by 85.41 percent of the respondents, followed by local bodies with 81.43 percent and

awareness programmes organised by government departments with 72.31 percent. This shows that local-level institutional mechanisms play a pivotal role in informing beneficiaries about available schemes. Informal social networks, such as friends, relatives, and neighbours accounting for 67.00 percent, also emerge as important channels of communication, suggesting that interpersonal interaction significantly contributes to the diffusion of information. In contrast, electronic media (60.86 percent), print media (57.05 percent), and public hoardings (53.73 percent) serve as secondary yet meaningful sources of awareness. The contribution of social media, reported by 42.95 percent of respondents, remains comparatively limited, possibly reflecting disparities in digital access and usage. Furthermore, hospital authorities (22.89 percent) and non-government organisations (16.75 percent) represent the least influential sources.

Overall, the results reveal that awareness of government schemes depends largely on direct personal contact and local institutional outreach, highlighting the central importance of grassroots communication systems in effective policy implementation and beneficiary mobilisation.

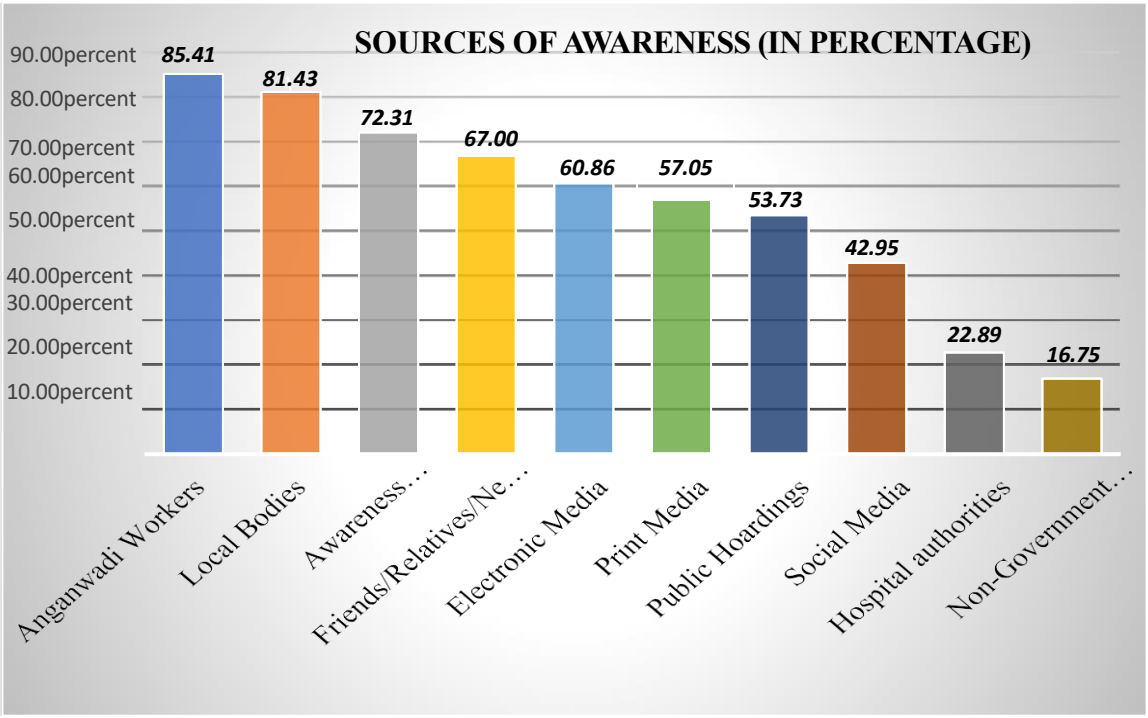


Figure 4.2: Awareness Sources of Government Schemes

Source: Author's Compilation

Figure 4.2 reveals that interpersonal and community-based channels predominate as sources of awareness for government schemes among women beneficiaries with

Anganwadi workers cited by 85.41 percent of the 603 respondents. The data underscores the superior efficacy of grassroots mechanisms over mass or institutional media in this context. Grassroot mechanisms are the foundational local arrangements that connect government initiatives with the target population and ensure effective implementation at the community level including the Anganwadi workers, NGO's and village councils. It is seen from the results that the Anganwadi workers fulfill a pivotal function in disseminating awareness of government schemes among women, particularly in rural locales, as evidenced by their predominant ranking (85.41 percent) in the distribution analysis, underscoring the efficacy of grassroots mechanisms. In contrast, hospital authorities exhibited minimal influence as awareness sources (22.89 percent), highlighting a substantive outreach deficit. Strategic advocacy by these institutions for health and maternity schemes is recommended to facilitate access for economically disadvantaged women, thereby augmenting program participation and enhancing beneficiary well-being. Similarly, non-governmental organisations (NGOs), despite their emphasis on women's general welfare, demonstrate limited engagement in promoting government schemes (16.75 percent). Their proactive involvement in targeted awareness campaigns could substantially elevate beneficiary enrolment, ensure equitable access and advance the socio-economic conditions of vulnerable women.

Table 4.11: Government Schemes availed by Women Beneficiaries

Category of Government Schemes	Name of the Government Scheme	Frequency	Percentage
Welfare Schemes	LLS	165	27.36
	GAS	190	31.51
	DSSS	140	23.22
Schemes for Entrepreneurship	CMRY	215	35.66
	PMEGP	175	29.02
Health and Maternity Schemes	MS	265	43.95
	PMMVY	167	27.69
	JSY	59	9.78

Source: Author's Compilation

The data presented in **Table 4.11** illustrates the distribution of utilisation patterns among female beneficiaries across three principal categories of government welfare interventions: *welfare schemes, schemes for entrepreneurship, and health and maternity schemes*

(N=603). The results reveal differential levels of engagement across these categories, reflecting variations in accessibility, awareness, eligibility criteria, and perceived relevance among the target population.

Among the *welfare initiatives*, the GAS demonstrated the highest level of participation, with 190 respondents (31.51 percent) reporting high utilisation of this programme. The LLS exhibited moderate engagement levels, reaching 165 beneficiaries (27.36 percent), while the DSSS registered comparatively lower coverage, with 140 respondents (23.22 percent) indicating participation. This distribution pattern suggests a greater reliance on direct household and income-support mechanisms among women beneficiaries, with the GAS serving as the predominant welfare intervention in this category.

Within the *entrepreneurship domain*, the CMRY emerged as the most widely accessed scheme, with 215 participants (35.66 percent) reporting utilisation. The PMEGP demonstrated moderate uptake levels, with 175 respondents (29.02 percent) indicating participation in this employment-oriented initiative. The relatively higher engagement with state-sponsored entrepreneurship programmes compared to centrally administered schemes suggests greater accessibility or heightened awareness of state-level interventions among the beneficiary population.

The *health and maternity category* exhibited the highest overall utilisation rates across all examined interventions. The MS recorded the most substantial participation level among all schemes, with 265 beneficiaries (43.95 percent) reporting engagement, thereby underscoring its critical role in addressing maternal and child health needs within the target population. The PMMVY achieved moderate utilisation among 167 respondents (27.69 percent). Conversely, the JSY registered the lowest participation rate across all examined schemes, with only 59 participants (9.78 percent) reporting utilisation, potentially attributable to stringent eligibility constraints, limited programme awareness, or inadequate information dissemination mechanisms.

Few of the success stories of beneficiaries of these schemes are shown in the Annexure A.

The objectives were analysed using ANOVA and the Tukey post hoc test analysis.

4.3 Analysis of Variance (ANOVA)

ANOVA serves as a robust statistical technique for examining whether significant differences exist in mean awareness levels across multiple groups, rendering it ideally

suited to the study's objective of analysing relationships between demographic characteristics, scheme participation and awareness among women beneficiaries across categorised government schemes (Field, 2018; Hair et al., 2019). It compares means of continuous dependent variables, such as awareness scores, against categorical independent variables, such as age groups, education levels, income, marital status, residential location, and participation status, while controlling for Type I error inflation inherent in multiple pairwise t-tests (Pallant, 2020; Tabachnick & Fidell, 2019). In this context, one-way ANOVA tests for main effects, determining if demographic factors or participation levels yield statistically distinct awareness profiles across welfare, entrepreneurship, health and maternity schemes. For instance, it assesses whether urban, educated women exhibit higher awareness than rural counterparts. The F-statistic quantifies between-group variance relative to within-group error, with post-hoc tests like Tukey's HSD pinpointing specific group disparities (Tabachnick & Fidell, 2019). This approach enhances empirical rigour, distinguishing systematic effects from chance, and informs targeted policy interventions to bridge awareness gaps (Pallant, 2020).

4.3.1 Data Analysis of Objective 1a

To examine the effect of demographic characteristics on awareness levels among women beneficiaries across the categorised government schemes.

Table 4.12: ANOVA - Age Group and Awareness of Government Schemes

Government Scheme Category		Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	10.597	2	5.299	3.394	0.034	Supported
	Within Groups	936.642	600	1.561			
Schemes for Entrepreneurship	Between Groups	8.651	2	4.825	2.461	0.043	Supported
	Within Groups	749.738	600	4.250			
Health and Maternity Schemes	Between Groups	11.971	2	3.486	5.175	0.009	Supported
	Within Groups	758.549	600	3.264			

Source: Author's Compilation

Significance at 0.05 level

Table 4.12 gives the ANOVA results which provide critical insights into how age groups influence awareness levels among women beneficiaries of government welfare,

entrepreneurship, health, and maternity schemes. By dividing respondents into three age groups (18–40 years, 41–60 years, and 61 years and above), this study examines whether awareness differs significantly across life stages, potentially reflecting variations in priorities, access to information, or exposure to public programmes.

The one-way ANOVA revealed statistically significant differences in age group across the government scheme categories. Significant differences were found for Welfare Schemes (F=3.394, p=0.034), Schemes for Entrepreneurship (F=2.461, p=0.043), and Health and Maternity Schemes (F=5.175, p=0.009). As all p-values were less than 0.05, the null hypothesis was rejected, and it can be inferred that the age group significantly influenced the categories of government schemes.

Table 4.13: Tukey Post Hoc Results for Age Group across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P- Value	Interpretation
Welfare Schemes	2.00 = 1.57, 0.00 = 1.78, 3.00 = 2.00, 1.00 = 2.30	0.001	Significant pairwise difference exists between age groups
Schemes for Entrepreneurship	1.00 = 1.95, 0.00 = 1.97, 2.00 = 2.00	0.024	Significant pairwise difference exists between age groups
Health and Maternity Schemes	Subset 1: 3.00 = 1.45; Subset 2: 2.00 = 1.71, 1.00 = 1.87; Subset 3: 0.00 = 2.32	0.05, 0.031, 0.041	Significant pairwise difference exists between age groups

Source: Author's Compilation

Significance at 0.05 level

Table 4.13 shows the results of Tukey HSD post hoc test that was employed to determine if there were significant differences among age groups across the three government scheme categories. The results indicate that age has a significant impact on the scheme categories, though the effect varies across the three types of schemes.

For Welfare Schemes, the homogeneous subset result shows the mean scores as 2.00 = 1.57, 0.00 = 1.78, 3.00 = 2.00, and 1.00 = 2.30, with a significance value of 0.001. Since this value is less than 0.05, there is a significant pairwise difference between age groups. Age groups differ significantly in their availing of Welfare Schemes.

For Schemes for Entrepreneurship, the mean scores are 1.00 = 1.95, 0.00 = 1.97, and 2.00 = 2.00, with a significance value of 0.024. Since 0.024 is less than 0.05, it indicates a significant pairwise difference between age groups. Age group significantly influences Schemes for Entrepreneurship.

For Health and Maternity Schemes, the results are divided into three subsets: Subset 1: 3.00 = 1.45; Subset 2: 2.00 = 1.71 and 1.00 = 1.87; and Subset 3: 0.00 = 2.32, with significance values of 0.050, 0.031, and 0.041, respectively. Since 0.031 and 0.041 are less than 0.05, and the groups fall into different subsets, this indicates significant variation between age groups for Health and Maternity Schemes.

Table 4.14: ANOVA - Education and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	9.316	4	4.329	8.485	0.005	Supported
	Within Groups	937.923	598	4.568			
Schemes for Entrepreneurship	Between Groups	5.002	4	5.251	7.999	0.007	Supported
	Within Groups	748.387	598	5.251			
Health and Maternity Schemes	Between Groups	11.687	4	5.922	6.330	0.045	Supported
	Within Groups	749.834	598	5.254			

Source: Author's Compilation

Significance at 0.05 level

Table 4.14 shows the ANOVA results for whether there was a significant difference among the groups across the different categories of government schemes. The results revealed that the differences were statistically significant for all three categories of schemes. For Welfare Schemes, the ANOVA result showed a significant difference between groups, with an F-value of 8.485 and a p-value of 0.005. Since the p-value is less than 0.05, the null hypothesis was rejected and the result was considered statistically significant.

For the Schemes for Entrepreneurship analysis, the analysis also indicated a significant difference between groups, with an F-value of 7.999 and a p-value of 0.007. This shows that the variation among the groups was statistically significant.

Similarly, for Health and Maternity Schemes, the ANOVA result showed a significant difference between groups, with an F-value of 6.330 and a p-value of 0.045. As this p-value is less than 0.05, the null hypothesis was rejected for this category as well.

Overall, the ANOVA results indicate a statistically significant difference among the groups for Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes.

Table 4.15: Tukey Post Hoc Results for Education across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P- Value	Interpretation
Welfare Schemes	3.00 = 1.33, 0.00 = 2.48, 1.00 = 2.54, 2.00 = 2.61	0.114	No significant pairwise difference between education groups
Schemes for Entrepreneurship	1.00 = 2.46, 2.00 = 2.50, 0.00 = 2.64	0.971	No significant pairwise difference between education groups
Health and Maternity Schemes	1.00 = 2.44, 2.00 = 2.49, 3.00 = 2.52, 0.00 = 2.64	0.685	No significant pairwise difference between education groups

Source: Author's Compilation

Significance at 0.05 level

Table 4.15 shows that Tukey HSD post hoc test was conducted to identify whether the education groups differed significantly with respect to the three categories of government schemes after the ANOVA showed overall significant differences.

For Welfare Schemes, all education groups were included in a single homogeneous subset, with a significance value of 0.114, which is greater than 0.05. This indicates that there was no significant pairwise difference between the education groups, even though the overall ANOVA result was statistically significant.

For Schemes for Entrepreneurship, all education groups fell into a single homogeneous subset, with a significance value of 0.971, which is also greater than 0.05. This shows that there was no significant pairwise difference between education groups in this category.

Similarly, for Health and Maternity Schemes, all education groups were in a single homogeneous subset, with a significance value of 0.685, which is above 0.05. This indicates that the education groups did not differ significantly in their availing the Health and Maternity Schemes.

Table 4.16: ANOVA - Marital Status and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	3.550	1	13.550	2.261	0.003	Supported
	Within Groups	943.689	601	11.570			
Schemes for Entrepreneurship	Between Groups	3.493	1	3.493	2.799	0.095	Not Supported
	Within Groups	749.896	601	1.248			
Health and Maternity Schemes	Between Groups	0.008	1	0.008	4.331	0.042	Supported
	Within Groups	761.512	601	1.267			

Source: Author's Compilation

Significance at 0.05 level

Table 4.16 depicts the results of an ANOVA performed to determine whether there were significant differences in respondents' marital status across different categories of government schemes. The results revealed a statistically significant difference for Welfare Schemes (F= 2.261, p=0.003), Health and Maternity Schemes (F=4.331, p=0.042) as their p-values were less than the 0.05 level of significance. Therefore, the null hypothesis was rejected for these two categories. However, for Schemes for Entrepreneurship, the result was not statistically significant (F = 2.799, p = 0.095), as the p-value was greater than 0.05. Hence, the null hypothesis was accepted for this category.

It can therefore be concluded that marital status had a significant association with Welfare Schemes and Health and Maternity Schemes, but not with Schemes for Entrepreneurship.

Table 4.17: Tukey Post Hoc Results for Marital Status across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P- Value	Interpretation
Welfare Schemes	2.00 = 1.53, 1.00 = 1.56, 0.00 = 1.59, 3.00 = 2.00	0.004	Significant pairwise difference exists between marital status groups
Health and Maternity Schemes	2.00 = 1.52, 3.00 = 1.53, 0.00 = 1.57, 1.00 = 1.60	0.003	Significant pairwise difference exists between marital status groups

Source: Author's Compilation

Significance at 0.05 level

The Tukey HSD post hoc analysis was performed as seen in the **Table 4.17** to examine pairwise differences among marital status groups across categories of government schemes. The results showed that for Welfare Schemes, the homogeneous subset result shows 2.00 =

1.53, 1.00 = 1.56, 0.00 = 1.59, and 3.00 = 2.00, with a significance value of 0.004. Since 0.004 is less than 0.05, this indicates a significant pairwise difference among marital status groups. In simple terms, respondents with different marital statuses differed significantly in their responses to Welfare Schemes.

For Health and Maternity Schemes, the homogeneous subset result shows 2.00 = 1.52, 3.00 = 1.53, 0.00 = 1.57, and 1.00 = 1.60, with a significance value of 0.003. Since 0.003 is less than 0.05, this indicates a significant pairwise difference among marital status groups. This means marital status significantly influenced responses to Health and Maternity Schemes.

Table 4.18: ANOVA - Occupation and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	4.294	4	4.073	8.681	0.081	Not Supported
	Within Groups	942.946	598	4.577			
Schemes for Entrepreneurship	Between Groups	5.132	4	4.283	7.025	0.003	Supported
	Within Groups	748.257	598	4.251			
Health and Maternity Schemes	Between Groups	3.835	4	5.959	9.757	0.060	Not Supported
	Within Groups	757.685	598	5.267			

Source: Author's Compilation

Significance at 0.05 level

Table 4.18 shows the results of ANOVA conducted to examine whether occupation had a significant influence on the different categories of government schemes. It was found that occupation had a significant effect only on Schemes for Entrepreneurship, while no significant differences were found for Welfare Schemes and Health and Maternity Schemes.

For Welfare Schemes, the ANOVA result was not statistically significant with an F-value of 8.681 and a p-value of 0.081. Since the p-value is greater than 0.05, the null hypothesis was accepted. This indicates that there was no significant difference among occupational groups in terms of Welfare Schemes.

For Schemes for Entrepreneurship, the ANOVA result was statistically significant with an F-value of 7.025 and a p-value of 0.003. As the p-value is less than 0.05, the null hypothesis was rejected. This means that occupation significantly influenced respondents' views and involvement in Schemes for Entrepreneurship.

For Health and Maternity Schemes, the ANOVA result was not statistically significant with an F-value of 9.757 and a p-value of 0.060. Since the p-value is greater than 0.05, the null hypothesis was accepted. Therefore, occupation did not significantly influence Health and Maternity Schemes.

Table 4.19: Tukey Post Hoc Results for Occupation across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P- Value	Interpretation
Schemes for Entrepreneurship	0.00 = 2.49, 2.00 = 3.00, 1.00 = 3.05	0.755	No significant pairwise difference between occupation groups

Source: Author's Compilation

Significance at 0.05 level

Table 4.19 shows that Tukey HSD post hoc test was conducted to identify whether the occupation groups differed significantly with respect to the three categories of government schemes. For Schemes for Entrepreneurship, all occupation groups again fell into a single homogeneous subset, with a significance value of 0.755, which is also greater than 0.05. This shows that there was no significant pairwise difference between the occupation groups with respect to Schemes for Entrepreneurship. Occupation does not appear to have a differential impact on respondents' perceptions or opinions regarding entrepreneurship schemes. Although the ANOVA result showed a statistically significant overall difference among the groups, the post hoc test did not reveal any significant pairwise differences between specific groups. This suggests that, while variation exists across the groups as a whole, the differences between individual group pairs were not large enough to reach statistical significance after multiple comparison adjustment.

Table 4.20: ANOVA - Annual Family Income and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	3.778	3	4.259	6.800	0.004	Supported
	Within Groups	943.461	599	4.575			
Schemes for Entrepreneurship	Between Groups	2.453	3	5.818	8.652	0.002	Supported
	Within Groups	750.936	599	5.254			
Health and Maternity Schemes	Between Groups	0.646	3	7.215	7.170	0.007	Supported
	Within Groups	760.874	599	7.270			

Source: Author's Compilation

Significance at 0.05 level

Table 4.20 shows the ANOVA results of the influence of annual family income on awareness across the different categories of government schemes. The results show that annual family income had a statistically significant effect on all three scheme categories: Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes.

For Welfare Schemes, the ANOVA result was statistically significant with an F-value of 6.800 and a p-value of 0.004. Since the p-value is less than 0.05, the null hypothesis was rejected. This indicates that respondents across different annual family income groups differed significantly in their availing of Welfare Schemes.

For Schemes for Entrepreneurship, the ANOVA result was also statistically significant with an F-value of 8.652 and a p-value of 0.002. As the p-value is below the 0.05 significance level, the null hypothesis is rejected. This means that annual family income significantly influenced Schemes for Entrepreneurship.

For Health and Maternity Schemes, the ANOVA result again showed statistical significance, with an F-value of 7.170 and a p-value of 0.007. Since the p-value is less than 0.05, the null hypothesis was rejected for this category as well. Therefore, annual family income significantly influenced Health and Maternity Schemes.

Table 4.21: Tukey Post Hoc Results for Annual Family Income across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P- Value	Interpretation
Welfare Schemes	2.00 = 2.88, 0.00 = 2.92, 3.00 = 3.00, 1.00 = 3.08	0.041	Significant pairwise difference between groups
Schemes for Entrepreneurship	2.00 = 2.00, 1.00 = 2.91, 0.00 = 3.08	0.005	Significant pairwise difference exists between groups
Health and Maternity Schemes	3.00 = 2.74, 1.00 = 3.00, 2.00 = 3.00, 0.00 = 3.02	0.112	No significant pairwise difference between groups

Source: Author's Compilation

Significance at 0.05 level

The Tukey HSD post hoc test as seen in **Table 4.21** was carried out to examine whether annual family income groups differed significantly across the three categories of government schemes. For Welfare Schemes, the homogeneous subset includes 2.00 = 2.88, 0.00 = 2.92, 3.00 = 3.00, and 1.00 = 3.08, with a significance value of 0.041. Since 0.041 less than 0.05, this indicates that there is a significant pairwise difference between the groups at the 5 percent level.

For Schemes for Entrepreneurship, the homogeneous subset result is 2.00 = 2.00, 1.00 = 2.91, and 0.00 = 3.08, with a significance value of 0.005. Since 0.005 is less than 0.05, this indicates a significant pairwise difference between the groups. In simple terms, the groups differ significantly with respect to Schemes for Entrepreneurship.

For Health and Maternity Schemes, the homogeneous subset includes 3.00 = 2.74, 1.00 = 3.00, 2.00 = 3.00, and 0.00 = 3.02, with a significance value of 0.112. Since 0.112 is greater than 0.05, there is no significant pairwise difference between the groups for Health and Maternity Schemes.

Table 4.22: ANOVA - Residential Area and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	0.305	1	6.305	8.194	0.000	Supported
	Within Groups	946.935	601	7.576			
Schemes for Entrepreneurship	Between Groups	0.002	1	6.002	9.001	0.001	Supported
	Within Groups	753.387	601	7.254			
Health and Maternity Schemes	Between Groups	2.731	1	2.731	8.163	0.002	Supported
	Within Groups	758.789	601	1.263			

Source: Author's Compilation

Significance at 0.05 level

Table 4.22 gives the ANOVA results, which show that residential area had a statistically significant effect on all three scheme categories: Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes. For Welfare Schemes, the ANOVA result was statistically significant with an F-value of 8.194 and a p-value of 0.000. For Schemes for Entrepreneurship, the ANOVA result was also statistically significant with an F-value of 9.001 and a p-value of 0.001. For Health and Maternity Schemes, the result was statistically significant with an F-value of 8.163 and a p-value of 0.002. Since the p-values of all the three categories are below 0.05, the null hypothesis was rejected for all categories of government schemes, indicating that residential area significantly influences awareness of welfare schemes, entrepreneurship schemes, and health and maternity schemes.

Table 4.23: Tukey Post Hoc Results for Residential Area across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P-Value	Interpretation
Welfare Schemes	3.00 = 1.00, 1.00 = 1.41, 0.00 = 1.48, 2.00 = 1.50	0.077	No significant pairwise difference between residential area groups
Schemes for Entrepreneurship	0.00 = 1.44, 1.00 = 1.46, 2.00 = 1.50	0.980	No significant pairwise difference between residential area groups
Health and Maternity Schemes	0.00 = 1.39, 2.00 = 1.47, 3.00 = 1.52, 1.00 = 1.52	0.193	No significant pairwise difference between residential area groups

Source: Author's Compilation

Significance at 0.05 level

Table 4.23 shows the results of The Tukey HSD post hoc test was used to examine whether respondents from different residential area groups differed significantly with respect to the three categories of government schemes.

For Welfare Schemes, all residential area groups were included in a single homogeneous subset. The significance value was 0.077, which is greater than 0.05. This indicates that there was no significant pairwise difference between the residential area groups in relation to Welfare Schemes.

For Schemes for Entrepreneurship, all residential area groups again fell within one homogeneous subset. The significance value was 0.980, which is much greater than 0.05. Therefore, there was no significant pairwise difference between the residential area groups with respect to Schemes for Entrepreneurship.

For Health and Maternity Schemes, all residential area groups were also included in one homogeneous subset, with means ranging from 1.39 to 1.52. The significance value was 0.193, which is greater than 0.05. This shows that there was no significant pairwise difference among the residential area groups regarding Health and Maternity Schemes.

Table 4.24: ANOVA - District and Awareness of Government Schemes

Government Scheme Category	Basis	Sum of Squares	df	Mean Square	F-value	P-Value	Inference
Welfare Schemes	Between Groups	0.152	1	0.152	7.097	0.006	Supported
	Within Groups	947.087	601	1.576			
Schemes for Entrepreneurship	Between Groups	0.151	1	0.151	5.121	0.028	Supported
	Within Groups	753.237	601	1.253			
Health and Maternity Schemes	Between Groups	5.189	1	5.189	4.123	0.043	Supported
	Within Groups	756.332	601	1.258			

Source: Author's Compilation

Significance at 0.05 level

Table 4.24 shows the results of one-way ANOVA conducted to examine whether the district had a significant influence on the different categories of government schemes. The results show that the district had a statistically significant effect on all three scheme categories: Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes.

For Welfare Schemes, the ANOVA result was statistically significant with an F-value of 7.097 and a p-value of 0.006. Since the p-value is less than 0.05, the null hypothesis was rejected. This indicates that respondents from different districts differed significantly in their responses to Welfare Schemes.

For Schemes for Entrepreneurship, the ANOVA result was also statistically significant with an F-value of 5.121 and a p-value of 0.028. As the p-value is less than 0.05, the null hypothesis was rejected. This means that the district had a significant influence on Schemes for Entrepreneurship.

For Health and Maternity Schemes, the ANOVA result was again statistically significant with an F-value of 4.123 and a p-value of 0.043. Since the p-value is below 0.05, the null hypothesis was rejected for this category as well. Therefore, the district significantly influenced Health and Maternity Schemes.

Table 4.25: Tukey Post Hoc Results for District across Categories of Government Schemes

Government Scheme Category	Homogeneous Subset Result	P-Value	Interpretation
Welfare Schemes	3.00 = 1.00, 1.00 = 1.41, 0.00 = 1.48, 2.00 = 1.50	0.077	No significant pairwise difference between residential area groups
Schemes for Entrepreneurship	0.00 = 1.44, 1.00 = 1.46, 2.00 = 1.50	0.980	No significant pairwise difference between residential area groups
Health and Maternity Schemes	0.00 = 1.39, 2.00 = 1.47, 3.00 = 1.52, 1.00 = 1.52	0.193	No significant pairwise difference between residential area groups

Source: Author's Compilation

Significance at 0.05 level

Table 4.25 showed the results of post hoc analysis. Although one-way ANOVA revealed statistically significant differences among residential area groups with respect to Welfare Schemes (p=0.006), Schemes for Entrepreneurship (p=0.028) and Health and Maternity Schemes (p=0.043), the post hoc homogeneous subset analysis showed no statistically significant pairwise differences between the residential area groups in any of the three

categories ($p>0.05$). This suggests that the significant ANOVA results reflect overall variation among the groups collectively, but no particular residential area group differed significantly from another when compared individually.

4.3.2 Data Analysis of Objective 1b

The objective was to assess the influence of scheme participation on awareness levels among women beneficiaries across government scheme categories. The aim is to understand whether availing a scheme increases or influences the awareness of other schemes. It will help to reveal whether scheme participation influences broader social entitlements or remains an isolated benefit.

4.3.2.1 Participation in Welfare Schemes and Awareness

Participation in welfare schemes often acts as a woman's initial structured contact with government systems, which can significantly influence her awareness of other programs. When a woman avails of a scheme, she gains information about the process, documentation, and outreach involved, which may lead to awareness of additional government initiatives she was previously unaware of. Nonetheless, this awareness depends on the quality of information dissemination, the role of facilitators, and the woman's literacy and social mobility. Active participation encourages women to develop a broader understanding of related schemes. Therefore, understanding the link between participation in welfare schemes and awareness of other schemes in that category is essential for evaluating programme reach and identifying gaps in how welfare information is communicated and received at the grassroots level.

Table 4.26: Number of Welfare Schemes Adopted by Beneficiaries

No. of Schemes Adopted by beneficiaries	N	Mean	Standard Deviation
0	108	1.2619	1.12348
1	191	2.3588	1.19146
2	223	2.5123	1.29835
3	81	2.3423	1.26105
Total	**603**	**2.4190**	**1.25439**

Source: Author's Compilation

Table 4.26 shows the number of welfare schemes availed by the women beneficiaries**.** The table shows the mean level of awareness of schemes in the welfare category based on the number of schemes adopted by the beneficiaries. The welfare category included three

government schemes. It is observed that beneficiaries who adopted none of the welfare schemes (N=108) have the lowest mean awareness score of 1.2619 with a standard deviation of 1.12348. This indicates that women who did not adopt any scheme tend to have relatively low awareness. Beneficiaries who adopted one scheme (N=191) show a much higher mean awareness score of 2.3588 with a standard deviation of 1.19146. This suggests that awareness increases notably on availing atleast one scheme. Those who adopted two schemes (N=233) have the highest mean awareness score of 2.5123 with a standard deviation of 1.29835. This implies that beneficiaries adopting two schemes are, on average, the most aware of the schemes in that category. For beneficiaries who adopted three schemes (N=81), the mean awareness score is 2.3423 with a standard deviation of 1.26105 shows lower awareness. It was observed that the women sometimes avail the schemes only for getting the benefit with less or no information about the scheme details.

Table 4.27: ANOVA - Participation in Welfare Schemes and Awareness

Awareness of Welfare Schemes						
	Sum of Squares	**df**	**Mean Square**	**F-value**	**P-Value**	**Inference**
Between Groups	4.482	3	3.241			
Within Groups	942.758	599	2.962	8.949	0.006	Supported
Total	947.240	602				

Source: Author's Compilation

Significance at 0.05 level

Table 4.27 shows the ANOVA results which further confirm that there is a statistically significant difference in awareness levels across beneficiary groups based on the number of welfare schemes adopted ($F = 8.949$, $p = 0.006 < 0.05$). This implies that participation in multiple schemes enhances awareness, thereby supporting the hypothesis.

4.3.2.2 Participation in Schemes for Entrepreneurship and Awareness

Examining the link between women's participation in entrepreneurship schemes and their awareness of related programs is crucial, as access to financial resources alone does not guarantee economic independence without knowledge of other available schemes. If participation increases awareness, it underscores the need to incorporate livelihood education, and policymakers must address this to ensure that the aid effectively supports women's economic empowerment.

Table 4.28: Number of Schemes for Entrepreneurship Adopted by Beneficiaries

No. of Schemes Adopted by beneficiaries	N	Mean	Standard Deviation
0	213	2.9750	1.10911
1	222	3.0783	1.14950
2	168	3.1098	1.24254
Total	**603**	**2.4190**	**1.25439**

Source: Author's Compilation

Table 4.28 shows women beneficiaries' awareness levels based on the number of entrepreneurship schemes adopted, measured by mean scores. The schemes for entrepreneurship included two schemes in that category. The 603 respondents are divided into three groups: No schemes (N=213), one scheme (N=222), and two schemes (N=168). Data reveals that awareness increases with more schemes: the lowest mean score is 2.9750 for no schemes, 3.0783 for one scheme, and 3.1098 for two schemes. This suggests active scheme participation boosts awareness, exposing women to more government information. Standard deviations are similar, indicating consistent response variability across groups. The results imply that engagement with multiple schemes, not just one, gradually increases awareness, highlighting the need for schemes to promote cross-awareness rather than operate in isolation.

Table 4.29: ANOVA - Participation in Schemes for Entrepreneurship and Awareness Awareness of Schemes for Entrepreneurship

	Sum of Squares	df	Mean Square	F-Value	P-Value	Inference
Between Groups	10.426	2	3.475			
Within Groups	742.963	600	1.240	2.802	0.039	Supported
Total	753.389	602				

Source: Author's Compilation

Significance at 0.05 level

Table 4.29 shows the ANOVA results which reveal a statistically significant difference in awareness levels across groups ($F = 2.802$, $p = 0.039 < 0.05$), suggesting that participation in entrepreneurship schemes influences awareness, with beneficiaries adopting more schemes showing relatively higher awareness, and hence, the hypothesis is supported.

4.3.2.3 Participation in Health and Maternity Schemes and Awareness

Health and Maternity schemes provide recurring contact with the government system, unlike one-off grants. This sustained engagement offers a unique opportunity to inform women about the other schemes. Assessing whether these interactions increase general awareness reveals if health programs function solely for delivery or as vital platforms for holistic empowerment.

Table 4.30: Number of Health and Maternity Schemes Adopted by Beneficiaries

No. of Schemes Adopted by beneficiaries	N	Mean	Standard Deviation
0	112	1.1961	0.89022
1	151	2.2230	1.14356
2	297	3.3042	1.10243
3	43	3.2536	1.18421
Total	**603**	**3.2692**	**1.12472**

Source: Author's Compilation

The **Table 4.30** reveals that the awareness level of health and maternity schemes increases with the number of schemes adopted by the beneficiaries. The health and maternity category included three schemes. Beneficiaries who adopted no schemes (N=112) had the lowest mean score (1.1961), while those who adopted two schemes (N=297) had the highest mean score (3.3042). This indicates that higher adoption of health and maternity schemes is associated with greater awareness among the women beneficiaries.

Table 4.31: ANOVA - Participation in Health and Maternity Schemes and Awareness

Awareness of Health and Maternity Schemes

	Sum of Squares	df	Mean Square	F-Value	P-Value	Inference
Between Groups	0.810	3	0.270	8.213	0.061	Not Supported
Within Groups	760.710	599	1.270			
Total	761.521	602				

Source: Author's Compilation

Significance at 0.05 level

Table 4.31 gives the ANOVA results which show that the differences in awareness levels among groups are not statistically significant ($F = 8.213$, $p = 0.061 > 0.05$). This indicates that participation in health and maternity schemes does not significantly influence awareness of other schemes in that category, and the hypothesis is not supported.

4.4 Chapter Summary

The chapter examines socio-demographic traits, awareness, information sources, and scheme participation among women beneficiaries of government programs in Goa. The sample is diverse and balanced across districts, age groups, education levels, marital status, occupations, income, and urban-rural settings, strengthening validity and indicating broad access. Awareness was highest for welfare schemes, moderate for health and maternity programs, and lowest for entrepreneurship initiatives, revealing dissemination gaps. Grassroots channels, government campaigns, and social networks were the primary sources of information, while mass and social media had a limited impact. It was found that demographic factors significantly influenced awareness. Participation in the schemes enhanced awareness of welfare and entrepreneurship schemes through experiential learning, suggesting targeted grassroots and digital outreach to promote lesser-known programs.

Chapter 5

Analysis of Government Schemes in the Empowerment of Women

5.1 Introduction

Understanding the role of government schemes in empowering women is crucial to India's broader development towards an inclusive and progressive society. The government has shown a continuing commitment to reform by implementing policies to address inequalities in gender, literacy, resource access, and economic participation. These initiatives collectively reflect a strong national goal of promoting equality, social justice, and inclusive growth.

Women empowerment, encompassing social and economic dimensions, is a complex process that relies on improved access to education, healthcare, employment, financial resources, and social enterprises. True empowerment is rooted in financial independence, enabling women to challenge traditional norms and achieve sustainable development. Empowered women strengthen family stability by contributing to economic growth, workforce engagement, and children's education, thereby fostering broader societal stability. Fundamental pillars like education, health, and employment also play a role in reducing poverty by enlarging the labour force and encouraging self-sufficiency through access to credit, savings, and skills. Government programs targeting health, education, and entrepreneurship have demonstrated measurable successes across various states; however, obstacles such as socio-cultural barriers, limited awareness, and implementation gaps continue to restrict their full potential.

This chapter systematically examines selected categories of government schemes to assess their impact on women's social and economic empowerment in Goa. By exploring both expectations and real experiences, and clarifying complex relationships in existing research, it aims to fill knowledge gaps and suggest policy measures to enhance empowerment outcomes.

5.2 Data Analysis and Interpretation

Women Empowerment (WE) is measured through economic and social empowerment. Economic Empowerment (EE) and Social Empowerment (SE) are second-order reflective constructs taken in the study. The EE is measured by Financial Independence (FD), Family Expenses (FE), and Investments (INV), whereas the SE is measured by Social Status and Security (SSS), Decision Making (DM), and Personal Independence (PI). This section discusses the results of the statistical assumptions examined in the study, which explain the impact of government schemes on the social and economic empowerment of women beneficiaries in the State of Goa.

The analysis proceeded through Structural Equation Modeling (SEM), with the measurement model evaluated first to ensure that all constructs demonstrated adequate reliability and validity before further testing. The measurement model defines how observed variables relate to latent constructs that cannot be directly measured. It links conceptual variables to measured ones, similar to factor analysis. The model is evaluated based on indicator reliability, internal consistency, convergent validity, and discriminant validity. Convergent validity is established when variables relate to the latent construct and when AVE is higher than 0.5. Discriminant validity measures the distinctiveness of a construct using metrics such as the Fornell-Larcker criterion and the HTMT ratio. Overall, the measurement model confirms each construct is measured accurately before testing hypotheses.

5.2.1 Assessment of Measurement Model

The evaluation of the measurement model represents the initial stage in PLS-SEM analysis. Like most statistical approaches, PLS-SEM relies on rules of thumb as general guidelines for evaluating model results (Chin, 1998, 2010; Gotz et al., 2010; Henseler et al., 2015; Hair et al., 2017). These rules of thumb are, by nature, broad interpretive guidelines, and their application may vary depending on the specific research context.

First, it involves examining the indicator loadings. Loadings above 0.70 indicate that the construct explains more than 50 percent of the indicator's variance, demonstrating satisfactory reliability (Hair et al., 2019).

Secondly, it involves assessing **Internal Consistency Reliability** through *Cronbach's alpha* and *Composite Reliability (CR),* **Convergent Validity** through *Average Variance Extracted (*AVE) and **Discriminant Validity** using the *Fornell Larcker Criterion* and the

Heterotrait-Monotrait (HTMT) ratio. These assessments ensure that the constructs demonstrated acceptable reliability and validity for subsequent structural model analysis.

5.2.1.1 Assessment of Internal Consistency, Reliability and Convergent Validity

Reliability and validity must be examined before testing hypotheses. Internal consistency reliability describes the correlation among the statements used to measure the construct and is expected to be high.

Cronbach's alpha is used to assess the internal consistency reliability of items measuring a latent construct. Values of 0.70 or higher are considered acceptable for ensuring the reliability of responses, indicating that indicators consistently reflect the same concept. Its significance lies in its support for measurement quality (Hair et al., 2021).

Composite Reliability (CR): CR was examined to assess the internal consistency of each construct in the measurement model. CR accounts for the actual factor loadings of individual indicators rather than assuming equal contribution from each item. This makes it particularly well-suited for use in SEM, where indicator weights vary across constructs. A CR value of 0.70 or above is widely regarded as indicative of acceptable reliability (Hair et al., 2019).

Convergent validity refers to the degree to which a construct accounts for the variance in its associated items. It is assessed using the ***Average Variance Extracted (AVE)***, calculated by squaring each indicator's factor loading and averaging the results. An AVE value of 0.50 or above is considered acceptable, indicating that the construct explains at least 50 percent of the variance among its items.

5.2.1.2 Multicollinearity

Assessing the multicollinearity is crucial for evaluating the degree of correlations among independent variables in the structural model. The item multicollinearity of the scale indicates a higher chance of duplicate items. The repeated item leads to redundancy and should be avoided in the research. The item multicollinearity of the items is examined with the help of the Variance Inflation Factor (VIF), which is expected to be less than 3.30 or lower, as values in this range indicate a lack of significant multicollinearity issues (Kock, 2015). This improves the stability and validity of the SEM model.

The result of Internal Consistency Reliability is reported in **Table 5.1**:

Table 5.1: Internal Consistency Reliability

Constructs	Variable Code	Factor Loading	VIF	Cronbach's Alpha	CR	AVE
Decision making (DM)	DM1	0.835	2.497	0.921	0.939	0.718
	DM2	0.828	2.676			
	DM3	0.840	2.644			
	DM4	0.855	3.358			
	DM5	0.880	3.589			
	DM6	0.845	2.920			
Economic Empowerment	EE	Higher Order Construct measured by FE, FD and INV		0.936	0.943	0.495
Family Expenses (FE)	FE1	0.785	1.928	0.906	0.931	0.729
	FE2	0.878	3.099			
	FE3	0.884	3.284			
	FE4	0.880	3.342			
	FE5	0.837	2.262			
Financial Independence (FD)	FD1	0.741	2.897	0.927	0.941	0.695
	FD2	0.694	2.702			
	FD3	0.727	2.666			
	FD4	0.687	2.844			
	FD5	0.712	3.101			
	FD6	0.718	2.913			
	FD7	0.721	2.751			
Investments (INV)	INV1	0.853	2.459	0.880	0.912	0.676
	INV2	0.847	2.450			
	INV3	0.845	2.309			
	INV4	0.828	2.218			
	INV5	0.733	1.727			
Personal Independence (PI)	PI1	0.775	1.932	0.862	0.903	0.618
	PI2	0.862	3.100			
	PI3	0.874	3.296			
	PI4	0.870	3.346			
	PI5	0.827	2.273			
	PI6	0.401	1.069			
Social Status and Security (SSS)	SSS1	0.826	2.487	0.901	0.922	0.602
	SSS2	0.813	2.322			
	SSS3	0.791	2.116			
	SSS4	0.810	2.421			
	SSS5	0.848	2.742			
	SSS6	0.785	2.113			
	SSS7	0.780	2.113			
	SSS8	0.494	1.211			

Constructs	Variable Code	Factor Loading	VIF	Cronbach's Alpha	CR	AVE
Social Empowerment	SE	Higher Order Construct measured by PI, DM and SSS		0.927	0.935	0.423
Women Empowerment (WE)	WE1	0.779	1.658	0.892	0.926	0.758
	WE2	0.902	3.087			
	WE3	0.894	3.058			
	WE4	0.901	3.304			

Source: Author's Compilation

The result of convergent validity reported that the construct loadings of each item is near or greater than 0.7, the CR and AVE of each construct included in the scale is found to be greater than 0.7 and 0.5 respectively ensuring the presence of convergent validity in the measurement scale. On the other hand, the HTMT ratio of each pair of constructs is found to be less than 0.8. Further, the Fornell larker criteria satisfied the condition of the discriminant validity. It can be concluded that the scale used in the study ensures the criteria of convergent and discriminant validity. The results indicated that the VIFs for all items in the scale are less than 5, indicating the absence of multicollinearity in the scale.

5.2.1.3 Assessment of Discriminant Validity

After establishing reliability and convergent validity of reflectively measured constructs, the final step involves assessing discriminant validity. This evaluation determines the degree to which a construct is empirically distinct from others, both in terms of its correlations with other constructs and the extent to which its indicators exclusively represent that particular construct.

Fornell-Larcker Criterion: While Fornell and Larcker (1981) proposed comparing each construct's AVE with squared inter-construct correlations, Henseler et al. (2015) demonstrated that this criterion performs poorly when indicator loadings are similar across constructs, thereby limiting its effectiveness for assessing discriminant validity.

HTMT Ratio: The HTMT criterion is defined as the mean value of the indicator correlations across constructs relative to the (geometric) mean of the average correlations of indicators measuring the same construct. A threshold value of 0.85 is considered (Henseler et al., 2015).

Table 5.2: Fornell-Larcker Criteria

Constructs	DM	EE	FE	FD	INV	PI	SSS	SE	WE
DM	0.847								
EE	0.547	0.857							
FE	0.379	0.704	0.854						
FD	0.489	0.828	0.512	0.833					
INV	0.518	0.822	0.582	0.589	0.833				
PI	0.405	0.842	0.821	0.542	0.599	0.894			
SSS	0.591	0.556	0.387	0.526	0.483	0.438	0.776		
SE	0.821	0.792	0.705	0.640	0.655	0.743	0.650	0.857	
WE	0.362	0.803	0.752	0.495	0.544	0.814	0.372	0.687	0.870

Source: Author's Compilation

Table 5.2 presents the discriminant validity matrix of the constructs employed in the study. The results indicate a well-constructed and robust measurement model. The diagonal values, representing the square root of the AVE for each construct, are consistently high across all nine constructs DM (0.847), EE (0.857), FE (0.854), FD (0.833), INV (0.833), PI (0.894), SSS (0.776), SE (0.857), and WE (0.870) thereby confirming that each construct accounts for a substantial proportion of variance in its respective indicators, thus establishing sound convergent validity. Notably, each diagonal value exceeds the off-diagonal correlations within its respective row and column, satisfying the Fornell-Larcker criterion for discriminant validity and confirming that each construct is empirically distinct from the others. The high inter-construct correlations observed between certain constructs, such as EE, PI, and SE, are theoretically anticipated, as these dimensions of women's empowerment are conceptually interconnected and tend to reinforce one another in practice. Overall, the matrix provides convincing evidence that the constructs in the study exhibit both internal consistency and sufficient discrimination, thereby supporting the validity of the measurement model and the reliability of the resulting findings.

Table 5.3: HTMT Ratio

Constructs	DM	EE	FE	FD	INV	PI	SSS	SE	WE
DM									
EE	0.595								
FE	0.414	0.825							
FD	0.529	0.831	0.558						
INV	0.580	0.812	0.646	0.652					
PI	0.461	0.754	0.658	0.613	0.684				
SSS	0.648	0.612	0.430	0.576	0.544	0.514			
SE	0.800	0.836	0.746	0.689	0.719	0.822	0.768		
WE	0.400	0.840	0.842	0.544	0.610	0.752	0.418	0.732	

Source: Author's Compilation

Table 5.3 shows that the HTMT values were below the threshold of 0.85, indicating that the constructs are empirically distinct and that discriminant validity is largely established. For instance, the values between *Economic Empowerment and Financial Independence* (0.831), *Economic Empowerment and Family Expenses* (0.825), and *Social Empowerment and Economic Empowerment* (0.836) fall within the acceptable range, suggesting these constructs are closely related yet sufficiently distinct. These results confirm that all nine constructs DM, EE, FE, FD, INV, PI, SSS, SE, and WE are empirically distinct, thereby establishing discriminant validity for the measurement model.

Table 5.4: Cross Loadings

Constructs	DM	FD	FE	INV	PI	SSS	WE
DM1	**0.835**	0.430	0.329	0.442	0.362	0.555	0.314
DM2	**0.828**	0.428	0.312	0.417	0.337	0.506	0.296
DM3	**0.840**	0.377	0.280	0.387	0.307	0.515	0.262
DM4	**0.855**	0.446	0.330	0.493	0.348	0.470	0.316
DM5	**0.880**	0.424	0.351	0.480	0.367	0.499	0.339
DM6	**0.845**	0.381	0.320	0.413	0.337	0.457	0.310
FD1	0.432	**0.840**	0.473	0.504	0.496	0.497	0.462
FD2	0.422	**0.799**	0.419	0.482	0.440	0.495	0.409
FD3	0.462	**0.826**	0.450	0.510	0.473	0.485	0.441
FD4	0.348	**0.832**	0.392	0.453	0.420	0.388	0.372
FD5	0.375	**0.842**	0.424	0.475	0.446	0.369	0.410
FD6	0.407	**0.848**	0.422	0.488	0.449	0.414	0.405

Constructs	DM	FD	FE	INV	PI	SSS	WE
FD7	0.405	**0.845**	0.404	0.524	0.432	0.417	0.383
FE1	0.343	0.434	**0.785**	0.468	0.775	0.310	0.779
FE2	0.286	0.442	**0.878**	0.469	0.862	0.333	0.902
FE3	0.310	0.434	**0.884**	0.489	0.874	0.319	0.894
FE4	0.322	0.413	**0.880**	0.468	0.870	0.333	0.901
FE5	0.356	0.462	**0.837**	0.583	0.827	0.353	0.734
INV1	0.448	0.532	0.527	**0.853**	0.548	0.451	0.490
INV2	0.399	0.492	0.516	**0.847**	0.527	0.401	0.483
INV3	0.404	0.451	0.532	**0.845**	0.545	0.373	0.508
INV4	0.416	0.506	0.458	**0.828**	0.474	0.403	0.424
INV5	0.478	0.438	0.339	**0.733**	0.347	0.354	0.314
PI1	0.343	0.434	0.785	0.468	**0.775**	0.310	0.779
PI2	0.286	0.442	0.878	0.469	**0.862**	0.333	0.902
PI3	0.310	0.434	0.884	0.489	**0.874**	0.319	0.894
PI4	0.322	0.413	0.880	0.468	**0.870**	0.333	0.901
PI5	0.356	0.462	0.837	0.583	**0.827**	0.353	0.734
PI6	0.282	0.346	0.247	0.295	**0.401**	0.433	0.238
SSS1	0.485	0.423	0.298	0.376	0.337	**0.826**	0.290
SSS2	0.461	0.422	0.289	0.379	0.333	**0.813**	0.282
SSS3	0.471	0.429	0.305	0.387	0.344	**0.791**	0.288
SSS4	0.499	0.399	0.309	0.349	0.348	**0.810**	0.297
SSS5	0.511	0.420	0.352	0.404	0.395	**0.848**	0.343
SSS6	0.463	0.445	0.324	0.438	0.371	**0.785**	0.313
SSS7	0.432	0.427	0.256	0.375	0.297	**0.780**	0.248
SSS8	0.316	0.277	0.262	0.280	0.283	**0.494**	0.242
WE1	0.343	0.434	0.785	0.468	0.775	0.310	**0.779**
WE2	0.286	0.442	0.878	0.469	0.862	0.333	**0.902**
WE3	0.310	0.434	0.884	0.489	0.874	0.319	**0.894**
WE4	0.322	0.413	0.880	0.468	0.870	0.333	**0.901**

Source: Author's Compilation

Cross loadings are used in SEM to assess discriminant validity by comparing the loading of each indicator on its designated construct with its loadings on other constructs. An indicator is considered satisfactory when it loads highest on its own construct and lower on all other constructs. Thus, cross-loading analysis helps confirm that the constructs are distinct and that the indicators appropriately measure their intended latent variables. The

results showed that most indicators loaded highest on their respective constructs, particularly for DM, FD, INV, and SSS, indicating acceptable measurement quality.

5.2.2 Assessment of Structural Model

The structural model assessment evaluates the strength and direction of relationships among the study's constructs, examining path coefficients, significance levels, and the overall explanatory power of the model. It determines how well the hypothesised relationships hold empirically providing evidence on whether scheme participation meaningfully influence women empowerment outcomes across the identified dimensions.

The result of hypothesis testing is shown in **Table 5.5.**

Table 5.5: Result of Path Coefficient

Hypotheses	Relationship	Path Coefficient(β)	T statistics	P values	Inference
H_3	Welfare Schemes → SE	0.135	3.024	0.003	Supported
H_4	Schemes for Entrepreneurship→ SE	0.110	2.800	0.005	Supported
H_5	Health and Maternity Schemes → SE	0.230	5.911	0.000	Supported
H_6	Welfare Schemes → EE	0.156	3.419	0.001	Supported
H_7	Schemes for Entrepreneurship → EE	0.133	3.158	0.002	Supported
H_8	Health and Maternity Schemes → EE	0.123	2.957	0.003	Supported
H_9	SE → WE	0.137	2.737	0.006	Supported
H_{10}	EE → WE	0.694	14.994	0.000	Supported

Source: Author's Compilation

Significance at 5 percent

The **Table 5.5** presents the results of hypothesis testing, which indicate that all the proposed hypotheses are statistically significant and supported, as evidenced by positive path coefficients, significant *t*-statistics, and *p*-values below 0.05. This demonstrates that welfare schemes, entrepreneurship schemes, health and maternity schemes exert a meaningful influence on both SE and EE, which in turn contribute significantly to overall WE.

With regard to SE, welfare schemes show a positive and significant effect with a path coefficient of 0.135, *t* value of 3.024, and *p* value of 0.003, thereby supporting H_3. Similarly, schemes for entrepreneurship also exert a positive and significant influence on SE (β = 0.110, t = 2.800, p = 0.005), confirming H_4. Among the three categories, health and maternity schemes exhibit the strongest effect on SE, with a path coefficient of 0.230, *t* value of 5.911, and *p* value of 0.000, thus supporting H_5. This suggests that health-related interventions and maternity support play a particularly important role in enhancing women's social status, confidence, participation, and well-being.

In relation to EE, all three categories of schemes also demonstrate positive and significant effects. Welfare schemes have a path coefficient of 0.156 with a *t* value of 3.419 and a *p* value of 0.001, supporting H_6. Schemes for entrepreneurship show a positive effect on EE (β = 0.133, t = 3.158, p = 0.002), thereby confirming H_7. Likewise, health and maternity schemes positively influence EE (β = 0.123, t = 2.957, p = 0.003), thereby supporting H_8. These findings indicate that government schemes not only improve women's access to social and welfare support but also enhance their economic capacity, financial security, and ability to contribute to household and livelihood decisions.

Further, the model shows that both SE and EE have significant positive effects on overall WE. SE has a path coefficient of 0.137, *t* value of 2.737, and *p* value of 0.006, thereby supporting H_9. EE, however, demonstrates a much stronger impact on WE, with a substantially higher path coefficient of 0.694, *t* value of 14.994, and *p* value of 0.000, confirming H_{10}. This indicates that although both social and economic dimensions are important, EE is the most powerful predictor of overall WE in the present study.

Overall, the results imply that government schemes significantly contribute to women empowerment through both social and economic pathways. While health and maternity schemes appear to be the most influential in fostering SE, welfare schemes show the strongest effect on EE among the scheme categories. At the same time, EE emerges as the dominant factor shaping overall women empowerment. These findings highlight the importance of multidimensional policy interventions that simultaneously strengthen women's social position and economic independence in order to achieve broader empowerment outcomes.

Table 5.6: Results of R^2, Q^2 and f^2

	R^2	Predictors	Q^2	f^2	Effect Size
WE	0.665	SE	0.082	0.017	Small
		EE	0.044	0.578	Large

Source: Author's Compilation

Table 5.6 shows that the construct WE has an R^2 value of 0.665, indicating that approximately 66.5 percent of the variance in WE is explained by its predictors, which reflects a substantial explanatory power according to Cohen's (1988) benchmarks. The Q^2 value of 0.082 is positive, confirming the model's moderate predictive relevance for this construct.

The predictor SE has an f^2 value of 0.017, which falls below the 0.02 threshold, indicating a negligible to small effect on WE. This suggests that while SE contributes to the model, its individual influence on WE is relatively weak. The predictor EE has an f^2 value of 0.578, which far exceeds the 0.35 threshold, indicating a large effect on WE. This reflects that EE is a substantively significant and dominant predictor of WE in the model.

Overall, the model demonstrates strong explanatory power for WE ($R^2 = 0.665$). Among the two predictors, EE exerts a large and dominant influence ($f^2 = 0.578$), while SE contributes only marginally ($f^2 = 0.017$). These findings suggest that economic factors play a far more critical role in driving WE compared to social factors within this model.

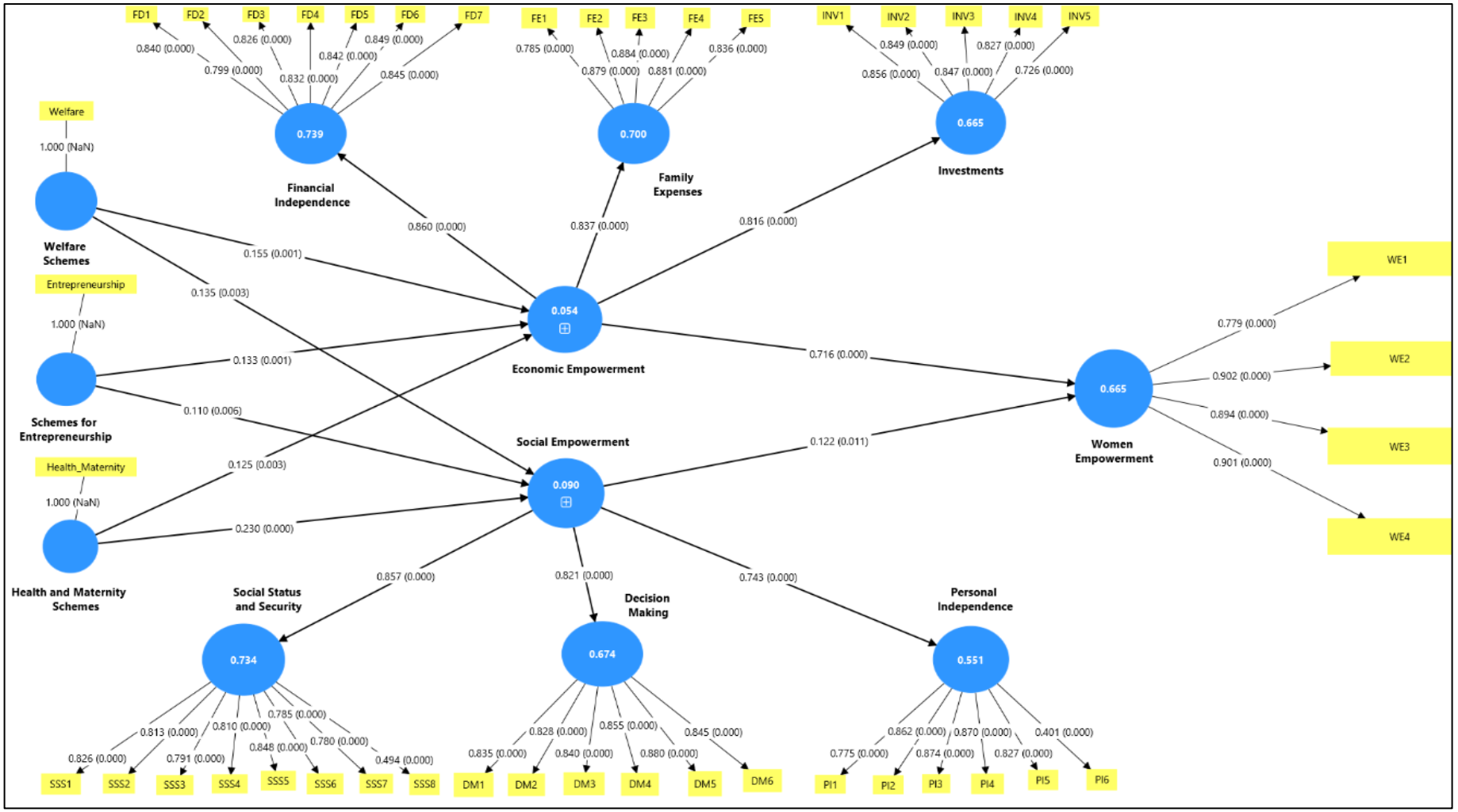


Figure 5.1: Structural Model using Smart PLS 4.0

Source: Author's Compilation

5.3 Chapter Summary

This chapter examined the structural relationships between various government schemes and the dimensions of women empowerment using PLS-SEM. The findings reveal that all three categories of schemes Welfare Schemes, Schemes for Entrepreneurship, and Health and Maternity Schemes significantly contribute to both social and economic empowerment of women beneficiaries in Goa. Notably, Health and Maternity Schemes showed the strongest influence on social empowerment, while Welfare Schemes had a slightly stronger impact on economic empowerment. Further, both social and economic empowerment were found to significantly influence overall women empowerment, with economic empowerment demonstrating a much stronger effect. These results underline the effectiveness of the schemes in achieving their intended objectives and highlight the central role of economic independence in driving comprehensive empowerment. The results also establish the structural model's validity through path analysis, Fornell-Larcker, and HTMT assessments. The chapter provides empirical support for the continued implementation and strengthening of these schemes, while also identifying key leverage points for policy refinement to enhance women's socio-economic status.

Chapter 6

Moderating Effect of Demographics on Women Empowerment through Government Schemes

6.1 Introduction

Women's empowerment is considered a foundational pillar of economic and social development, especially with regard to government welfare frameworks designed to address persistent gender inequalities. Social empowerment (SE) and economic empowerment (EE) have been considered as the two interrelated areas which have been measured through enhanced decision making, personal independence, social status and security and increased financial independence, contribution in family expenses and investments. Extant literature has established direct relationships between both SE and EE and the empowerment outcomes at a larger level encompassing involvement in politics, increase in bargaining power at the family level and improvement in health. However, these associations are neither universally acceptable nor identical and exhibit considerable content-specific variability across populations and settings. An important determinant of this variability can be the influence of moderating demographic factors. SE and EE lead to meaningful improvements in the lives of women which is highly based upon the individual and contextual attributes that help to shape the social positioning and lived experiences of women.

The empowerment outcomes are affected by demographic variables, such as age, education, occupation, income, and marital status, as they influence access, experience, and utilisation of opportunities. These factors also affect the resource availability, awareness levels and the capacity to benefit from policy interventions. The importance of moderation is highlighted by several descriptive patterns. Education may moderate the empowering effect of economic resources, while the conversion of social benefits into broader improvements in the lives of beneficiaries may be moderated by cultural and geographic contexts. In a similar manner, the response of younger and older beneficiaries to empowerment may differ. At the same time rural women may face structural barriers which do not affect their urban counterparts.

Therefore, these variations necessitate context-specific analytical frameworks rather than uniform policies. Recognising and considering these moderating factors helps deepen conceptual understanding of empowerment by highlighting its non-universal, context-specific nature. It would also guide policymakers in designing targeted programmes tailored to the diverse circumstances of women, thereby maximising efficacy across diverse demographic groups. The chapter employed SEM to test hypotheses regarding the moderating role of demographic factors in the relationships among SE, EE and WE.

6.2 Moderation in Structural Equation Modeling (SEM)

Moderation occurs when a third variable, termed the moderator, alters the strength or direction of the relationship between an exogenous (independent) variable and an endogenous (dependent) variable (Baron & Kenny, 1986; Hayes, 2018). In SEM, this is analysed by forming an interaction between the predictor and moderator, with a specified path from this latent observed product construct to the outcome (Kline, 2016). Moderation analysis within SEM framework provides a strong methodological approach for the examination of the strength and direction of relationships between SE, EE and WE and their variation across demographic groups (Hair et al., 2019; Hayes, 2018). SEM assesses complex pathways while accounting for error and latent constructs, offering precise estimates of the effects of moderation. (Kline, 2016; Marsh et al., 2004). The approach reveals heterogeneity in the processes of empowerment; for instance, education and place of residence may increase the economic empowerment effects while restrictive norms may reduce them (Kabeer, 2005). These insights help in designing targeted and equitable policies that accommodate diverse lived experiences of women rather than adopting one-size-fits-all approaches (Narayan, 2005). The primary objective is to evaluate whether and how the demographic variables moderate the relationship between SE, EE and WE thereby influencing the strength and direction of these relationships among women beneficiaries of the government schemes.

6.3 Moderation Analysis

The moderation analysis tests a series of formulated hypotheses to assess the moderating effects of age group, marital status, annual family income, occupation, and education on both SE and EE pathways leading to WE. The analysis was run using interaction effects across all demographics. A simple slope analysis was conducted to better understand the results of the moderation analysis.

6.3.1 Interaction Effect of Age

Age may influence the relationship between social and economic empowerment and overall women's empowerment, as responses to empowerment initiatives may vary between younger and older women. Younger women might derive greater empowerment benefits from economic opportunities, whereas older women might attach greater importance to social empowerment factors.

Table 6.1: Moderating Effect of Age on the Relationship between Social and Economic Empowerment with Women Empowerment

Hypotheses	Path	Path Coefficient (β)	Standard deviation	T statistics	P values	Inference
H_{11}	Age x SE →WE	-0.087	0.042	2.082	0.037	Supported
H_{16}	Age x EE →WE	0.060	0.040	1.489	0.137	Not Supported

Source: Author's Compilation

Significance at 5 percent

Note: SE-Social Empowerment, EE-Economic Empowerment, WE-Women Empowerment

The **Table 6.1** depicts the influence of age on the relationship between social and economic empowerment with women empowerment. It is observed that overall, age exerts a negligible direct effect and connects non-significantly to women empowerment.

The moderation analysis reveals that age has a moderating effect on the relationship between SE and WE. This relation is negative and statistically significant ($\beta = -0.087$, $t = 2.082$, $p = 0.037$ indicating that the positive influence of SE on WE weakens with the increase in age of the respondents. This may imply that younger women derive greater empowerment benefits from social dimensions compared to their older counterparts. From the results, the hypothesis that there is a moderating effect of age group on the relationship between social empowerment and women empowerment (H_{11}) is accepted.

The interaction results for economic empowerment are positive but not statistically significant ($\beta = 0.060$, $t = 1.489$, $p = 0.137$), which shows that age does not moderate the relationship between EE and WE. It can be concluded that the hypothesis that there is a moderating effect of age group on the relationship between economic empowerment and women empowerment H_{16} is rejected.

6.3.1.1 Simple Slope Analysis of Age as a Moderator between Social Empowerment and Women Empowerment

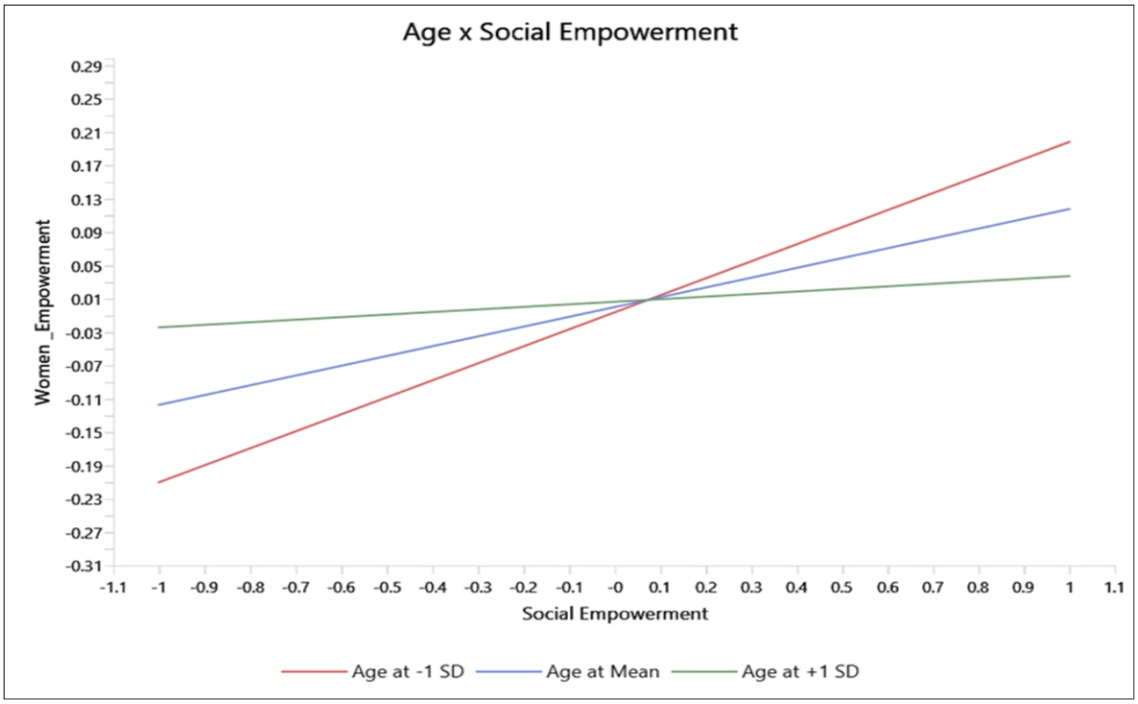


Figure 6.1: Simple Slope Analysis of Age x SE →WE

Source: Author's Compilation

Figure 6.1 shows the interaction plot, which illustrates how age moderates the relationship between SE and WE. The three lines represent different age levels: younger women (Age at -1 SD, red), average age (Age at Mean, blue), and older women (Age at +1 SD, green).

The steeper slope of the red line indicates that younger women experience a stronger and more pronounced positive relationship between SE and overall WE. As SE increases, younger women show considerably greater gains in WE than their older counterparts. In contrast, the nearly flat green line for older women suggests that SE has a minimal effect on their overall empowerment levels. The blue line representing average-aged women falls between these two extremes, reflecting a moderate relationship.

Overall, the plot confirms that age significantly moderates the relationship between SE and WE, with the effect being strongest among younger women and weakening progressively with increasing age. This suggests that government initiatives may yield greater empowerment outcomes for younger women than for older women.

6.3.1.2 Simple Slope Analysis of Age as a Moderator between Economic Empowerment and Women Empowerment

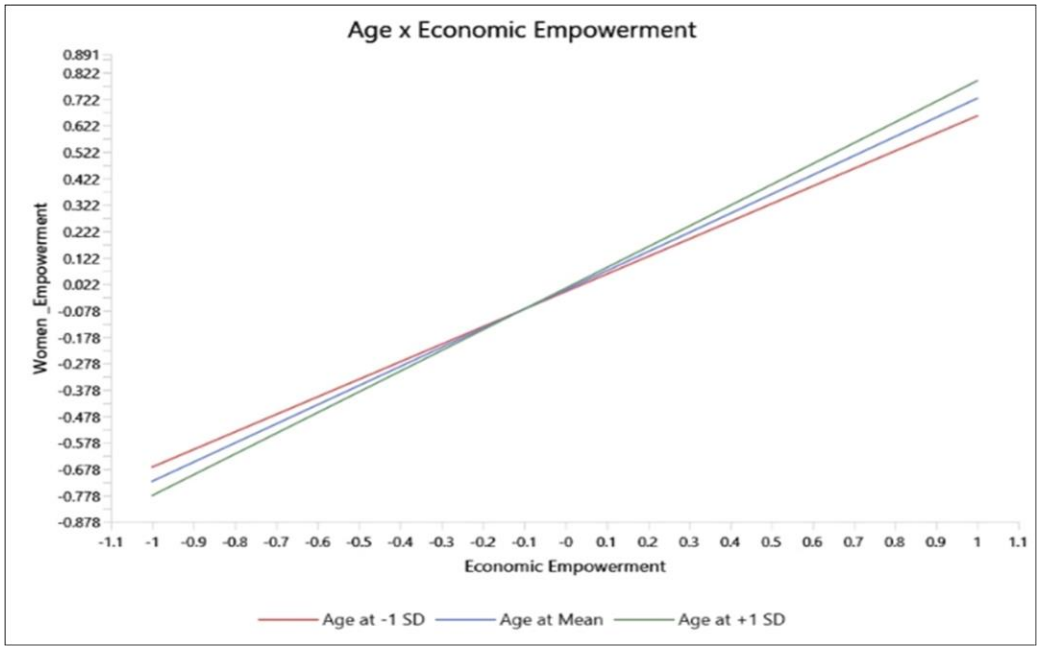


Figure 6.2: Simple Slope Analysis of Age x EE →WE

Source: Author's Compilation

Figure 6.2 shows the interaction plot that depicts how age moderates the relationship between EE and WE across three age groups: younger women (Age at -1 SD, red), average age (Age at Mean, blue), and older women (Age at +1 SD, green).

All three lines display strong positive slopes, indicating that EE consistently and substantially enhances WE across all age groups. The moderating effect of age on the EE and WE relationship is relatively weak. However, a closer examination reveals a subtle divergence, particularly at higher levels of EE. Older women (green line) show marginally greater empowerment gains compared to younger women (red line) as EE increases, suggesting that older women may benefit slightly more from the initiatives.

Overall, the plot confirms that EE is a strong and consistent predictor of WE regardless of age, with age playing only a minor moderating role. This implies that EE interventions are broadly effective across all age groups.

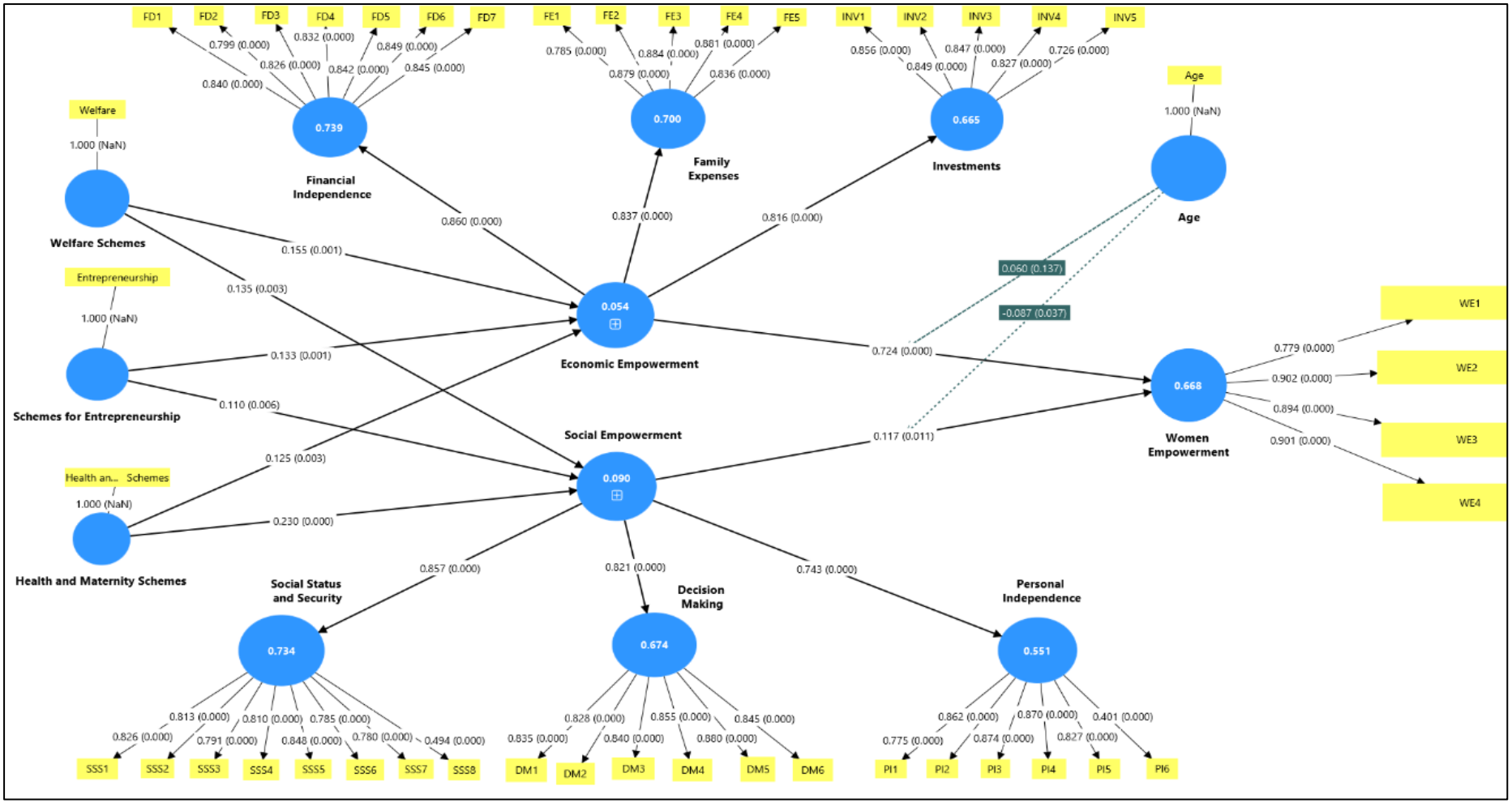


Figure 6.3: Moderating Effect of Age on the Relationship between Social and Economic Empowerment with Women Empowerment

Source: Author's Compilation

6.3.2 Interaction Effect of Marital Status

Marital status may moderate the relationship between social and economic empowerment and women's empowerment, as married and unmarried women likely respond differently to empowerment interventions and opportunities.

Table 6.2: Moderating Effect of Marital Status on the Relationship between Social and Economic Empowerment with Women Empowerment

Hypotheses	Path	Path Coefficient (β)	Standard deviation	T statistics	P values	Inference
H_{12}	Marital Status x SE →WE	-0.085	0.088	0.964	0.335	Not Supported
H_{17}	Marital Status x EE →WE	0.037	0.083	0.452	0.651	Not Supported

Source: Author's Compilation

Significance at 5 percent

Note: SE-Social Empowerment, EE-Economic Empowerment, WE-Women Empowerment

Table 6.2 shows moderation by the demographic factor, marital status on the relationship between SE and EE with WE. The results indicate that the interaction effect for Marital Status × SE → WE was negative and statistically insignificant (β = -0.085, p = 0.335) suggesting that there is no substantive evidence that the association between SE and WE differ between married and unmarried women. The results indicate that any observed variation in the relationship between SE and WE across marital status may be attributable to variation in sampling rather than meaningful moderating influence. Thus, the hypothesis that there is a moderating effect of marital status on the relationship between economic empowerment and women empowerment (H_{12}) is rejected.

Similarly, the interaction effect for Marital Status× EE → WE was positive but non-significant (β = 0.037, p = 0.651). This implies that marital status does not condition the relationship of EE with We and that the economic gains appear to relate to WE and are statistically comparable for both the groups of marital status. It is seen that the results do not provide empirical support for marital status as a moderator in the current study and hence, the hypothesis that there is a moderating effect of marital status on the relationship between EE and WE (H_{17}) is rejected.

6.3.2.1 Simple Slope Analysis of Marital Status as a Moderator between Social Empowerment and Women Empowerment

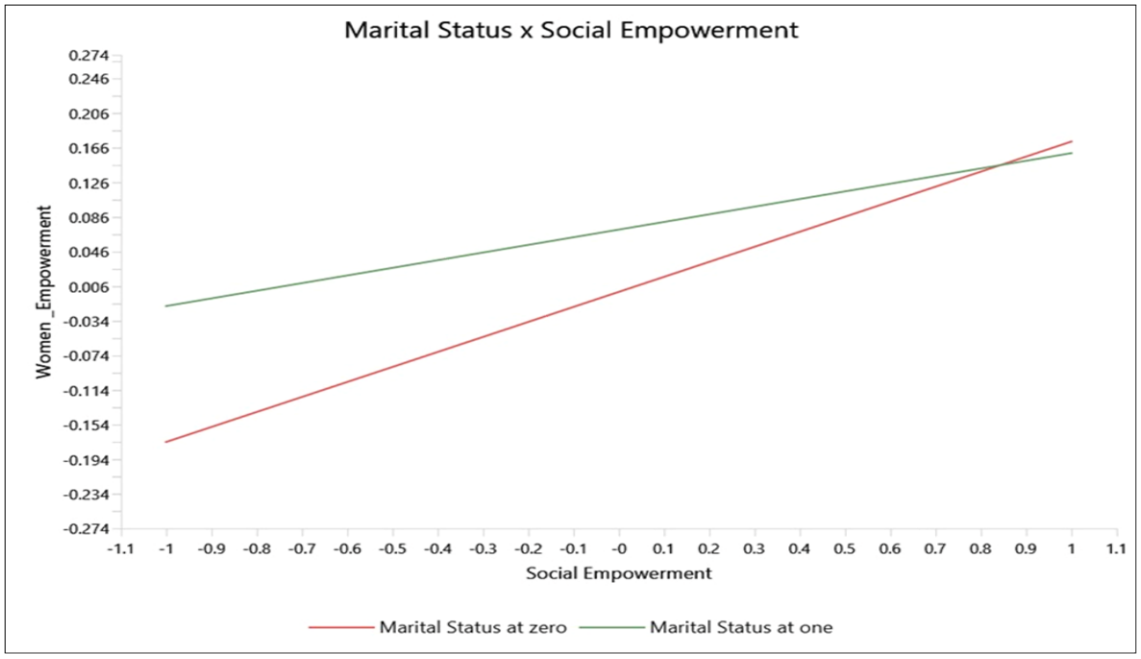


Figure 6.4: Simple Slope Analysis of Marital Status x SE →WE
Source: Author's Compilation

Figure 6.4 illustrates the moderating effect of marital status on the relationship between SE and WE. Both lines show a positive trajectory, confirming that as SE increases, WE rises regardless of marital status. The green line (married women) starts from a notably higher baseline than the red line (unmarried women), suggesting that marriage provides a stronger foundation for empowerment, possibly due to greater access to scheme benefits, household decision-making opportunities, and social recognition. This initial advantage indicates that married women derive more empowerment gains at lower levels of SE. However, as SE increases, both lines gradually converge toward the higher end of the scale, indicating that the empowerment gap between married and unmarried women narrows progressively. This convergence implies that strong social empowerment can offset the initial advantage held by married women, eventually bringing unmarried women to comparable levels of empowerment. Overall, marital status meaningfully moderates the SE-WE relationship, with its influence diminishing as social empowerment strengthens.

6.3.2.2 Simple Slope Analysis of Marital Status as a Moderator between Economic Empowerment and Women Empowerment

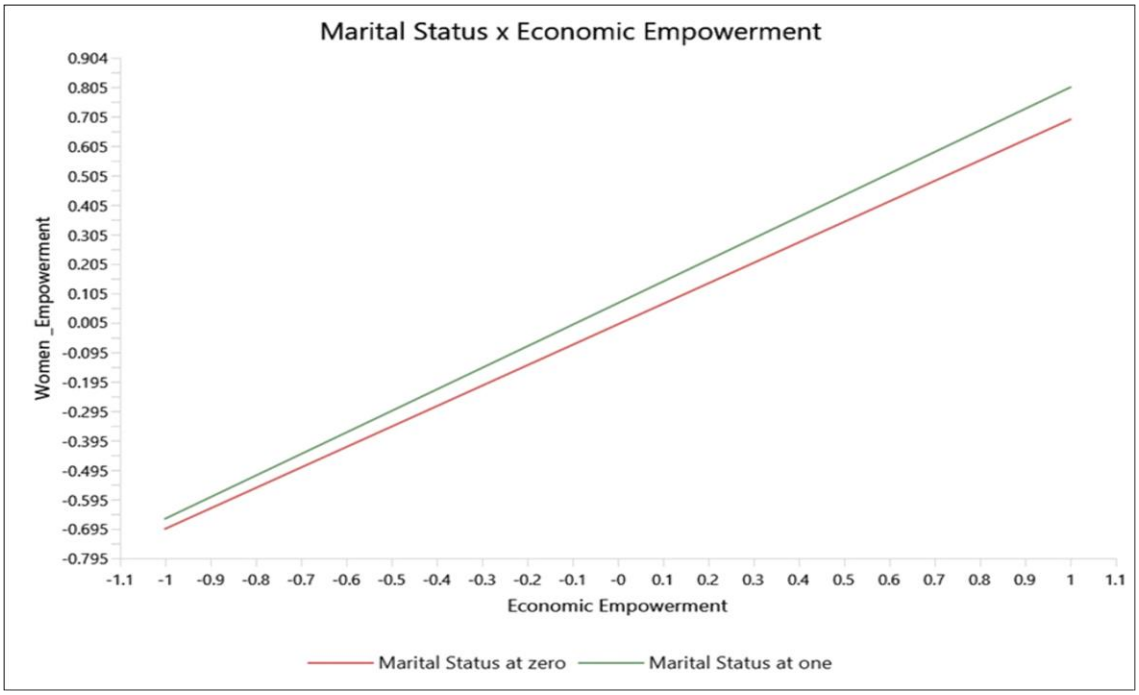


Figure 6.5: Simple Slope Analysis of Marital Status x EE →WE
Source: Author's Compilation

Figure 6.5 illustrates the moderating effect of marital status on the relationship between EE and WE. Both lines display a strong, consistent positive trajectory, confirming that EE is a significant driver of WE irrespective of marital status. The two lines run nearly parallel throughout, maintaining a consistent gap across all levels of EE, with married women (green line) recording persistently higher empowerment levels than unmarried women (red line). This sustained difference suggests that marriage amplifies empowerment gains from economic participation, as married women tend to have greater access to household resources, are more frequently targeted by welfare schemes, and operate within social structures that recognise their economic contributions. Notably, the lines do not converge at higher levels of EE, confirming that marital status exerts a stable and persistent moderating effect. Interventions aimed at EE are therefore likely to yield stronger outcomes for married women across all levels of engagement.

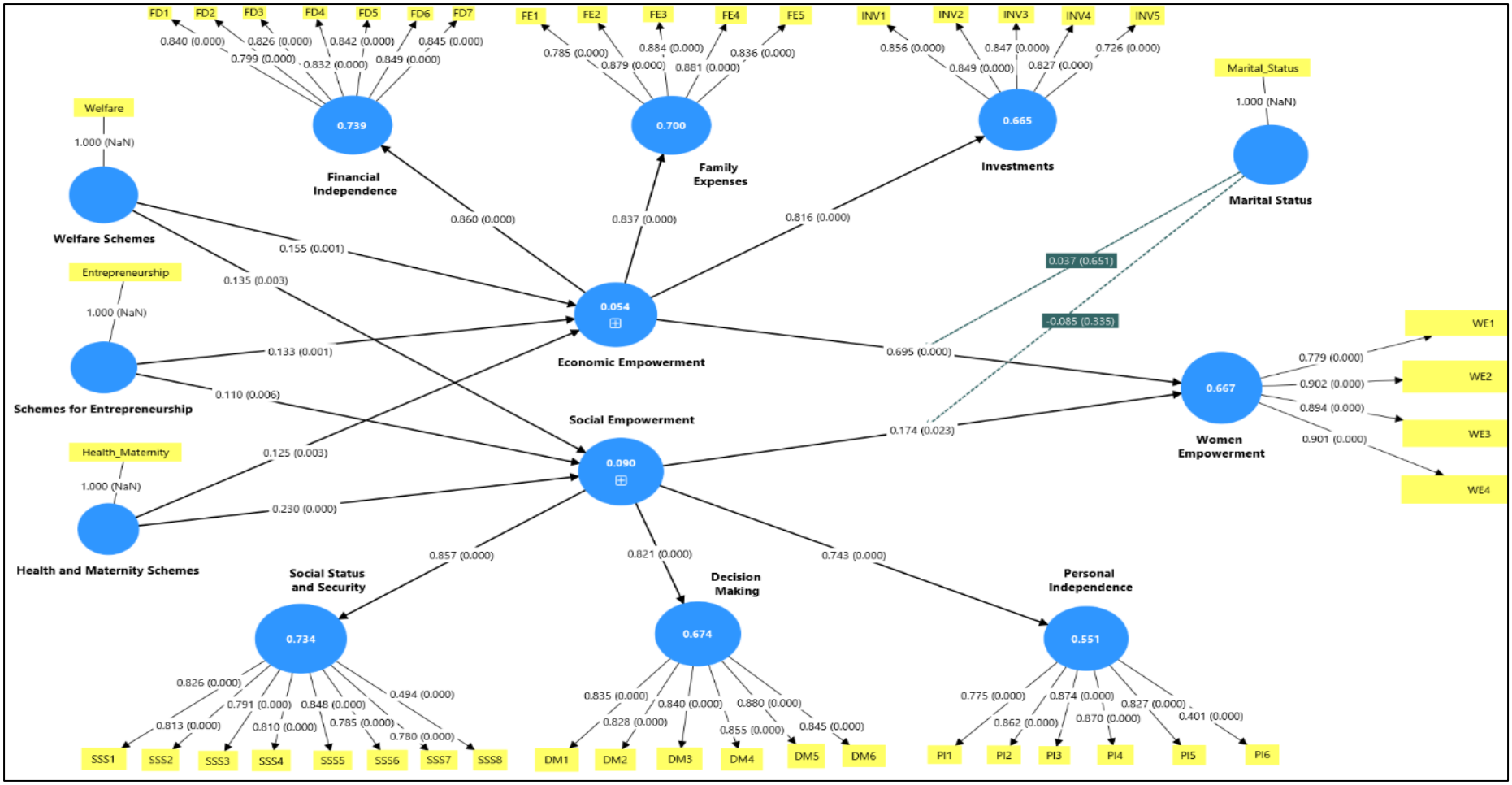


Figure 6.6: Moderating Effect of Marital Status on the Relationship between Social and Economic Empowerment with Women Empowerment

Source: Author's Compilation

6.3.3 Interaction Effect of Annual Family Income

Annual family income may moderate the relationship between social and economic empowerment and women's empowerment, as women from higher- and lower-income households may experience empowerment outcomes differently.

Table 6.3: Moderating Effect of Annual Family Income on the Relationship between Social and Economic Empowerment with Women Empowerment

Hypotheses	Path	Path Coefficient (β)	Standard deviation	T statistics	P values	Inference
H_{13}	Annual Family Income x SE →WE	-0.096	0.047	2.073	0.038	Supported
H_{18}	Annual Family Income x EE →WE	0.079	0.043	1.836	0.066	Not Supported

Source: Author's Compilation

Significance at 5 percent

Note: SE-Social Empowerment, EE-Economic Empowerment, WE-Women Empowerment

The **Table 6.3** shows the examination of annual family income as a moderator of the structural relationships between SE, EE with WE. The analysis reveals a statistically significant but negative interaction for the SE-WE pathway (β = -0.096, p = 0.038) indicating that the positive effect of SE on WE decrease with the rise in annual family income. This advocates that gains from SE derived through the government schemes lead to comparatively stronger empowerment results among women from the lower income group compared to women from higher income group. Therefore, the hypothesis that there is a moderating effect of annual family income on the relationship between social empowerment and women empowerment (H_{13}) is accepted.

On the other hand, the relationship between EE and WE is positive but not statistically significant (β = 0.079, p = 0.066) which provides no conclusive evidence that the annual family income moderates the conversion of EE into broader WE outcomes. The results fail to accept the hypothesis that there is a moderating effect of annual family income on the relationship between EE and WE (H_{18}).

6.3.3.1 Simple Slope Analysis of Annual Family Income as a Moderator between Social Empowerment and Women Empowerment

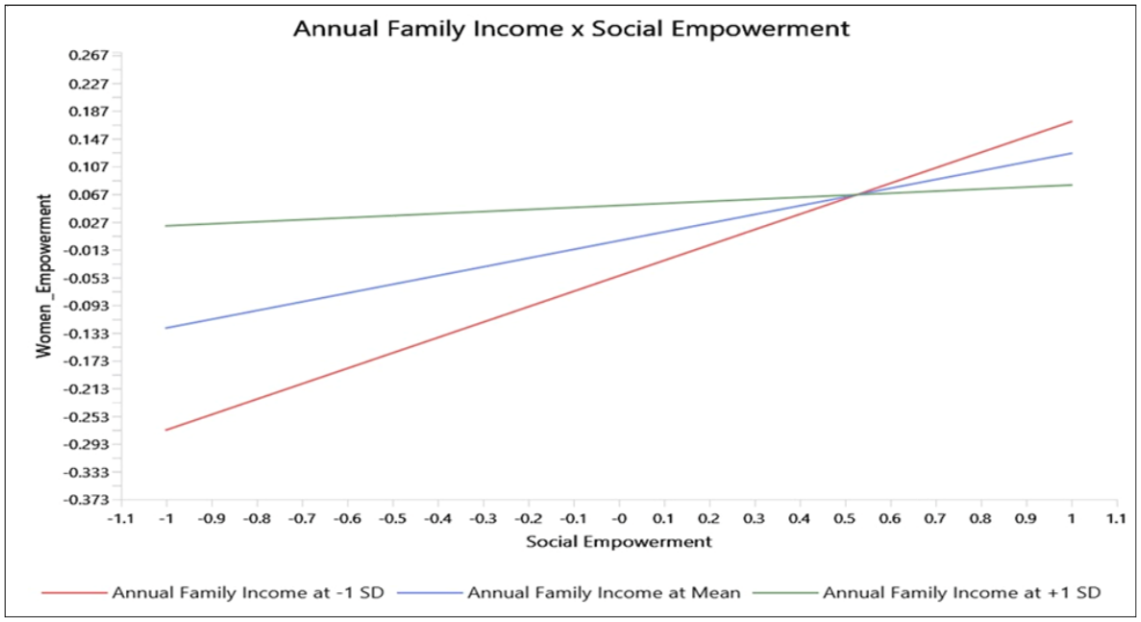


Figure 6.7: Simple Slope Analysis of Annual Family Income x SE →WE

Source: Author's Compilation

Figure 6.7 illustrates the moderating effect of annual family income on the relationship between SE and WE presented across three income levels low income at -1 SD (red line), mean income (blue line), and high income at +1 SD (green line).

The three lines display markedly different slopes, indicating that annual family income substantially moderates the relationship between SE and WE. The red line, representing low-income women, shows the steepest positive slope, starting at the lowest level but rising sharply as SE increases, suggesting that social participation serves as a critical compensatory mechanism for limited financial resources. The green line, representing high-income women, remains relatively flat throughout, starting at a higher baseline but showing minimal growth, indicating that their empowerment needs are already largely met through economic means. The blue line, representing mean-income women, follows a moderate trajectory between the two extremes. All three lines converge around the midpoint of the SE scale, beyond which low-income women begin to surpass their higher-income counterparts. This shows SE is a strong equaliser for poor women, highlighting the need to target SE programs at lower-income groups for maximum impact.

6.3.3.2 Simple Slope Analysis of Annual Family Income as a Moderator between Economic Empowerment and Women Empowerment

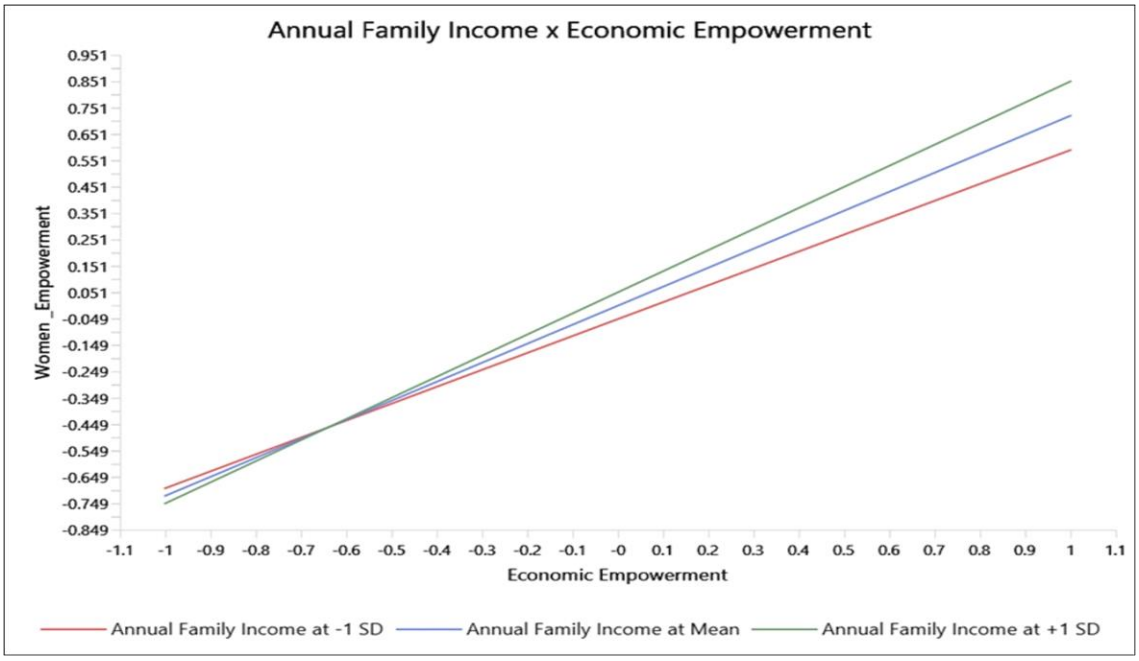


Figure 6.8: Simple Slope Analysis of Annual Family Income x EE →WE

Source: Author's Compilation

Figure 6.8 illustrates the moderating effect of annual family income on the relationship between EE and WE across three income levels low at -1 SD (red line), mean (blue line), and high at +1 SD (green line). All three lines display a strong, consistent positive slope, confirming that EE is a robust driver of WE across all income groups. Notably, the three lines begin very close together at the lower end of the EE scale, indicating minimal income-based differences when economic empowerment is low. However, as EE increases, the lines progressively diverge, with the green line (high-income women) pulling ahead and recording the highest empowerment levels, while the red line (low-income women) trails behind. This divergence suggests that higher family income amplifies the empowerment gains derived from economic participation, as women with greater financial resources are better positioned to convert economic empowerment into broader life outcomes. Overall, the graph confirms that annual family income positively moderates the EE-WE relationship, with its enhancing effect becoming increasingly pronounced at higher levels of EE.

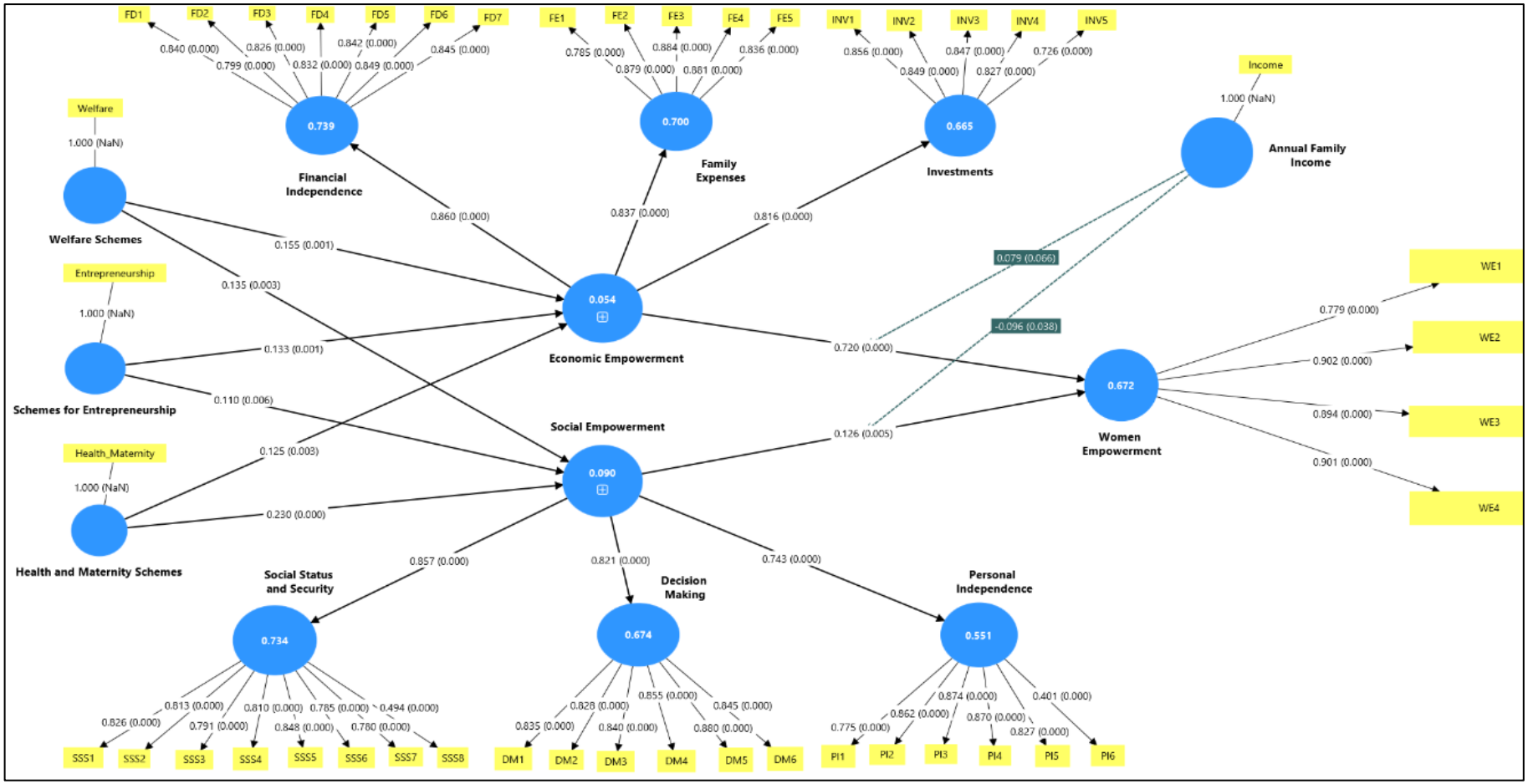


Figure 6.9: Moderating Effect of Annual Family Income on the Relationship between Social and Economic Empowerment with Women Empowerment

Source: Author's Compilation

6.3.4 Interaction Effect of Occupation

Occupation may moderate the relationship between social and economic empowerment and women's empowerment, as employed and unemployed women may perceive and experience empowerment differently based on their occupational status.

Table 6.4: Moderating Effect of Occupation on the Relationship between Social and Economic Empowerment with Women Empowerment

Hypothesis	Path	Path Coefficient (β)	Standard deviation	T statistics	P values	Inference
H_{14}	Occupation x SE →WE	-0.002	0.041	0.057	0.955	Not Supported
H_{19}	Occupation x EE →WE	0.031	0.037	0.835	0.404	Not Supported

Source: Author's Compilation

Significance at 5 percent

Note: SE-Social Empowerment, EE-Economic Empowerment, WE-Women Empowerment

The **Table 6.4** depicts occupation as a moderator of the relationship between SE and WE. The results revealed that the interaction effect is negligible and statistically non-significant (β = -0.002, p = 0.955). Hence, this indicates no empirical evidence that any differences in occupational status would change the strength or direction of the SE-WE relationship among the women beneficiaries of government schemes. Based on these results the hypothesis that there is a moderating effect of occupation on the relationship between SE and WE (H_{14}) was rejected.

Similarly, moderation was examined for the association between EE and WE through the demographic factor occupation. The estimated interaction was positive but small and statistically insignificant ((β = 0.031, p = 0.404) indicating that occupation does not moderate the relationship between EE and WE. Hence, the hypothesis that there is a moderating effect of occupation on the relationship between EE and WE (H_{19}) was rejected.

6.3.4.1 Simple Slope Analysis of Occupation as a Moderator between Social Empowerment and Women Empowerment

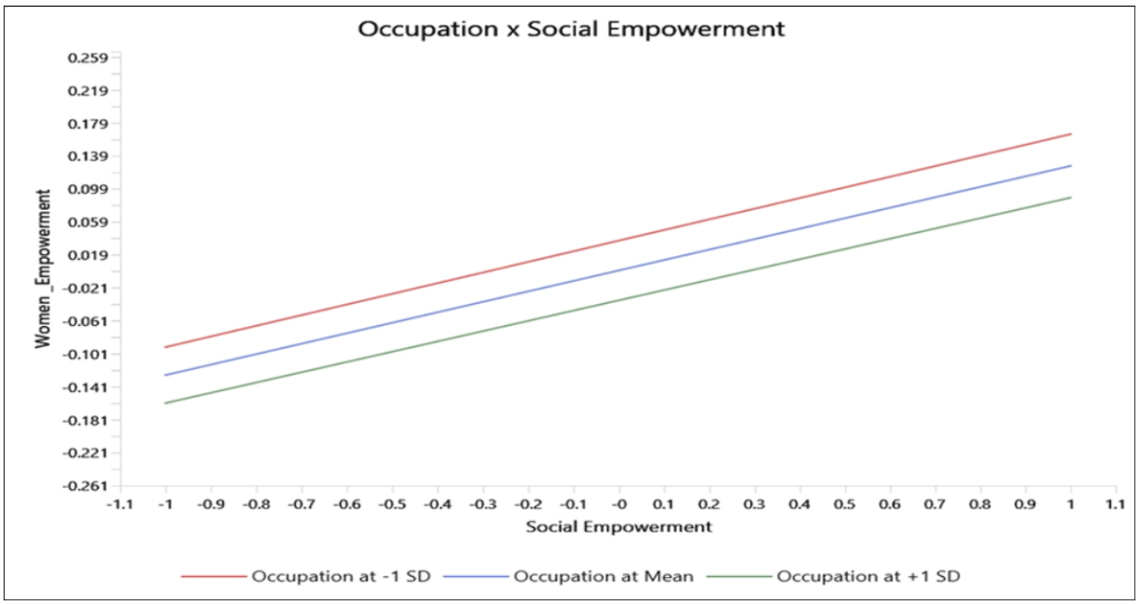


Figure 6.10: Simple Slope Analysis of Occupation x SE →WE

Source: Author's Compilation

Figure 6.10 illustrates the moderating effect of occupation on the relationship between SE and WE across three occupational levels low at -1 SD (red line), mean (blue line), and high at +1 SD (green line). All three lines display a consistent, similarly sloped, positive trajectory, confirming that SE positively and uniformly drives WE across all occupational categories. The lines run parallel throughout without converging or diverging, indicating that while occupation influences the baseline level of empowerment, it does not alter the rate at which SE translates into WE. The red line, representing women with lower occupational status, consistently records the highest empowerment levels, while the green line, representing higher occupational status, falls lowest throughout. This suggests that social empowerment yields relatively greater returns for women in lower occupational categories, possibly because community participation and social engagement compensate for the limited autonomy and recognition associated with lower-status occupations, making SE a particularly valuable empowerment channel for this group.

6.3.4.2 Simple Slope Analysis of Occupation as a Moderator between Economic Empowerment and Women Empowerment



Figure 6.11: Simple Slope Analysis of Occupation x EE →WE

Source: Author's Compilation

Figure 6.11 illustrates the moderating effect of occupation on the relationship between EE and WE across three occupational levels low at -1 SD (red line), mean (blue line), and high at +1 SD (green line). All three lines display a strong, steep positive slope, confirming that EE is a powerful and consistent driver of WE across all occupational categories. Notably, the three lines begin separated at the lower end of the EE scale, with the red line (lower occupation) starting at the highest level and the green line (higher occupation) starting at the lowest, but all three converge clearly at the higher end of the scale. This convergence indicates that as EE grows stronger, occupational differences become increasingly irrelevant, and women across all occupational levels achieve comparable empowerment outcomes. This suggests that robust EE has a powerful equalising effect, effectively bridging occupational disparities and delivering uniform empowerment gains, making it a particularly impactful intervention regardless of a woman's occupational background.

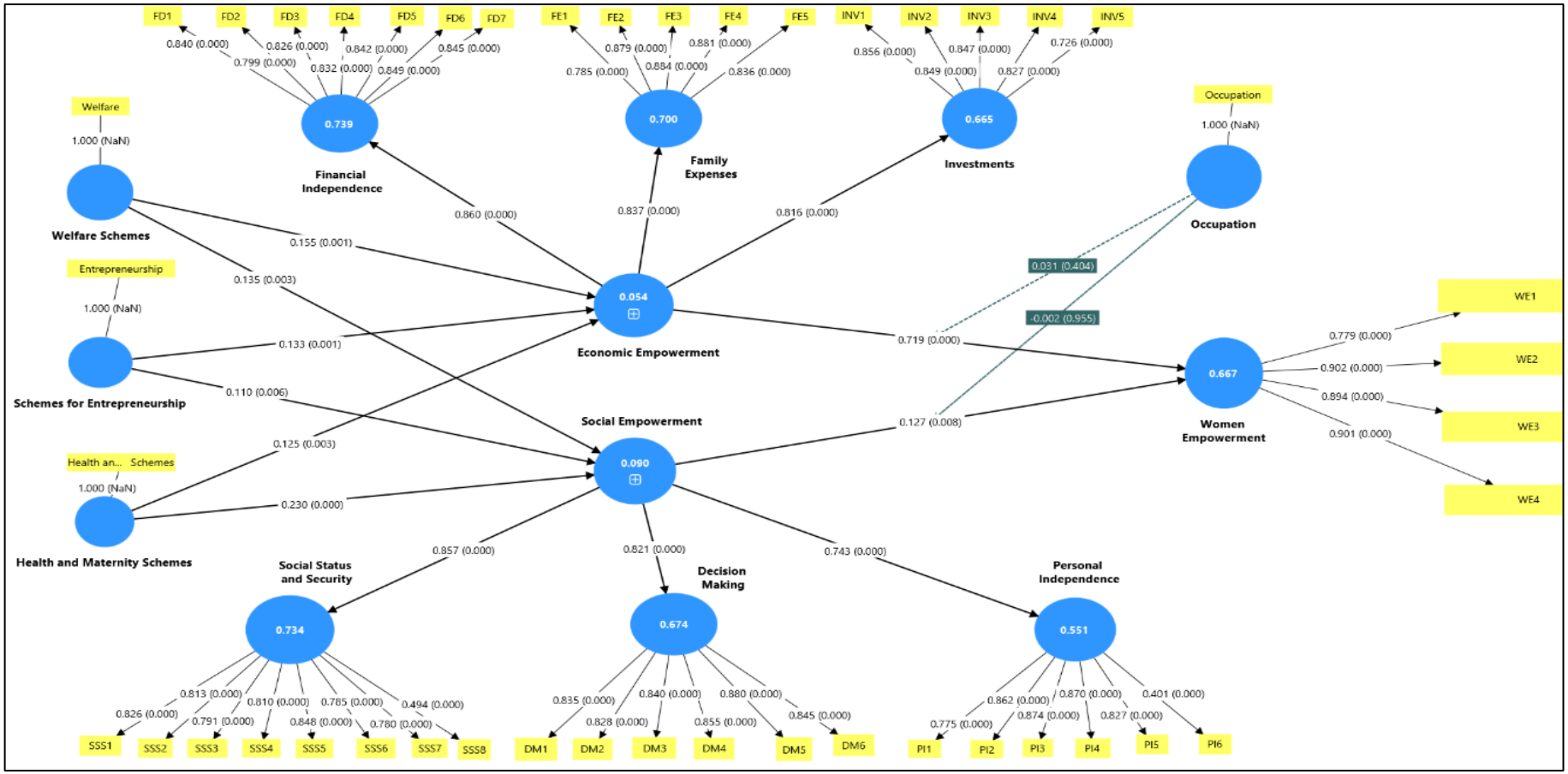


Figure 6.12: Moderating Effect of Occupation on the Relationship between Social and Economic Empowerment with Women Empowerment

Source: Author's Compilation

6.3.5 Interaction Effect of Education

Education may moderate the relationship between social and economic empowerment and women's empowerment, as women with higher and lower educational attainment may perceive and experience empowerment differently based on their literacy and awareness levels.

Table 6.5: Moderating Effect of Education on the Relationship between Social and Economic Empowerment with Women Empowerment

Hypotheses	Path	Path Coefficient (β)	Standard deviation	T statistics	P values	Inference
H_{15}	Education x SE →WE	0.006	0.042	0.151	0.880	Not Supported
H_{20}	Education x EE →WE	0.005	0.040	0.126	0.900	Not Supported

Source: Author's Compilation

Significance at 5 percent

Note: SE-Social Empowerment, EE-Economic Empowerment, WE-Women Empowerment

Table 6.5 shows education as a probable moderator of the structural association between SE and WE. The interaction term Education × SE → WE within the SEM results was examined which indicated that this interaction effect is very small and statistically non-significant (β = 0.006, p = 0.880). This suggests that the strength of the SE–WE relationship does not differ systematically across education levels, and any observed variation is likely attributable to sampling fluctuation rather than a meaningful moderating influence. Therefore, H_{15} that there is a moderating effect of education on the relationship between social empowerment and women empowerment was not supported.

Similarly, moderation was evaluated for the relationship between EE and WE through the interaction term Education × EE → WE. The findings show that the interaction effect is negligible and not statistically significant (β = 0.005, p = 0.900). This indicates no empirical evidence that education conditions how EE translates into overall WE outcomes. Collectively, the results imply that education does not function as a condition for either the SE - WE or EE - WE pathways in the proposed model and thus, H_{20} that there is a moderating effect of education on the relationship between EE and WE was not supported.

6.3.5.1 Simple Slope Analysis of Education as a Moderator between Social Empowerment and Women Empowerment

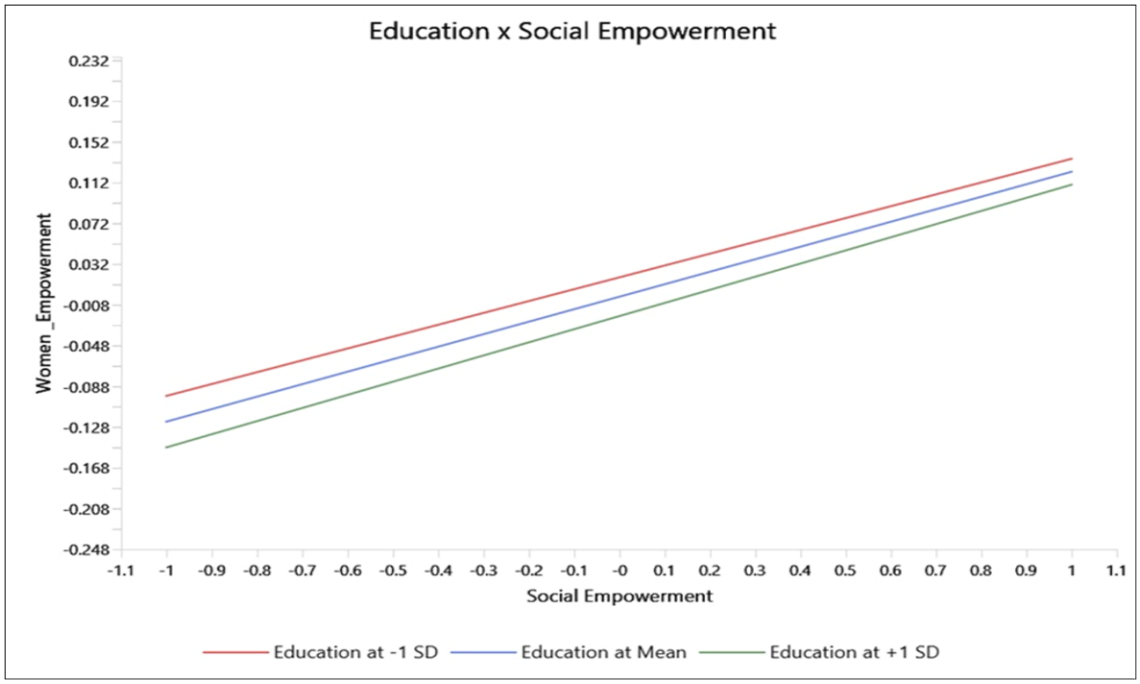


Figure 6.13: Simple Slope Analysis of Education x SE →WE

Source: Author's Compilation

Figure 6.13 illustrates the moderating effect of education on the relationship between SE and WE across three educational levels, low at -1 SD (red line), mean (blue line), and high at +1 SD (green line). All three lines display a consistent positive slope, confirming that SE reliably drives WE across all educational levels. The lines run nearly parallel throughout, indicating that education does not significantly alter the rate at which SE translates into WE, but does influence the baseline level of empowerment. Interestingly, the red line representing lower education consistently records the highest empowerment levels, while the green line representing higher education falls lowest throughout. This counterintuitive finding suggests that social empowerment is particularly impactful for less educated women, possibly because community participation and social engagement serve as alternative pathways to empowerment when formal educational advantages are absent. The lines converge slightly at the higher end, indicating a marginal narrowing of education-based differences as SE strengthens, reinforcing the role of social empowerment as an equalising force across educational backgrounds.

6.3.5.2 Simple Slope Analysis of Education as a Moderator between Economic Empowerment and Women Empowerment

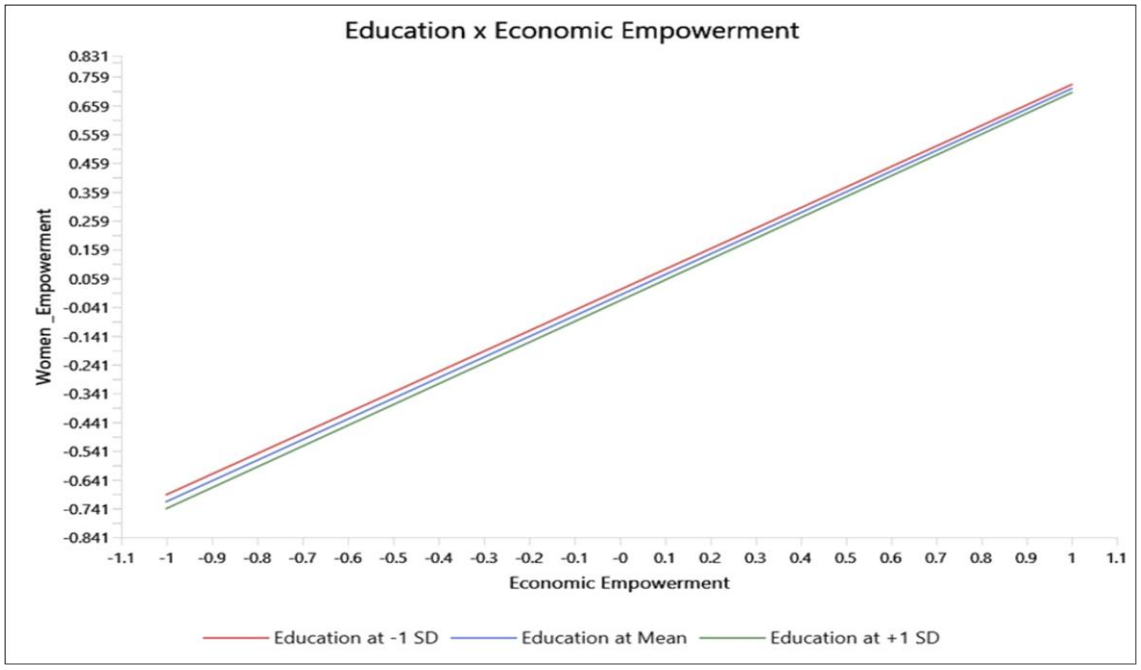


Figure 6.14: Simple Slope Analysis of Education x EE →WE

Source: Author's Compilation

Figure 6.14 displays a moderation analysis examining how education level moderates the relationship between EE and WE. This interaction plot reveals that EE has a strong, consistent positive effect on Women's Empowerment across all three education levels (−1 SD, Mean, +1 SD). The nearly parallel lines indicate that education plays a minimal moderating role the relationship between Economic Empowerment and Women's Empowerment remains largely unchanged regardless of the education level of women. A slight divergence at the lower end of the x-axis suggests that women with lower education levels report marginally higher empowerment at lower economic levels, but this difference is negligible. Overall, EE emerges as the dominant predictor of WE, with education contributing little to no significant interaction effect.

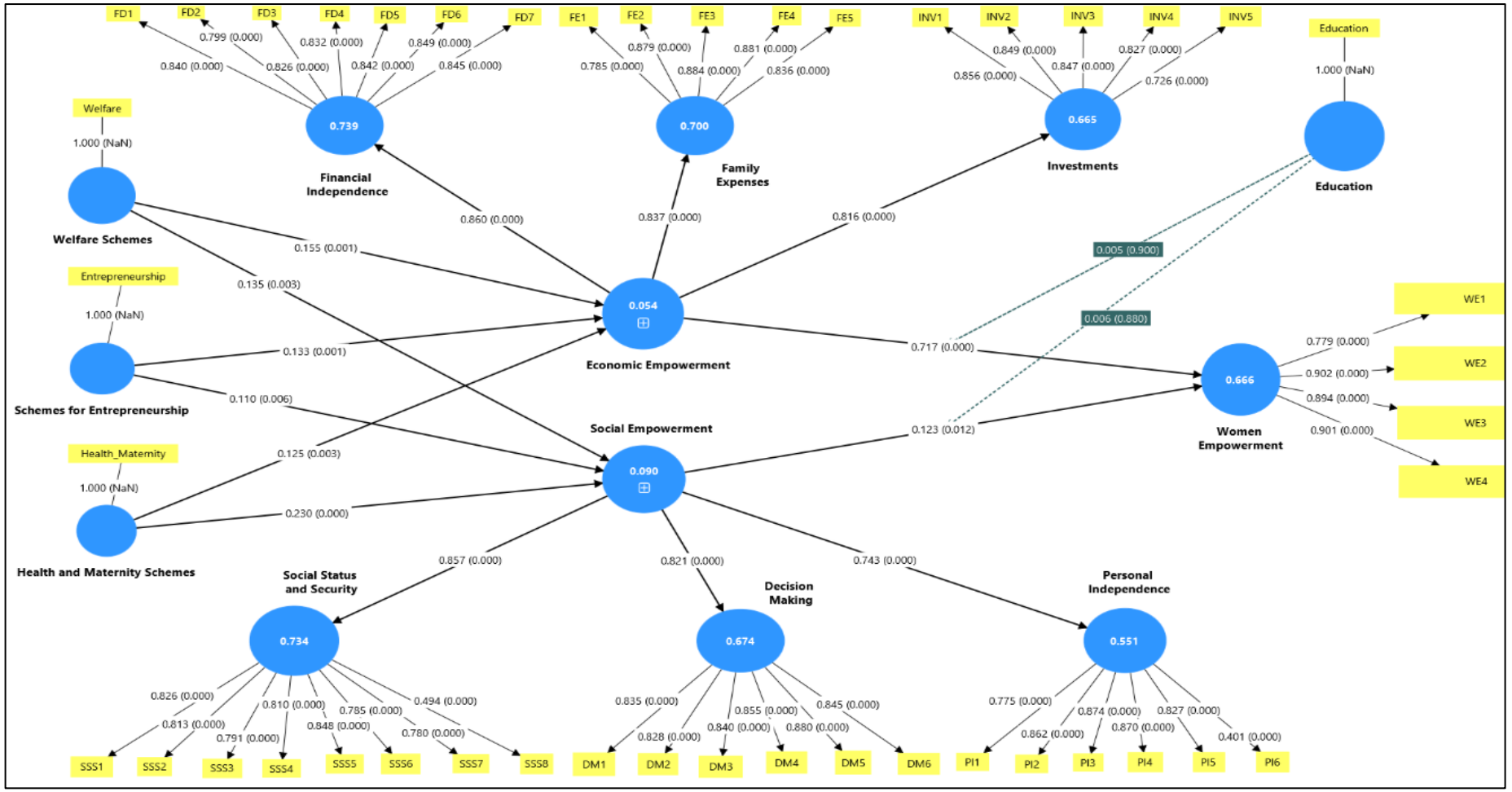


Figure 6.15: Moderating Effect of Education on the Relationship between Social and Economic Empowerment with Women Empowerment

Source: Author's Compilation

6.4 Chapter Summary

This chapter explored how demographic attributes like age, marital status, income, occupation and education moderate the relationships between social empowerment (SE), economic empowerment (EE), and women's empowerment (WE) using SEM analysis. It reveals that only age and income significantly weaken the SE→WE path, with younger women and lower-income households benefitting more from SE. Other demographics showed no significant moderation effects, indicating consistent empowerment outcomes across groups. Overall, the findings suggest that SE and EE drive WE, with demographics playing a minor role, implying that government schemes effectively benefit women across all groups. EE is the primary driver of empowerment, and SE provides essential support.

Chapter 7

Challenges Faced by Women Beneficiaries in Availing Government Schemes

7.1 Introduction

India has consistently emphasised the dual objectives of economic growth and social equity in the post-independence trajectory recognising that sustainable progress requires the systematic breaking down of ingrained structural inequalities. Women's empowerment occupies a central position within this paradigm and is widely acknowledged as a transformative driver of holistic social change. Consequently, both Central and State governments have introduced wide-ranging schemes encompassing general welfare, healthcare, education, employment, financial inclusion and legal awareness. However, despite their comprehensive design and intent, the initiatives continue to suffer from uneven utilisation, with a substantial proportion of women beneficiaries encountering formidable barriers in accessing and effective availing of scheme benefits.

Multifaceted in nature, these barriers span across administrative, socio-cultural and economic domains. At the administrative level, cumbersome documentation requirements, procedural delays, poor inter-agency coordination, lack of transparency in processes, and inadequate monitoring mechanisms collectively hinder the efficient delivery of services. Intensifying these challenges are pervasive awareness gaps, which disproportionately affect women with limited literacy, who frequently remain uninformed about available schemes, eligibility criteria and application procedures due to insufficient institutional outreach. Socio-cultural, patriarchal norms constrain women's mobility, autonomy and access to information, while prevailing household power dynamics and concerns regarding personal safety particularly in rural and semi-urban contexts deter meaningful engagement with public systems and foster dependence on unreliable intermediaries. From the economic perspective, poverty, low educational attainment and stringent financial prerequisites further exclude women from livelihood and entrepreneurial opportunities, perpetuating cycles of vulnerability. A systematic identification and prioritisation of these barriers is therefore indispensable for evidence-based policy refinement.

This chapter employs the Analytic Hierarchy Process (AHP), a structured multi-criteria decision-making technique, to examine and rank the key challenges encountered by women beneficiaries in Goa.

7.2 Theoretical Framework and Justification

The AHP developed by Thomas L. Saaty in the 1970s, is a widely employed multi-criteria decision-making framework designed to address intricate problems through a structured and systematic approach. AHP enables rigorous evaluation through the integration of subjective judgment and mathematical precision by organising decision problems into hierarchies of criteria and sub-criteria (Saaty, 1990). The method relies primarily on pairwise comparisons, wherein the relative importance of contending factors is assessed using a standardised numerical scale and subsequently converted into quantitative priority weights through eigenvalue computations. Consistency ratios are additionally employed to verify the logical coherence and reliability of the judgments rendered (Barcelona, 2020). AHP's methodological adaptability has facilitated its broad application across diverse disciplines including engineering, business management, healthcare and public policy, owing to its distinctive capacity to synthesise qualitative perceptions with quantitative data (Rahmayanti et al., 2021; Sekhar et al., 2016; Noori, 2015). The synthesis of local priorities across the hierarchy produces global weights, which facilitate ranking and selection among alternatives.

Thus, the theoretical foundation of AHP integrates hierarchy structuring, pairwise comparison, priority measurement and consistency verification, making it a robust tool for analysing complex decision problems involving both subjective and objective considerations.

In the present study, AHP is applied to systematically identify and rank the challenges encountered by women beneficiaries in accessing government schemes in Goa, assigning relative weights to barriers encompassing accessibility constraints, awareness deficits and implementation inefficiencies. This structured prioritisation brings to light the lived experiences of the beneficiaries and provides a strong empirical foundation for framing targeted policy interventions aimed at enhancing scheme uptake and advancing equitable women's empowerment.

7.3 Methodological Framework and Data Collection

7.3.1 Operationalisation of the AHP Methodology

The operationalisation of the AHP methodology necessitated the development of a structured questionnaire incorporating pairwise comparison matrices for the selected perceived challenges in accessibility of government schemes. The identified challenges were carefully curated with the help preliminary research and interactions with beneficiaries to ensure comprehensive coverage of the barriers faced by them. These selected perceived challenges were subsequently incorporated into the AHP questionnaire to facilitate systematic evaluation and prioritisation.

7.3.2 Sampling Strategy and Participant Selection

For this study, 78 women beneficiaries were selected out of the 603 respondents of the study through convenience sampling, ensuring representative coverage and capturing spatial variations in scheme implementation. Duration of scheme participation, depth of experiential knowledge and capacity to provide informed judgments were considered before the selection of respondents. As AHP prioritises expert elicitation over large probabilistic samples, emphasising quality insights drawn from knowledgeable respondents over statistical generalisability (Takala et al., 2006). Hence, the participants were deliberately chosen due to their long scheme involvement and complete program understanding. This ensured the generation of robust and meaningful pairwise comparisons, facilitating a rigorous multidimensional assessment of the relative importance of challenges encountered by beneficiaries.

7.3.3 Data Collection Protocol

Rigorous ethical and methodological standards were adhered to during the process of data collection to ensure informed participation and response validity. Prior to administering the AHP questionnaire, comprehensive explanatory sessions were conducted with participants in the local vernacular language to ensure linguistic accessibility and conceptual understanding. The purpose and objectives of the survey were communicated to the respondents in their local language, which helped in minimising misunderstandings and encouraged genuine responses ensuring clarity and accuracy. These orientation sessions detailed the objectives of the study, the nature of the pairwise comparison requirement, the significance of their experiential knowledge for the research and the intended utilisation of their responses for policy-relevant analysis.

Following the completion of these briefing sessions and confirmation of informed consent, participants were presented with the set of identified perceived challenges and were asked to rate these challenges through pairwise comparisons. Participants were guided through the pairwise comparison exercise, wherein they evaluated the relative importance of different challenges using Saaty's (1980) fundamental scale. This scaling mechanism facilitates a nuanced prioritisation of issues by allowing respondents to express the relative significance of paired criteria.

A matrix was constructed to compare attributes pairwise using Saaty's scale.

Table 7.1: Satty's Scale of Relative Importance

Scale of Importance for Pairwise Comparisons	Numeric Rating
Extreme Importance	9
Very Strong	7
Strong	5
Moderate	3
Equal	1
Intermediate values between two adjacent judgements	2,4,6,8

Source: Satty's Scale (1980)

Table 7.1 shows Satty's scale which employs a nine-point ratio framework (ranging from 1, indicating equal importance, to 9, indicating extreme importance of one element over another) to quantify qualitative judgments regarding the comparative importance or severity of one challenge compared to another. In the Pairwise Comparison Matrix (PCM), the diagonal elements are always equal to 1, while the values in the lower left section are the reciprocals of the corresponding upper right values. The AHP matrix included the identified perceived challenges in availing the government schemes in Goa by women beneficiaries.

Responses were systematically documented and subsequently recorded. The collected responses, on a 1-to-9 scale, were then encoded as input matrices for AHP analysis. The collected data were processed as inputs into the AHP model, which analysed the pairwise comparisons to calculate priority weights for each challenge, enabling the derivation of priority weights and consistency assessments for the identified challenges.

7.4 Analytical Significance and Policy Implications

This methodological approach facilitates the transformation of subjective, experiential knowledge into a structured priority framework, thereby generating empirically grounded insights to inform evidence-based policy interventions. It offers a transparent, evidence-based framework for prioritising factors and supporting informed decision-making across domains such as public policy evaluation, strategic planning, and resource allocation, particularly when stakeholder perspectives and experiential knowledge are critical to the process (Mohammed et al., 2018).

This analytic process enabled the study to generate a ranked list of barriers, highlighting those that most critically impact women's ability to benefit from government schemes in Goa. Such results have significant implications for policymakers and program implementers, as they provide an evidence-based foundation for redesigning or enhancing schemes, improving outreach, effectively addressing the specific needs and concerns of women beneficiaries, and ultimately enhancing women's access to government schemes in the State of Goa.

7.5 Process of Identification of Perceived Challenges

The study conducted a comprehensive and systematic identification of challenges faced by the women beneficiaries while accessing the government schemes in Goa. An integrated approach was adopted combing both the secondary and primary sources to ensure holistic understanding. Initially, an extensive review was done of the academic literature, government reports and organisational documents to establish a robust theoretical and empirical foundation. Subsequently, the focus group discussions conducted with the women beneficiaries during fieldwork validated and refined the emerging framework in context. This process finally culminated in the identification of fifteen discrete challenges which were later operationalised as primary evaluation criteria within the AHP framework.

7.6 Enumeration of Identified Challenges

The fifteen perceived challenges faced by women beneficiaries in accessing government schemes in the state of Goa are enumerated as follows:

Table 7.2: Challenges Faced by Women Beneficiaries and their Description

Challenges	Description
Inadequate knowledge about schemes	Limited awareness regarding the existence, objectives, eligibility criteria, and benefits of available welfare programs
Inadequate infrastructure	Insufficient physical facilities, technological resources, and administrative capacity at implementation sites
Inadequate family support	Lack of familial encouragement, assistance, or permission to access and utilise government schemes
Lack of mobility	Restricted physical movement due to transportation constraints, geographical distances, or sociocultural restrictions on women's mobility
Lack of education	Limited literacy and educational attainment impeding comprehension of scheme requirements and application procedures
Issues with documents	Difficulties in obtaining, maintaining, or presenting the required documentation for scheme enrolment and benefit receipt.
Late fulfilment of conditionality	Delays in satisfying specific conditions necessary for continued benefit receipt from schemes
Difficulty in opening and operating bank accounts	Challenges related to financial inclusion, banking procedures, and account management requirements
Improper response from authority	Inadequate, dismissive, or unhelpful interactions with administrative personnel and implementing officials
Inadequate information provided	Insufficient, unclear, or inaccessible information regarding application procedures, entitlements, and beneficiary obligations
Difficult procedure	Complex, cumbersome, or opaque administrative processes for scheme enrolment and benefit claiming.
Insufficient financial assistance	Inadequate quantum of financial benefits relative to beneficiaries' needs and program objectives
Delay in getting financial assistance	Temporal lags between eligibility confirmation and actual disbursement of financial benefits
Inadequate institutional support	Limited organisational capacity, resources, and commitment among implementing institutions
Political interference	Undue political influence in beneficiary selection, resource allocation, or program implementation processes

Source: Author's Compilation

Table 7.2 shows the challenges faced by women beneficiaries while availing the schemes. These challenges collectively reflect the multifaceted barriers spanning the informational, administrative, institutional, socioeconomic, and political domains that impede the effective utilisation of government welfare schemes by women in Goa.

7.7 Data Analysis and Interpretation

The fifteen challenges identified which were encountered by women beneficiaries in accessing government schemes in Goa were evaluated and prioritised. Structured pairwise comparison matrices were administered to 78 beneficiaries through guided discussions and questionnaires, wherein participants assessed the relative importance of identified barriers. Priority weights were subsequently derived through eigenvalue computations, accompanied by consistency verification. The responses received from the women beneficiaries are analysed using the AHP method in the excel worksheet. The AHP matrix is used to prioritise the dimensions of the perceived challenges in availing government schemes by women beneficiaries. The responses received from the 78 women beneficiaries were reported, and the Saaty-Scale Reciprocal Matrix in shown in **Table 7.3**:

Table 7.3: Saaty-Scale Reciprocal Matrix

Challenges	Inadequate knowledge about schemes	Inadequate infrastructure	Inadequate family support	Lack of mobility	Lack of education	Issues with documents	Late fulfilment of conditionality	Difficulty in opening and operating bank account	Improper response from authority	Inadequate information provided	Difficult procedure	Insufficient financial assistance	Delay in getting financial assistance	Inadequate institutional support	Political interference
Inadequate knowledge about schemes	1	1/8	6	5	7	4	6	5	1/3	1/5	6	3	4	6	7
Inadequate infrastructure	8	1	1/7	7	1/8	1/6	1/6	1/7	6	1/7	1/6	1/8	7	7	5
Inadequate family support	1/6	7	1	8	8	9	5	1/6	1/8	1/8	1/6	1/6	1/6	7	7
Lack of mobility	1/5	1/7	1/8	1	1/3	5	1/6	1/4	6	6	4	1/6	1/6	6	6
Lack of education	1/7	8	1/8	3	1	7	1/6	7	7	1/4	1/5	1/5	1/4	7	7
Issues with documents	1/4	6	1/9	1/5	1/7	1	8	1/6	1/7	1/7	1/7	1/5	1/6	1/4	8
Late fulfilment of conditionality	1/6	6	1/5	6	6	1/8	1	1/7	1/7	1/6	1/3	1/8	1/7	1/6	8
Difficulty in opening/operating bank account	1/5	7	6	4	1/7	6	7	1	6	6	3	1/7	1/6	5	5
Improper response from authority	3	1/6	8	1/6	1/7	7	7	1/6	1	7	7	1/8	1/7	1/6	8
Inadequate information provided	5	7	8	1/6	4	7	6	1/6	1/7	1	8	1/8	1/8	7	8
Difficult procedure	1/6	6	1/6	1/4	5	7	3	1/3	1/7	1/8	1	1/8	1/8	1/7	8
Insufficient financial assistance	1/3	8	6	6	5	5	8	7	8	8	8	1	8	1/8	6
Delay in getting financial assistance	1/4	1/7	6	6	4	6	7	6	7	8	8	1/8	1	1/8	8
Inadequate institutional support	1/6	1/7	1/7	1/6	1/7	4	6	1/5	6	1/7	7	8	8	1	8
Political interference	1/7	1/5	1/7	1/6	1/7	1/8	1/8	1/5	1/8	1/8	1/8	1/6	1/8	1/8	1

Source: Author's Compilation

The AHP matrix consists of two triangular matrices namely upper and lower triangular matrix where the upper triangular matrix needs the responses from the women beneficiaries according to the pairwise comparison of the cells. However, the lower triangular matrix does not need any response, thus, filled with X (as no responses is needed here). The main diagonal of the AHP matrix is filled with 1, representing that the same dimensions of included different perceived challenges in availing the government schemes in Goa state by women beneficiaries is equally important.

The women beneficiaries were requested to compare the different perceived challenges in availing the government schemes mentioned in the upper triangular cells of the AHP matrix. The pairwise comparison is done using the 9-point rating scale (Saaty, 1977). In the rating scale of 1 to 9, 1 indicates equally important and 9 means absolutely important. The table presents the pairwise comparison matrix derived from responses provided by the selected women beneficiaries, evaluating the relative severity of fifteen perceived challenges in accessing government welfare schemes in Goa. The upper triangular elements capture the initial judgments elicited from participants, while the lower triangular elements comprise their reciprocals, ensuring matrix reciprocity as per AHP conventions.

Column sums facilitate the normalisation process, culminating in priority weights that quantify each challenge's relative dominance.

Table 7.4: Normalised Matrix

Challenges	Inadequate knowledge about schemes	Inadequate infrastructure	Inadequate family support	Lack of mobility	Lack of education	Issues with documents	Late fulfilment of conditionality	Difficulty in opening and operating bank account	Improper response from authority	Inadequate information provided	Difficult procedure	Insufficient financial assistance	Delay in getting financial assistance	Inadequate institutional support	Political interference
Inadequate knowledge about schemes	0.0626	0.0083	0.1373	0.0949	0.1865	0.0564	0.0914	0.1430	0.0080	0.0050	0.1324	0.1148	0.0871	0.1271	0.0642
Inadequate infrastructure	0.5010	0.0661	0.0033	0.1329	0.0033	0.0023	0.0025	0.0041	0.1434	0.0036	0.0037	0.0048	0.1524	0.1483	0.0458
Inadequate family support	0.0104	0.4628	0.0229	0.1519	0.2132	0.1268	0.0762	0.0048	0.0030	0.0032	0.0037	0.0064	0.0036	0.1483	0.0642
Lack of mobility	0.0125	0.0094	0.0029	0.0190	0.0089	0.0705	0.0025	0.0071	0.1434	0.1517	0.0883	0.0064	0.0036	0.1271	0.0550
Lack of education	0.0089	0.5289	0.0029	0.0569	0.0266	0.0986	0.0025	0.2002	0.1673	0.0063	0.0044	0.0077	0.0054	0.1483	0.0642
Issues with documents	0.0157	0.3967	0.0025	0.0038	0.0038	0.0141	0.1219	0.0048	0.0034	0.0036	0.0032	0.0077	0.0036	0.0053	0.0733
Late fulfilment of conditionality	0.0104	0.3967	0.0046	0.1139	0.1599	0.0018	0.0152	0.0041	0.0034	0.0042	0.0074	0.0048	0.0031	0.0035	0.0733
Difficulty in opening/operating bank account	0.0125	0.4628	0.1373	0.0759	0.0038	0.0845	0.1067	0.0286	0.1434	0.1517	0.0662	0.0055	0.0036	0.1059	0.0458
Improper response from authority	0.1879	0.0110	0.1831	0.0032	0.0038	0.0986	0.1067	0.0048	0.0239	0.1770	0.1545	0.0048	0.0031	0.0035	0.0733
Inadequate information provided	0.3131	0.4628	0.1831	0.0032	0.1066	0.0986	0.0914	0.0048	0.0034	0.0253	0.1766	0.0048	0.0027	0.1483	0.0733
Difficult procedure	0.0104	0.3967	0.1373	0.0047	0.1333	0.0986	0.0457	0.0095	0.0034	0.0032	0.0221	0.0048	0.0027	0.0030	0.0733
Insufficient financial assistance	0.0209	0.5289	0.1373	0.1139	0.1333	0.0705	0.1219	0.2002	0.1912	0.2023	0.1766	0.0383	0.1742	0.0026	0.0550
Delay in getting financial assistance	0.0157	0.0094	0.1373	0.1139	0.1066	0.0845	0.1067	0.1716	0.1673	0.2023	0.1766	0.0048	0.0218	0.0026	0.0733
Inadequate institutional support	0.0104	0.0094	0.0033	0.0032	0.0038	0.0564	0.0914	0.0057	0.1434	0.0036	0.1545	0.3065	0.1742	0.0212	0.0733
Political interference	0.0089	0.0132	0.0033	0.0032	0.0038	0.0018	0.0019	0.0057	0.0030	0.0032	0.0028	0.0064	0.0027	0.0026	0.0092

Source: Author's Compilation

Table 7.4 the normalised matrix obtained by dividing each entry by the sum of its column. So for each cell:

$$n_{ij} = \frac{a_{ij}}{\sum a_{ij}}$$

It represents the cell value divided by the column total indicating the relative contribution in the column. It indicates the normalised values of each cell and the average of each row represents the relative importance of each perceived challenges in availing the government schemes.

The results reported that the major challenge in availing the government schemes in Goa state is insufficient financial assistance (12.71 percent). It was found that the financial assistance provided under the various welfare schemes and the health and maternity schemes was small. The women respondents believed the amount received was insufficient to maintain a good standard of living. The entrepreneurship schemes provided higher amounts hence the women beneficiaries received a good sum to start their own business venture. However, the beneficiaries of welfare schemes and the health and maternity schemes felt that insufficient financial assistance was a major hurdle in availing such schemes.

The next high perceived challenges are Inadequate knowledge about schemes (9.74 percent), Delay in getting financial assistance (9.4 percent), Inadequate institutional support (9.31 percent) and Inadequate family support (9.23 percent). The moderately perceived challenges faced by women beneficiaries are Inadequate information provided (7.80 percent), Difficulty in opening and operating bank accounts (7.27 percent), Lack of education (6.63 percent), Difficult procedure (6.00 percent), Improper response from authority (5.60 percent) and Inadequate infrastructure (5.40 percent). The challenges which are perceived as low are found to be Lack of mobility (4.62 percent), Late fulfilment of conditionality (3.53 percent), Issues with documents (2.55 percent) and Political interference (0.47 percent).

Table 7.5: Consistency Values

Measure	Value
Lambda Max	15.2615
Consistency Index	0.0187
Consistency Ratio	0.0117

Source: Author's Compilation

Table 7.5 shows the consistency of the pairwise comparison matrix which was tested using the AHP was evaluated using Lambda Max, CI, and Consistency Ratio.

Lambda Max: This is the principal eigenvalue of the matrix. In a perfectly consistent matrix with 15 criteria, it should be exactly 15. Since 15.2615 is very close to 15, the judgments are highly consistent.

Consistency Index (CI): measures how far the matrix is from perfect consistency. The CI was 0.0187. A value this small means the inconsistency is very low in the judgements.

Consistency Ratio : compares the inconsistency with a random matrix. In AHP, if Consistency Ratio < 0.10, the matrix is considered acceptable. Here, 0.0117 is less than the acceptable threshold, the matrix is consistent and reliable, which means that the consistency level of the judgments is considered satisfactory. Therefore, the pairwise comparisons used in the AHP analysis were consistent, and the derived priorities are reliable.

Table 7.6: Final AHP Ranking of Challenges

Challenges	Relative Importance (percentage)
Insufficient financial assistance	12.82
Inadequate knowledge about schemes	9.74
Delay in getting financial assistance	9.44
Inadequate institutional support	9.31
Inadequate family support	9.23
Inadequate information provided	7.80
Difficulty in opening and operating bank account	7.27
Lack of education	6.63
Difficult procedure	6.00
Improper response from authority	5.60
Inadequate infrastructure	5.40
Lack of mobility	4.62
Late fulfilment of conditionality	3.53
Issues with documents	2.55
Political interference	0.47

Source: Author's Compilation

Table 7.6 depicts the AHP results which show the relative importance of the major challenges faced by respondents. The percentages indicate the relative importance of each challenge. A higher percentage means the challenge is considered more serious or influential.

The most important challenge is Insufficient financial assistance with a relative importance of 12.82 percent. This means respondents viewed lack of enough financial support as the biggest problem.

The second major challenge is Inadequate knowledge about schemes with 9.74 percent. This suggests that many respondents are not fully aware of the available government schemes, their benefits, or how to access them.

The next important challenge is delay in getting financial assistance at 9.44 percent. This indicates that even when support is available, respondents may face delays in receiving it, which reduces its usefulness.

Inadequate institutional support with 9.31 percent and Inadequate family support with 9.23 percent are also important challenges. These findings show that both external support systems and family encouragement play a major role in accessing or benefiting from schemes.

Other moderately important challenges include Inadequate information provided (7.80 percent), Difficulty in opening and operating bank account (7.27 percent), and Lack of education (6.63 percent). These reflect practical and informational barriers that can prevent effective use of schemes.

Challenges such as Difficult procedure (6.00 percent), Improper response from authority (5.60 percent), and Inadequate infrastructure (5.40 percent) were given medium importance, showing that administrative and structural problems also affect respondents.

The least important challenges were Lack of mobility (4.62 percent), Late fulfilment of conditionality (3.53 percent), Issues with documents (2.55 percent), and Political interference (0.47 percent). This means these were perceived as less serious compared to the other challenges.

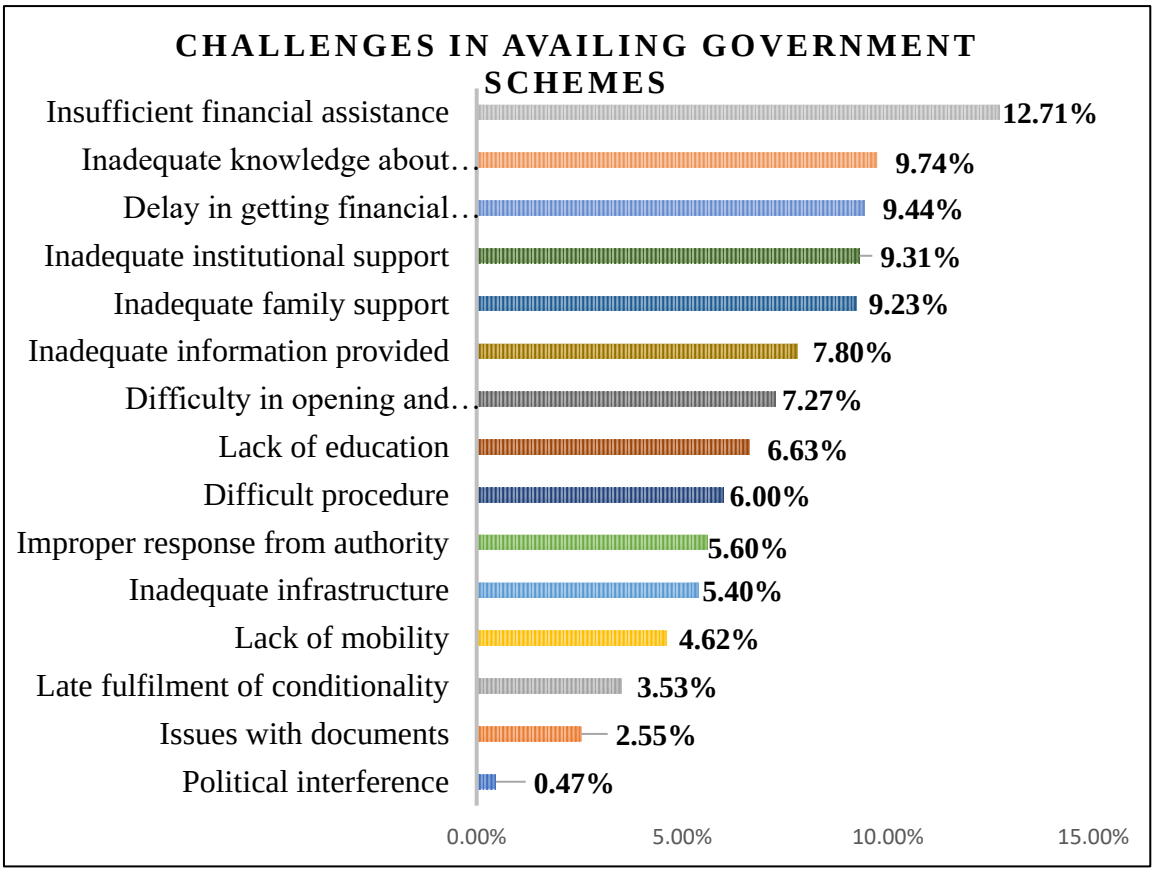


Figure 7.1: Relative Magnitude of the Challenges Faced by the Women Beneficiaries

Source: Author's Compilation

Figure 7.1 indicates the relative magnitude of the challenges faced by the women beneficiaries in availing the government schemes in the state of Goa. The table reported that the first five challenges cover 50 percent of the proportion of the challenges faced by women beneficiaries. The first eleven challenges cover the 89 percent of the proportion of the challenges faced by women beneficiaries in availing the government schemes in Goa. The data reveals that the most prominent challenge faced by women beneficiaries is insufficient financial assistance (12.71 percent), indicating a major constraint in accessing adequate monetary support through government schemes. This is followed by inadequate knowledge about schemes (9.74 percent) and delays in receiving financial aid (9.44 percent), reflecting both informational and procedural gaps. Other significant challenges include inadequate institutional support (9.31 percent) and lack of family support (9.23 percent), pointing to systemic and socio-cultural barriers. Issues related to banking procedures (7.27 percent) and lack of education (6.63 percent) further limit women's ability to fully benefit from these schemes. On the lower end, political interference (0.47 percent) and document issues (2.55 percent) were perceived as relatively less critical. Overall, the

findings suggest that addressing financial constraints, improving awareness, simplifying procedures, and enhancing institutional and family support are crucial to improving the reach and impact of women-oriented schemes.

Table 7.7: Categorised Challenges

Categories	Challenges
Financial/Economic	Insufficient financial assistance, Delay in financial assistance
Informative/Educational	Inadequate knowledge about schemes, inadequate information, Lack of education
Institutional/Administrative	Inadequate institutional support, Difficult procedure, Improper response from authority, Issues with documents, Late fulfilment of conditionality
Structural/Infrastructural	Difficulty opening/operating bank accounts, Inadequate infrastructure
Socio-Cultural	Inadequate family support, lack of mobility, political interference

Source: Author's work

The **Table 7.7** presents the challenges faced by the women beneficiaries while availing the schemes being grouped into various categories. Insufficient financial assistance and Delay in financial assistance were grouped as 'Financial/Economic challenges', Inadequate knowledge about schemes, Inadequate information and Lack of education were grouped as 'Informative/Educational challenges', Inadequate institutional support, Difficult procedure, Improper response from authority, Issues with documents and Late fulfilment of conditionality clustered as 'Institutional/Administrative challenges', Difficulty opening/operating bank accounts and Inadequate infrastructure were termed as 'Structural/Infrastructural challenges' and Inadequate family support, lack of mobility and political interference were put together as 'Socio-Cultural challenges'.

7.8 Chapter Summary

Despite numerous government initiatives aimed at empowering women through financial and social welfare schemes, many beneficiaries face significant hurdles in availing these benefits. This chapter examined the key challenges, including bureaucratic obstacles, lack of awareness, socio-cultural constraints, and financial illiteracy, that hinder women's access to government support. Understanding these barriers is crucial for improving policy implementation and ensuring effective outreach. The findings indicated that the major challenge is insufficient financial assistance particularly under welfare and health &

maternity schemes. Women respondents expressed that the financial aid provided was inadequate to maintain a decent standard of living. In contrast, entrepreneurship schemes offered loans, enabling beneficiaries to start their own businesses or ventures.

Other key challenges included inadequate knowledge about schemes, delays in receiving financial assistance, inadequate institutional support, and insufficient family support. Additionally, women moderately struggled with lack of adequate information, difficulty in opening and operating bank accounts, lack of education, complex application procedures, poor response from authorities and inadequate infrastructure. Challenges perceived as relatively low included mobility constraints, delays in meeting scheme conditions, document-related issues and political interference. These results highlight the need for improved financial assistance, better awareness programs, streamlined procedures, and stronger institutional and family support to enhance women's access to government schemes effectively.

Chapter 8

Findings, Conclusions and Suggestions

This research created a framework to analyse women empowerment through government schemes, focusing on awareness, Social Empowerment (SE), Economic Empowerment (EE) and outcomes. It combines the welfare, entrepreneurship, health and maternity schemes to provide a holistic understanding of their influence on empowerment. The study examines the awareness and participation impact on SE and EE, forming an integrated model of women empowerment. It also assesses the moderating effect of age, education, marital status, income and occupation on these relationships, using advanced techniques such as PLS-SEM and moderation analysis to enhance robustness. The results of path analysis and comparisons are presented to show the impact of schemes on women in Goa, with practical recommendations for policy improvements. The study highlights how participation in schemes improves decision-making, financial independence and social status, contributing to women's social and economic progress. It concludes by discussing the study's contributions and suggesting future research directions on empowerment pathways and effective interventions.

The study was carried out with the following objectives:

Objective 1: To analyse the relationship between demographic characteristics, women beneficiary status and awareness levels among women beneficiaries across different categories of government schemes.

a. To examine the effect of demographic characteristics on awareness levels among women beneficiaries across various categories of government schemes.
b. To assess the impact of women beneficiaries' status on their awareness levels across different categories of government schemes.

Objective 2: To assess the impact of social and economic empowerment through government schemes on women empowerment.

a. To assess the impact of government schemes on the social empowerment of women beneficiaries.
b. To assess the impact of government schemes on the economic empowerment of women beneficiaries.

c. To assess the impact of social and economic empowerment on women empowerment.

Objective 3: To evaluate the moderating effect of demographic attributes on the relationship between social and economic empowerment with women empowerment.

Objective 4: To identify various challenges faced by the women beneficiaries in availing the schemes.

To know the impact of the schemes on women beneficiaries, the study adopted different statistical methods, analysed the data and obtained the important results, which are outlined below:

8.1 Results and Discussion

8.1.1 Relationship between Demographic Characteristics and Awareness Levels among Women Beneficiaries across the Categorised Government Schemes

This hypothesis aims to evaluate whether demographic characteristics significantly influence awareness levels among women beneficiaries across different categories of government schemes. The ANOVA results collectively demonstrate that socio-demographic characteristics exert a significant and varied influence on women's awareness of government schemes across all three categories. Age was found to be a statistically significant determinant, with welfare schemes ($F=3.394$, $p=0.034$), entrepreneurship schemes ($F=2.461$, $p=0.043$), and health and maternity schemes ($F=5.175$, $p=0.009$) all recording p-values below the 0.05 threshold. Respondents in the 41–60 age group displayed comparatively higher awareness of welfare and entrepreneurship schemes, while those aged 61 years and above recorded the highest awareness of health and maternity schemes, suggesting that life-stage experiences shape the domains in which women seek or encounter scheme-related information.

Education level similarly produced significant differences across all three categories welfare schemes ($F=8.485$, $p=0.005$), entrepreneurship schemes ($F=7.999$, $p=0.007$), and health and maternity schemes ($F=6.330$, $p=0.045$) affirming that higher educational attainment is associated with greater awareness, likely through improved literacy, media access, and institutional engagement.

Marital status yielded significant results for welfare schemes ($F=2.261$, $p=0.003$) and health and maternity schemes ($F=4.331$, $p=0.042$), though not for entrepreneurship schemes

(F=2.799, p=0.095), while occupational status produced the inverse pattern, with significance recorded only for entrepreneurship schemes (F=7.025, p=0.003) and not for welfare (F=8.681, p=0.081) or health and maternity schemes (F=9.757, p=0.060), indicating that marital and occupational status operate as domain-specific rather than universal predictors of awareness.

Annual family income emerged as a consistently significant variable across all three categories welfare schemes (F=6.800, p=0.004), entrepreneurship schemes (F=8.652, p=0.002), and health and maternity schemes (F=7.170, p=0.007) as did residential area, which also produced significant results across welfare schemes (F=8.194, p=0.000), entrepreneurship schemes (F=9.001, p=0.001), and health and maternity schemes (F=8.163, p=0.002), underscoring the compounding disadvantage faced by lower-income and rural women in accessing scheme-related information.

Finally, district-level analysis confirmed significant differences in awareness between North and South Goa for all three categories welfare schemes (F=7.097, p=0.006), entrepreneurship schemes (F=5.121, p=0.028), and health and maternity schemes (F=4.123, p=0.043) highlighting that intra-state regional disparities represent a meaningful structural barrier to equitable awareness, and pointing to the need for geographically targeted outreach and dissemination strategies.

Extant literature consistently affirms that demographic characteristics significantly shape both awareness and scheme utilisation. Higher literacy facilitates understanding of eligibility criteria and application processes, while economic status determines exposure to informational channels such as digital platforms and community workshops (Chodhary & Bansal, 2022). In elderly populations, age-related cognitive decline and mobility limitations exacerbate awareness gaps, as evidenced by studies documenting reduced engagement in welfare programs (Goswami et al., 2019; Kumar et al., 2022; Mondal et al., 2024). Geographic location further increases these effects, with urban residents receiving greater publicity than rural counterparts (Srivastava et al., 2023; Kathy et al, 2025). Residential areas increase spatial disparities, with respondents in municipal areas enjoying greater connectivity and institutional proximity than those in panchayat jurisdictions, which rely on informal channels. Marital status also influences relational networks, with married women drawing on spousal support, unlike their unmarried counterparts, while

occupational heterogeneity spanning business and government roles highlights formal network privileges versus time-mobility limitations (Murugan & Dhanasekaran, 2016).

The awareness patterns identified in this study align closely with existing research, which consistently reports higher awareness of welfare and maternity schemes than of entrepreneurship-focused initiatives among women beneficiaries. Previous research confirms that direct benefit programs, including cash transfer schemes and social security provisions, achieve greater visibility due to effective grassroots dissemination by the frontline workers and community-based networks (Kabeer, 2005; Malhotra & Schuler, 2005; Panda & Dash, 2017; Gupta & Mukhopadhyay, 2018). Similarly, the moderate awareness levels observed for health and maternity programs correspond with regional studies that attribute such variations to differences in institutional outreach capacity and beneficiary socio-demographic profiles (Singh et al., 2020; Desai & Banerji, 2017). In contrast, the comparatively lower awareness of entrepreneurship schemes observed in this study aligns with the existing literature, which identifies complexity of procedures, perceived financial risks, and information gaps as significant barriers to availing schemes (Roomi & Harrison, 2011; Agarwal & Lenka, 2015).

Collectively, these patterns of convergence and variation underscore the critical role of scheme characteristics, dissemination mechanisms, and demographic factors in determining awareness levels, thereby reinforcing the need for differentiated communication strategies tailored to specific beneficiary segments to maximise the empowerment potential of government schemes. The differences in awareness, accessibility, or implementation effectiveness across regions and beneficiaries highlight the need for targeted policy interventions and administrative refinements to enhance the uniformity and effectiveness of scheme outcomes.

8.1.1.1 District and Awareness

The present study reveals significant geographical disparities in scheme awareness, with the North district outperforming the South district in the three categories of schemes. These findings align with research by Desai & Banerji 2017; Dreze & Sen; 2013, who documented substantial inter-district variations in public program awareness attributable to differences in administrative capacity, governance quality, and institutional infrastructure. Higher performance of the North district validates studies by Chattopadhyay & Duflo (2004) which emphasise that districts with stronger local governance, better-trained officials, and more

active civil society partnerships demonstrate higher awareness levels. These disparities highlight the urgent need for geographically differentiated, intensive awareness interventions in the South district to achieve equitable empowerment outcomes (Kabeer, 2015; Cornwall, 2016). The distributional pattern should be considered when interpreting district differences in awareness, as these may reflect socio-economic conditions, administrative efficiency, or information dissemination within each district.

8.1.1.2 Age and Awareness

This tripartite segmentation is particularly salient for analysing scheme awareness, as age serves as a critical moderator of information-acquisition and processing capacities. Women aged 41–60 years exhibit the highest awareness of welfare and entrepreneurship schemes, which corresponds with studies suggesting that middle-aged women demonstrate greater engagement in household financial decision-making and income-generation activities, thereby increasing their responsiveness to government support mechanisms (Desai & Banerji, 2017; Panda & Dash, 2017). Research by Gupta and Mukhopadhyay (2018), Singh et al. (2020), and Duflo (2012) similarly reported that women in productive age groups exhibit greater scheme awareness, attributed to increased institutional interaction and broader participation in social networks. Furthermore, Kabeer (2012) and Grown et al. (2005) argue that women in this age group possess greater bargaining power within households, which translates into increased awareness of economic opportunities and welfare provisions. Conversely, the lower awareness among younger women (18–40 years) and elderly women (61+ years) corroborates findings by Agarwal & Lenka (2015) and Mayoux (2001), who observed that younger women often prioritise educational pursuits and early career establishment over government scheme exploration, while older women encounter barriers including limited literacy, reduced mobility, and digital exclusion. However, contradictory evidence emerges from studies by Chaudhary & Verick (2014), Nandi & Laha (2019), and Sorgner et al. (2017), which report higher awareness among younger women attributed to superior digital literacy, active social media engagement, and greater exposure to online government platforms and mobile applications. The present study thus nuances the existing literature by demonstrating that age effects vary substantially across scheme types.

The reversal observed for health and maternity schemes where elderly women show the highest awareness aligns with life-cycle theories of welfare utilisation (Klasen & Lamanna,

2009; Singh & Badaya, 2014; Marmot & Wilkinson, 2006), which suggest that healthcare engagement intensifies with age. In the present study, the higher awareness among the higher age group women could be associated with the need to know more about maternity schemes for their pregnant daughters. This finding diverges from studies by Gupta et al. (2016), Arokiasamy & Gautam (2008), which report peak awareness among women of reproductive age (18–40 years), suggesting contextual variation influenced by regional outreach mechanisms, health infrastructure quality, and service delivery structures.

8.1.1.3 Education and Awareness

The findings of the study that women with secondary and higher secondary education demonstrate higher awareness than graduates and postgraduates support the argument that dependence on public schemes, rather than educational attainment alone, drives awareness levels (Panda & Dash, 2017; Desai & Andrist, 2010; Ramachandran, 2006). This aligns with research indicating that women in mid-level educational brackets rely more heavily on government welfare and livelihood programs and therefore actively seek related information (Roomi & Harrison, 2011; Mosedale, 2005).

However, this finding contradicts classical empowerment frameworks, which suggest a positive linear relationship between educational attainment and awareness (Kabeer, 2005; Malhotra & Schuler, 2005; Sen, 1999). Studies by Nussbaum (2011), Chaudhry et al. (2019), Dreze & Sen (2013), and Cornwall (2016) report that higher education enhances cognitive capacity, institutional engagement, critical consciousness, and access to information. The present findings challenge this assumption, suggesting that higher educational attainment may reduce perceived relevance of government schemes, particularly welfare and entrepreneurship programs, due to greater access to formal employment sectors, private services, and alternative financial resources (Deininger & Liu, 2013; Bandiera et al., 2020).

For health and maternity schemes, the relatively high awareness across all education levels aligns with findings by Singh & Badaya (2014), Gupta et al. (2016), Lim et al. (2010), and Powell-Jackson et al. (2015), who highlight the success of health outreach programs in transcending educational barriers through community health workers, mobile health clinics, and mother-child health campaigns. This supports the argument that health communication strategies, particularly through frontline workers Auxiliary Nurse Midwife and Accredited Social Health Activist (ASHA), community health centres, and Integrated

Child Development Services (ICDS) networks, are more inclusive and effective than those employed for economic or welfare schemes (Ranson et al., 2006).

The diverse educational distribution improves the ability to analyse differences in awareness across educational levels. It also helps identify literacy barriers and enables the creation of tailored communication strategies, such as simplified vernacular materials for those with lower education and more comprehensive digital or text resources for those with higher qualifications. These methods are crucial for maximising awareness and providing equitable access to government schemes among all educational groups.

8.1.1.4 Marital Status and Awareness

The study finds that unmarried women exhibit significantly higher awareness of welfare schemes and health schemes, while marital status does not significantly influence awareness of entrepreneurship schemes. This aligns with studies suggesting that unmarried women often bear direct responsibility for their economic security and demonstrate greater proactivity in seeking welfare support and livelihood opportunities (Chaudhary & Verick, 2014; Desai & Banerji, 2017; Aizer, 2010). Research by Field et al. (2010) and Anderson & Eswaran (2009) further suggests that unmarried women possess greater autonomy in information-seeking behaviour and resource allocation decisions.

However, this finding contradicts research that identifies married women as more aware of welfare and health schemes due to their greater interaction with family welfare institutions, maternity services, antenatal care programs, and community organisations (Gupta et al., 2016; Singh et al., 2020; Sharma et al., 2016). The divergence may reflect evolving socio-cultural dynamics in Goa, where unmarried women increasingly demonstrate financial autonomy, delayed marriage patterns, and proactive information-seeking behaviour compared to other Indian regions (Bloom et al., 2015; Jejeebhoy & Sathar, 2001).

The lack of significant marital status differences in health and maternity scheme awareness supports earlier findings that these schemes are widely disseminated through universal targeting approaches, thereby minimising demographic disparities (Singh & Badaya, 2014; Nandi & Laha, 2019; Lim et al., 2010; Ensor & Cooper, 2004).

8.1.1.5 Occupation and Awareness

The study reveals that businesspersons and private employees exhibit higher awareness of welfare and entrepreneurship schemes, while government employees and housewives

demonstrate stronger awareness of health and maternity schemes. These findings are consistent with occupational segmentation theories, which suggest that scheme relevance, exposure patterns, and information networks vary according to professional roles and institutional access (Roomi & Harrison, 2011; Panda & Dash, 2017; Brush et al., 2009; Verheul et al., 2012).

Higher awareness among businesspersons regarding entrepreneurship schemes corroborates findings by Agarwal & Lenka, 2015, Chaudhary & Verick, 2014; Brush & Cooper, 2012 who emphasise that women entrepreneurs actively seek government support programs to mitigate operational risks, access startup capital, acquire business development services and navigate regulatory frameworks. Similarly, higher health scheme awareness among housewives aligns with studies highlighting their central role in family health management, childcare responsibilities and healthcare decision-making (Singh & Badaya, 2014; Gupta et al., 2016; Desai & Johnson, 2005; Allendorf, 2007).

However, some studies contradict the present findings by reporting higher awareness of welfare schemes among government employees due to their proximity to policy information, bureaucratic networks, and institutional channels (Desai & Andrist, 2010; Grown et al., 2005). The relatively lower awareness among government employees in this study may reflect occupational reliance on formal employment benefits, provident funds, health insurance schemes, and pension systems rather than targeted public welfare schemes (Deininger & Liu, 2013; Kumari, 2020).

8.1.1.6 Annual Family Income and Awareness

The finding that middle-income households (₹1,50,000–3,00,000) demonstrate the highest awareness across all scheme categories aligns strongly with prior research (Klasen & Lamanna, 2009; Panda & Dash, 2017; Banerjee & Duflo, 2011). These studies argue that middle-income groups possess sufficient educational capital, social networks, and administrative literacy to navigate bureaucratic systems, yet still require state support for economic mobility, skill development, and asset accumulation.

The lower awareness among the poorest households supports findings by Desai & Banerji, 2017; Nandi & Laha, 2019; Narayan et al. (2009), who identify structural exclusion, documentation barriers, information asymmetries, geographical remoteness, and lack of institutional trust as key obstacles preventing low-income women from accessing scheme information and benefits. Similarly, the reduced engagement of high-income households

aligns with studies suggesting that wealthier groups rely on private healthcare services, commercial banking products, and market-based solutions, reducing their dependence on public welfare systems (Chaudhary & Verick, 2014; Subramanian & Kawachi, 2004; Gwatkin et al., 2007).

These findings contradict the normative policy assumption that the poorest households constitute the primary beneficiaries of welfare schemes, highlighting a critical implementation gap consistent with international evidence on targeting failures and elite capture (Kabeer, 2005; Nussbaum, 2011; Mansuri & Rao, 2013).

8.1.1.7 Residential Area and Awareness

The study finds higher awareness of schemes in municipal areas and of entrepreneurship and health schemes in panchayat areas. This aligns with research emphasising the differential effectiveness of decentralised governance structures, community-based delivery models, and proximity-based service provision in rural versus urban contexts (Desai & Banerji, 2017; Gupta et al., 2016).

Higher awareness in panchayat regions is consistent with findings that rural health outreach programs, ICDS networks, ASHA/ANM workers, and village health committees significantly enhance awareness and service utilisation through door-to-door campaigns and community mobilisation (Singh & Badaya, 2014; Nandi & Laha, 2019; Powell-Jackson et al., 2015). Similarly, the stronger performance of entrepreneurship schemes in panchayat areas aligns with the rural development literature, which emphasises self-employment promotion, agricultural diversification, microenterprise development, and livelihood enhancement as key policy priorities in rural governance structures (Agarwal & Lenka, 2015; Mitra & Shroff, 2007).

However, the higher welfare awareness in municipal areas contradicts studies reporting stronger rural penetration of welfare schemes due to poverty-focused targeting, identification of the below-poverty-line, and rural development priorities (Panda & Dash, 2017; Jalan & Ravallion, 2003; Himanshu & Rodgers, 2013). This divergence may reflect differences in administrative efficiency, bureaucratic capacity, digital infrastructure, access to documentation, and service delivery mechanisms between urban and rural governance structures in Goa (Chattopadhyay & Duflo, 2004).

Overall, the findings of the present study both validate and extend the existing literature by demonstrating that demographic variables exert differentiated, scheme-specific effects on awareness levels among women beneficiaries. While age, education, income, occupation, marital status, and administrative jurisdiction significantly influence awareness, their effects are neither linear nor uniform across scheme categories. These results reinforce the need for demographic-sensitive, scheme-specific, and regionally adaptive outreach strategies, thereby advancing both empirical understanding and policy relevance in the field of women's empowerment through government interventions.

8.1.2 Influence of Participation in Schemes on Awareness Levels among Women Beneficiaries across the Categorised Government Schemes.

The present study examines the influence of scheme participation on awareness levels among women beneficiaries across welfare, entrepreneurship, and health and maternity scheme categories. The findings reveal scheme-specific patterns that both align with and diverge from existing empirical evidence on the relationship between program participation and beneficiary awareness.

The descriptive statistics indicate variation in awareness of welfare schemes based on the number of schemes adopted and the ANOVA results confirmed that these differences are statistically significant ($F = 8.949$, $p = 0.006$), as the p-values were below 0.05 suggesting that greater participation in welfare schemes positively influences the awareness levels of beneficiaries about the other welfare schemes. The descriptive results of awareness of entrepreneurship schemes varied slightly across different levels of participation. The ANOVA results showed a statistically significant difference ($F=2.802$, $p=0.039$), suggesting that participation in entrepreneurship schemes has a positive but relatively moderate effect on awareness. The ANOVA results for health and maternity schemes revealed that the differences in awareness are not statistically significant at 5 percent level ($F= 8.213$, $p=0.061$).

The finding that awareness levels increase significantly with the number of welfare schemes adopted ($F = 8.949$, $p = 0.006$) corroborates extensive research demonstrating a positive association between program participation and beneficiary knowledge (Kabeer, 2005; Duflo, 2012; Banerjee & Duflo, 2011). This pattern aligns with studies by Desai & Banerji (2017) and Panda & Dash (2017), who found that repeated exposure to welfare programs through multiple scheme enrolments augments women's understanding of

eligibility criteria, application procedures, and benefit structures. The highest mean awareness among beneficiaries adopting two schemes (2.51) compared to non-adopters (1.26) supports the learning-by-doing framework proposed by Grown et al. (2005) and Narayan et al. (2009), which suggests that direct program experience serves as a critical information channel that supplements formal communication strategies. Cumulative awareness effect is particularly pronounced in integrated welfare delivery systems where multiple schemes are administered through common platforms such as Anganwadi centres, ration shops, and gram panchayat offices (Singh & Badaya, 2014; Ranson et al., 2006). Furthermore, studies by Lim et al. (2010) and Powell-Jackson et al. (2015) emphasise that beneficiary experience reduces information asymmetries and procedural uncertainties that often deter potential applicants from seeking government support. Research by Mansuri & Rao (2013) cautions that multiple program participation may reflect targeting inefficiencies or elite capture rather than genuine awareness-building. Their findings suggest that in certain contexts, the same subset of well-connected or better-informed women access multiple schemes while marginalised groups remain excluded despite policy intentions. Additionally, Jalan & Ravallion (2003) found that participation does not automatically translate to awareness in contexts where beneficiaries are passively enrolled without adequate information dissemination or empowerment-oriented program design. The present finding thus reinforces the importance of participatory program implementation that actively educates beneficiaries rather than merely enrolling them, consistent with empowerment frameworks advocated by Kabeer (2012), Cornwall (2016), and Rowlands (1997).

Research by Field et al. (2010) and Bandiera et al. (2020) similarly found that entrepreneurship program participation enhances women's familiarity with institutional resources, market opportunities, and regulatory frameworks, creating a virtuous cycle of awareness and engagement. Studies by Mayoux (2001) and Ghosh (2013) further suggest that entrepreneurial women actively seek information about government schemes as part of their business development strategies, thereby exhibiting higher awareness than women engaged solely in wage employment or domestic work. Evidence from studies by Nussbaum (2011) and Cornwall & Edwards (2010) suggests that participation in entrepreneurship schemes does not necessarily increase awareness when programs are poorly designed, lack mentorship components, or fail to build women's confidence and agency alongside providing financial resources. Sorgner et al. (2017) reported that

awareness disparities persist even among program participants based on educational background, social capital, and prior business exposure, suggesting that participation alone is insufficient without complementary capacity-building interventions.

Studies by Singh & Badaya (2014) and Sharma et al. (2016) similarly documented that maternal health awareness is widely disseminated through ASHA workers, antenatal care programs, and mass media campaigns, creating relatively uniform awareness levels regardless of actual scheme utilisation. Research by Arokiasamy & Gautam (2008) further suggests that health awareness operates through familial and social networks rather than formal program enrolment, as pregnancy and childbirth involve extensive information-sharing among women across participation statuses.

The findings demonstrate that scheme participation influences awareness levels in a differentiated manner across program categories, with significant positive effects for welfare and entrepreneurship schemes but not for health and maternity schemes. These patterns both corroborate and challenge existing literature, highlighting the importance of scheme-specific analysis rather than generalised assumptions about participation-awareness relationships. The results underscore the need for tailored awareness-building strategies that account for sectoral differences in delivery mechanisms, beneficiary engagement patterns, and information dissemination infrastructure, thereby advancing both theoretical understanding and practical policy design in women's empowerment initiatives (Kabeer, 2005, 2012; Rowlands, 1997; Sen, 1999).

8.1.3 Impact of Social and Economic Empowerment through Government Schemes on Women Empowerment

The structural equation modeling results demonstrate that all three scheme categories; welfare, entrepreneurship, and health and maternity significantly contribute to both social and economic empowerment dimensions, which subsequently influence overall women's empowerment. The structural model findings, derived from PLS-SEM analysis, reveal significant positive path coefficients linking scheme categories to empowerment dimensions, with all hypothesised direct relationships proving statistically significant.

The result of the measurement model indicated that all the scale items and construct values were within the acceptable limits for SE, EE and WE. The structural model analysis shows that both social and economic empowerment significantly contribute to women’s empowerment. SE has the strongest effect ($\beta = 0.830$, $p < 0.000$), while EE also exerts a

positive influence (β=0.158, p=0.012). Health and maternity schemes significantly enhance both EE (β=0.047, p=0.039) and SE (β=0.339, p=0.003). Similarly, entrepreneurship schemes positively impact EE (β = 0.054, p = 0.008) as well as SE (β=0.072, p=0.007). Welfare schemes also show a significant contribution, improving EE (β=0.013, p=0.031) and SE (β=0.079, p=0.029). Government schemes across the welfare, entrepreneurship, and health-maternity domains play an important role in strengthening both social and economic empowerment, which, in turn, positively influence overall women's empowerment.

The findings of this study extend beyond Kabeer's (1999) emphasis on asset ownership, demonstrating that empowerment constitutes a far more complex phenomenon. While material resources remain important, empowerment primarily depends on the reciprocal relationship between economic assets and the prevailing socio-cultural milieu, both of which interact with women's agency to determine their substantive control over tangible and intangible resources. This research confirms that empowerment surpasses the simple distribution of assets to economically vulnerable women; rather, it requires developing metrics that reflect transformative changes in social structures and normative frameworks achieved through women's deliberate action, both individually and collectively, within their specific societal contexts. Furthermore, the study validates that state interventions, including policies, legal frameworks, and programmatic initiatives aimed at women's empowerment, must be critically evaluated for their capacity to challenge and restructure intersecting systems of inequality that encompass not only gender but also economic stratification, caste dynamics, ethnic identities, and entrenched cultural traditions.

Collectively, the findings from the structural model substantiate the theoretical premise that integrated interventions across welfare, entrepreneurship, and health domains can synergistically contribute to both social and economic facets of empowerment, reinforcing the importance of multifaceted policy approaches to foster women's comprehensive empowerment. The robust social and economic empowerment of women links advocates for integrated scheme designs that address both material and social dimensions for holistic empowerment in contexts similar to Goa. Nevertheless, the findings highlight the need to strengthen social empowerment pathways through interventions that not only provide services but also challenge gender norms, build agency, and enhance women's voices and participation in decision-making processes at household and community levels.

8.1.4 Moderating Effect of Demographic Attributes on the Relationship between Social and Economic Empowerment with Women Empowerment

The moderation analysis provides new insights into the influence of demographic variables on the relationships between social empowerment (SE), economic empowerment (EE), and women empowerment (WE). The results indicate that age and annual family income function as significant boundary conditions in the SE–WE pathway, while marital status, occupation, and education do not significantly moderate the empowerment relationships. The SEM moderation analysis confirms that age significantly weakens the positive relationship between social empowerment (SE) and women empowerment (WE) (β = -0.087, p = 0.037), supporting H_{11}, while showing no effect on the economic empowerment (EE)–WE link (β = 0.060, p = 0.137), rejecting H_{16}. Similarly, annual family income negatively moderates the SE–WE pathway (β = -0.096, p = 0.038), upholding H_{13}, but not the EE–WE path (β = 0.079, p = 0.066), rejecting H_{18}. In contrast, marital status, occupation, and education exhibit no significant moderating effects on either SE–WE or EE–WE relationships (all p > 0.05), rejecting H_{12}, H14, H_{15}, H_{17}, H_{19}, and H_{20}.

The moderation analysis revealed that age does not act as a significant moderator in the relationships between SE and WE, or between EE and WE. The interaction terms between age and both social and economic empowerment dimensions were statistically non-significant, indicating that the influence of social and economic empowerment on overall women's empowerment remains consistent across age groups. These findings suggest that, regardless of age, the pathways through which social and economic empowerment contribute to overall empowerment are essentially uniform, and age does not amplify or attenuate these relationships. Consequently, age is not a boundary condition for the empowerment process as conceptualised in this study. Similarly, the lack of marital-status-based differentiation in the present study may reflect changing social realities and the inclusive design of government schemes.

Annual family income emerged as a significant moderator of the SE–WE relationship, with a negative and statistically significant interaction effect (β = -0.096, p < 0.05). This indicates that SE initiatives have a stronger impact on WE among women from lower-income households than among those from higher-income groups. This finding is consistent with prior research demonstrating that socially and economically disadvantaged women experience greater marginal gains in empowerment from institutional support, awareness programs, and collective participation (Kabeer, 2005; World Bank, 2012). Women from

lower-income backgrounds often face higher baseline deprivation, making social empowerment interventions particularly transformative. Conversely, the moderation effect of income on the EE–WE pathway was not statistically significant, which contrasts with studies suggesting that higher-income women may better leverage financial resources due to stronger asset bases and financial literacy (Agarwal, 1997; Duflo, 2012). The present results imply that economic empowerment mechanisms embedded within government schemes operate equitably across income groups, ensuring comparable empowerment outcomes. With respect to occupation as a moderator, the absence of occupational moderation effects in this study may be attributed to the standardised nature of government schemes, which provide uniform benefits irrespective of occupational background.

This finding suggests that empowerment pathways operate consistently across different education levels, indicating that even women with lower formal education can translate social and economic empowerment into broader empowerment outcomes. This result supports studies highlighting that institutional support and collective action can compensate for educational disadvantages (Kabeer, 2011; Narayan, 2005).

Overall, the findings underscore the critical role of age and income as meaningful moderators in the relationship between the SE and WE pathways, while affirming the relative universality of economic empowerment effects across demographic groups. These results highlight the need for age-sensitive and income-targeted social empowerment strategies, while reinforcing the broad-based effectiveness of economic empowerment interventions in advancing women empowerment.

8.1.5 Challenges Faced by the Women Beneficiaries in Availing the Schemes

The findings reveal that women beneficiaries in Goa encounter multiple and layered challenges while availing government schemes, with financial, informational, procedural, and socio-cultural constraints emerging as the most significant barriers. The analysis suggests that a relatively small set of systemic issues disproportionately hinders scheme effectiveness.

The most prominent challenge identified is insufficient financial assistance (12.71 percent), indicating that the quantum of benefits is often inadequate to meet beneficiaries' actual needs. This aligns with earlier studies which found that limited financial support restricts the transformative potential of welfare and entrepreneurship schemes for women (Kabeer, 2012; Malathi & Yuvasubramaniyan, 2021). However, contradictory evidence is found in

studies such as Pitt, et al. (2006), who reported significant empowerment gains even with modest financial support, suggesting that outcomes may vary based on contextual and implementation factors.

The second major challenge, inadequate knowledge about schemes reflects informational asymmetries and limited outreach. This finding is consistent with studies that show that a lack of awareness and understanding of eligibility, benefits, and procedures significantly reduces women's participation in government programs (Agarwal, 2010; Duflo, 2012; Pal et al., 2022; Raj et al., 2025). In contrast, studies such as Banerjee et al. (2025) suggest that information dissemination alone may not guarantee higher uptake unless accompanied by institutional facilitation and trust-building, indicating that awareness campaigns must be integrated with support mechanisms.

Overall, the findings suggest that improving the effectiveness of women-oriented schemes in Goa requires a multifaceted strategy that addresses financial adequacy, awareness generation, procedural simplification, and institutional responsiveness, alongside efforts to strengthen family and community support systems. These results reinforce the broader literature on women's empowerment, which underscores that sustainable empowerment emerges from the interaction of economic resources, social norms, institutional structures, and individual agency (Kabeer, 1999; Nussbaum, 2000; Sen, 1999; World Bank, 2020).

8.2 Conclusions

This research develops a comprehensive analytical framework to examine women empowerment through government schemes in Goa, integrating welfare, entrepreneurship, health and maternity schemes within a unified model. Employing advanced statistical techniques including Structural Equation Modeling (SEM) using Partial Least Squares (PLS-SEM), moderation analysis, and Analytical Hierarchy Process (AHP), the study systematically evaluates complex interrelationships among awareness, participation, empowerment dimensions, and demographic moderators, thereby generating robust empirical evidence on policy-driven empowerment mechanisms. It is seen that the demographic characteristics significantly shape women's awareness and utilisation of government schemes across all three categories. Education, age, annual family income, occupation, residential area, marital status and district location emerge as determinants that differentially influence awareness levels. Middle-aged women (41-60 years), those with secondary and higher secondary education, middle-income households (₹1,50,000-3,00,000), and businesspersons demonstrate higher awareness of welfare and

entrepreneurship schemes, while health and maternity schemes achieve a more uniform distribution of awareness through effective grassroots dissemination. Significantly, the North district consistently outperforms the South district across all categories, highlighting substantial geographical disparities requiring targeted interventions.

Scheme participation significantly enhances awareness of welfare and entrepreneurship programs, with progressive increases observed among beneficiaries adopting multiple schemes, validating the learning-by-doing framework, in which direct program experience serves as a critical information channel. However, health and maternity schemes exhibit no significant relationship between participation and awareness, reflecting saturation effects of universal outreach campaigns that create relatively uniform awareness regardless of individual utilisation patterns. These differential patterns underscore the importance of scheme-specific analysis rather than generalised assumptions.

SEM results demonstrate that all three scheme categories significantly contribute to both SE and EE, which subsequently influence overall women's empowerment. Health and maternity schemes exert the strongest effect on SE ($\beta = 0.230$, $p < 0.001$), followed by welfare schemes ($\beta = 0.135$, $p = 0.003$) and entrepreneurship schemes ($\beta = 0.110$, $p = 0.005$), validating the transformative role of maternal health programs. All three categories also significantly impact EE, with welfare schemes demonstrating the highest coefficient ($\beta = 0.156$, $p = 0.001$). Critically, EE exerts a substantially stronger influence on overall WE ($\beta = 0.694$, $p < 0.001$) than SE ($\beta = 0.137$, $p = 0.006$), suggesting that economic security enables subsequent gains in social autonomy and decision-making power.

Moderation analysis reveals that empowerment pathways are not uniform across all women. Age emerges as a significant negative moderator of the SE-WE relationship ($\beta = -0.087$, $p = 0.037$), indicating that younger women convert improvements in social resources such as participation, networks, awareness, and community engagement into broader empowerment outcomes more effectively than older women who face entrenched patriarchal norms. Similarly, annual family income negatively moderates this pathway ($\beta = -0.096$, $p = 0.038$), indicating that socially and economically disadvantaged women experience greater marginal gains in empowerment from institutional support, suggesting that SE initiatives have their greatest impact where constraints are strongest. Notably, marital status, occupation, and education exhibit no significant moderating effects, suggesting that empowerment conversion processes are more strongly shaped by life-stage

and household economic position than by these demographic categories, reflecting the inclusive design of government schemes and evolving gender norms.

Substantial implementation challenges undermine scheme effectiveness. Insufficient financial assistance (12.71 percent), inadequate knowledge about schemes (9.74 percent), delays in receiving financial assistance (9.44 percent), inadequate institutional support (9.31 percent), and lack of family support (9.23 percent) constitute the top five barriers, collectively accounting for 50 percent of reported difficulties. AHP prioritisation validates these findings, highlighting multidimensional, interconnected barriers that necessitate integrated reforms targeting financial adequacy, awareness-raising, procedural simplification, institutional responsiveness, and socio-cultural transformation.

This research advances theoretical understanding by integrating SE and EE dimensions within a comprehensive government scheme framework and demonstrating that empowerment pathways vary significantly across demographic groups, with the social empowerment route especially sensitive to age and economic context. The study contributes to literature by focusing on beneficiary-level perspectives in a regional context, offering nuanced understanding of how policy interventions translate into tangible empowerment outcomes.

The findings hold significant practical implications for policymakers and stakeholders. The strongest policy implication is that empowerment-oriented scheme design must move beyond one-size-fits-all approaches. SE interventions should be intentionally strengthened and adapted for older women and groups where social gains translate less efficiently into broader outcomes, emphasising age-sensitive and income-targeted initiatives. EE components should be paired with mechanisms supporting women's effective control and decision-making so that economic gains reliably expand agency. The research emphasises the need for geographically differentiated outreach strategies, particularly intensive awareness interventions in the South district, enhanced financial allocations ensuring benefit adequacy, streamlined disbursement mechanisms reducing procedural delays, strengthened institutional support systems including staff guidance and grievance redressal, and community mobilisation efforts challenging patriarchal norms to secure family support.

By demonstrating that sustainable empowerment emerges from synergistic interactions among economic resources, social norms, institutional structures, and individual agency, this study provides an evidence-based foundation for designing more effective, equitable,

and transformative women's empowerment interventions in Goa and similar contexts. The findings affirm that WE is achievable through policy but are most effective when programs recognise that different groups convert social and economic gains into empowerment at different rates and therefore require differentiated support to achieve comparable outcomes. The research thus offers both theoretical insights and actionable recommendations to strengthen the design, implementation, and impact of government schemes that advance women's comprehensive empowerment.

8.3 Suggestions

The findings of the present study carry significant implications for policy formulation, programme implementation, and the overall advancement of women's empowerment among beneficiary populations. Based on the conclusions drawn, the following suggestions are offered to strengthen the effectiveness of government schemes and enhance their reach among women.

i. The women beneficiaries were found to be aware of the various schemes; however, in contrast, awareness of entrepreneurship schemes, particularly PMEGP and Health and Maternity schemes, especially Janani Suraksha Yojana, remained comparatively lower, indicating the need for stronger information dissemination and motivation by the government.

ii. The results reveal that awareness of government schemes depends largely on direct personal contact and local institutional outreach, highlighting the central importance of grassroots communication systems in effective policy implementation and beneficiary mobilisation. Therefore, strengthening grassroots communication systems is needed in order to disseminate the information to potential beneficiaries in rural areas to increase the outreach.

iii. The beneficiaries revealed different sources for receiving information about the schemes. Hospital authorities among those exhibited minimal influence as awareness sources highlighting a substantive outreach deficit. Hence, strategic advocacy by the hospital authorities for health and maternity schemes is recommended to facilitate access for economically disadvantaged women, thereby augmenting program participation and enhancing beneficiary well-being. Similarly, non-governmental organisations (NGOs), despite their emphasis on women's general welfare, demonstrate limited engagement in promoting government schemes. Their proactive involvement in targeted awareness campaigns is suggested, which could substantially elevate beneficiary enrolment, ensure equitable access and advance the socio-economic conditions of vulnerable women.

iv. The relatively higher engagement with state-sponsored entrepreneurship programme CMRY compared to centrally administered scheme PMEGP suggests greater accessibility or heightened awareness of state-level interventions among the beneficiary population. Increase in promotional activities for centrally sponsored schemes is essential to increase the number of beneficiaries. The JSY registered the lowest participation rate among the examined schemes, potentially due to stringent eligibility criteria, limited programme awareness, or inadequate dissemination of information. Therefore, the government should expand dissemination mechanisms and relax eligibility criteria to enable women to easily access the scheme.

v. Many women face challenges of complex documentation requirements and procedural delays which discourages them from availing the benefits. Streamlining administrative procedures through digitisation, single-window systems, and targeted outreach mechanisms could enhance equitable access to welfare schemes for marginalised women. The monitoring and evaluation mechanisms should be strengthened to ensure that schemes translate into tangible empowerment outcomes.

8.4 Theoretical Contributions

This study contributes to the theoretical understanding of women empowerment by integrating both social and economic dimensions within the context of government financial schemes in the State of Goa. The study extends existing frameworks for measuring empowerment by examining how demographic variables, such as age, annual family income, marital status, education, and occupation, moderate the relationships between empowerment dimensions and overall, WE.

Furthermore, it bridges the gap in the literature by focusing on beneficiary-level perspectives in a regional context, offering a nuanced understanding of how the policy interventions translate into tangible empowerment outcomes. The findings can serve as a theoretical reference for future research on policy-driven empowerment, gender studies, and development economics, providing insights into the mechanisms by which government schemes affect the social and economic status of women.

8.5 Practical Implications of the Study

The study holds significant practical implications for policymakers, administrators, and stakeholders engaged in women's development. It enables government departments to

identify gaps in awareness, accessibility, and utilisation of existing schemes, thereby enhancing outreach and implementation strategies. The findings can guide policymakers in designing targeted interventions to strengthen women's social and economic independence, decision- making ability, and financial security.

By analysing the moderating role of demographic factors, the study emphasises the need for context-specific policies tailored to women's diverse socio-economic profiles. Additionally, it offers insights for implementing agencies to simplify procedures, reduce access barriers, and improve inter-departmental coordination, ensuring that women's empowerment schemes effectively achieve their intended objectives.

8.6 Limitations of the Study

1) The present study is geographically restricted to the State of Goa, and hence its findings may not be applicable to women beneficiaries in other states with different social, economic, cultural and policy environments.

2) It focuses exclusively on the women beneficiaries of the selected government schemes, excluding the non-beneficiaries who could have provided comparative perspectives. The study is confined to eight government schemes covering welfare, entrepreneurship, health, and maternity, to assess their impact on the social and economic empowerment of women, thereby excluding other relevant schemes that might influence empowerment outcomes.

3) As the study follows a cross-sectional design, it captures data at a single point in time, limiting the ability to assess long-term impacts of schemes on WE.

4) The study employed a combination of stratified sampling, convenience sampling and snowball sampling; however, alternate statistical techniques could produce different outcomes.

8.7 Scope for Further Research

The current study highlights the impact of government schemes on social and economic empowerment of the women beneficiaries in the State of Goa. The scope for further research could be:

1. Future research could adopt a longitudinal design to capture the long-term impact of government schemes on WE.
2. Comparative studies across different states could be undertaken to assess the regional variations in the impact of schemes.
3. Including non-beneficiaries in the sample would help identify gaps in awareness, accessibility, and utilisation.
4. The scope of empowerment could be broadened by incorporating political and psychological dimensions alongside social and economic aspects.
5. Further studies could also expand the analysis by including a wider range of social and financial schemes to provide a more holistic understanding of WE in Goa.

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Annexures

Appendix A

Success Stories

There are various schemes initiated by the Central and State governments for social and economic empowerment of women in the State of Goa. The schemes include *Laadli Laxmi Scheme, Griha Aadhar Scheme and the Dayanand Social Security Scheme* under the welfare category, the *Chief Minister's Rojgar Yojana and the Prime Minister's Employment Generation Programme* under the schemes for entrepreneurship and the *Mamta Scheme, Pradhan Mantri Matru Vandana Yojana and the Janani Suraksha Yojana* under the category of health and maternity schemes. Success stories under these scheme categories highlight their transformative impact on the social and economic lives of individual women beneficiaries and their families.

During the research, the 603 respondents were interviewed. The researcher observed that the beneficiaries were empowered by availing the above schemes which also had a significant impact on their families and the community at large.

A few success stories of the beneficiaries of each of these schemes are presented:

Beneficiary of Laadli Laxmi Scheme

Sunita Naik grew up in a modest household in a small village, Chopdem, in North Goa, where her parents managed day-to-day expenses carefully and higher education was not a realistic option for most children in the neighbourhood. Her parents were worried about her future, her education and her marriage.

One day her parents learned about the financial assistance under the Laadli Laxmi Scheme through the Panchayat and received the sum of ₹ 1,00,000 as a fixed deposit in Sunita's name. The support helped Sunita and her parents offset some of the wedding costs, reducing the need to borrow heavily. This provided a small but meaningful relief for a family with little financial cushion. The fact that the funds were registered in Sunita's name was unfamiliar to her at first, but over time, it gave her a quiet awareness that she had something of her own. With part of the assistance, she enrolled in a local tailoring course. Learning a skill while adjusting to married life wasn't easy, but the early months of stitching for neighbours brought in an irregular, modest income. Slowly, a few regular clients became a small but dependable source of earnings. She now stitches from home, fitting the work around her household responsibilities and her children's school schedules.

The income she earns isn't large, but it has shifted something in how the household functions. Sunita is more often included in conversations about spending and saving not always equally, but more than before. She has grown more confident in voicing her views. She has also passed on the information about the scheme to younger women she knows. These are small gestures, not organised advocacy, but they reflect a gradual change in how she sees her place in the community.

Sunita's story is of a woman determined to grow by navigating the real constraints, building her life slowly and finding a firm footing.

Beneficiary of Griha Aadhar Scheme

Shanta Gaonkar, a resident of Ambaulim in Quepem taluka in South Goa, belongs to a household where financial stability was always uncertain. Her husband works as a daily wage labourer, and irregular income made it difficult to manage household expenses, children's education, and healthcare. Shanta depended entirely on her husband's earnings and often felt stressed about meeting basic needs.

Her life changed when she learned about the Griha Aadhar Scheme through a local Anganwadi worker. After completing the application process, she began receiving regular monthly financial assistance of ₹ 1,500 directly into her bank account. For the first time, Shanta had a steady income in her own name, which brought her financial security. Though the amount seemed to be small, it was a relief to her. The support helped her manage daily household expenses without borrowing, thereby improving the family's overall stability. Gradually, Shanta started saving a small portion of the amount and used her cooking skills to begin preparing traditional Goan snacks at home. She sold these during festivals to neighbours, earning additional income. This helped her contribute more actively to household expenses and support her children's education.

This transformed her role within the family. Shanta now participates in financial decisions, including budgeting and planning. Her opinions are respected, and she feels more confident and independent. Beyond the household, she joined a self-help group in her village and also encouraged other women to apply for government schemes, sharing her experience to inspire them. With improved financial stability, Shanta's children enjoy better nutrition, regular schooling, and access to healthcare. The family is more resilient during difficult times, such as illness or seasonal unemployment, due to the monthly financial support.

Shanta's story highlights the positive impact of the Griha Aadhar Scheme in Goa. The scheme has not only strengthened her household's economic condition but has also enhanced her confidence, decision-making ability, and social participation. Her journey reflects how targeted welfare schemes can empower women and create lasting change for families and communities.

Beneficiary of Dayanand Social Security Scheme

Kamala Desai, a warm-hearted 67-year-old widow from Amona in Bicholim taluka, North Goa, faced many challenges after losing her husband who was a farmer. Without a stable income and with her children living in other towns, Kamala worked hard to cover everyday expenses, including food, medicine, and electricity bills. She often relied on help from relatives and neighbours, which made her feel uncertain and anxious about what the future might hold.

Her life took a positive turn when she heard about the Dayanand Social Security Scheme (DSSS) from her local Panchayat and Anganwadi worker in her village. This scheme provides monthly financial support to widows, senior citizens, and people with disabilities facing financial difficulties. With a little guidance from village officials, Kamala applied for the scheme and was happily approved as a beneficiary. The monthly pension of ₹ 2,000 brought her much-needed relief and gave her a sense of security. For the first time, Kamala had a reliable income in her own name. She could now buy groceries, pay utility bills and cover medical expenses without feeling dependent on others. This newfound financial independence boosted her confidence and restored her sense of dignity.

With her stability in place, Kamala also takes care of her small vegetable garden, growing fresh produce for her household and selling some at the local market. This small but meaningful activity adds to her income and keeps her active and engaged. She now manages her household on her own and no longer worries about being a burden. The scheme has also helped her feel more socially connected. Kamala inspires other elderly women to learn about and avail the scheme. Her inspiring story demonstrates that the scheme offers more than financial support; it fosters self-reliance, dignity, and social inclusion.

Kamala Desai's journey beautifully illustrates how the Dayanand Social Security Scheme is making a real difference in Goa. It shows how thoughtful welfare programs can help elderly women live their later years with confidence, independence, and respect.

Beneficiary of Chief Minister's Rojgar Yojana

Maria Fernandes, a 32-year-old woman from Calangute in Bardez taluka, North Goa, faced significant challenges supporting her family. Married with two young children and living in a joint family, her husband worked as a driver, earning just enough to cover daily expenses. Despite her embroidery and handicrafts skills, Maria lacked a platform or capital to make her talent financially sustainable. Her family often struggled financially, and she wished to contribute while managing her domestic duties. She also had a dream of starting her own business.

In 2015, Maria learned about CMRY through a local awareness program. The scheme aims to provide financial aid and skill development for women and unemployed youth, encouraging entrepreneurship. One day she also saw a poster advertisement about the CMRY stuck behind a Kadamba Bus while she was travelling from Panjim to Margao and this added to her curiosity to know more about the scheme. She contacted the panchayat in her village and tried to secure more information and understood that The Directorate of Industries, Trade and Commerce, Panjim would help her to get the benefits. She immediately registered as a beneficiary.

After approval, she received financial support of ₹ 1,00,000 as per the applicable conditions and finally she started her small embroidery and handicrafts business from home. She invested in stitching machines, raw materials, and marketing supplies. She began accepting custom orders for local events and shops. Over time, her products gained popularity in her village and nearby markets, providing a steady income. The scheme improved her economic situation and boosted her social status. Maria now actively participates in community meetings, sharing her story and motivating other women to utilise government programs. She contributes to household decisions and has gained confidence as an independent entrepreneur.

Maria's story exemplifies how CMRY can transform lives in Goa, empowering women from diverse backgrounds to attain financial independence, social recognition, and personal growth.

Beneficiary of Prime Minister's Employment Generation Programme

Anita Naik, a 28-year-old woman from Kavlem in Ponda taluka in Goa, comes from a middle-class family. Her parents run a small hotel in the village. While Anita had completed her higher secondary education, limited job opportunities in her village made it difficult for her to secure stable employment. She always dreamed of starting her own business but lacked both the financial resources and guidance to turn her idea into reality.

In 2022, she came to know about PMEGP through a local bank. She also heard about the scheme on FM radio. The scheme provides financial assistance to individuals and groups to start micro-enterprises, promoting self-employment and entrepreneurship. Motivated by the opportunity, Anita applied under the scheme with support from her family and local officials.

After her application was approved, Anita received financial assistance of ₹ 3,00,000 and guidance to set up a small organic spices processing unit at her home. She purchased essential equipment, raw materials, and packaging supplies. Initially, she began producing small batches of spices such as turmeric, chilly powder, and coriander powder for local households and small shops. Her products gained popularity for their freshness and quality, and demand grew steadily. She now earns a stable income and contributes significantly to her household. Beyond financial independence, Anita gained confidence in running a business, managing finances, and making strategic decisions.

Anita also became a role model in her village. She shares her experience with other women, inspiring them to pursue entrepreneurship and take advantage of government schemes. Her journey demonstrates how PMEGP empowers women from diverse backgrounds in Goa to achieve financial independence, social recognition, and personal growth.

Beneficiary of Mamta Scheme

Lalita Sawant, a 26-year-old woman from Bicholim taluka in North Goa, was expecting her first child when she faced several challenges accessing proper maternal healthcare. Coming from a lower-middle-class family, Lalita and her husband worked in small local businesses, earning just enough to meet daily household expenses. She had limited knowledge about government health schemes and was concerned about the costs of pregnancy-related check-ups, nutrition, and safe delivery.

Lalita delivered a girl child, and the Anganwadi worker informed her about the Mamta Scheme, a government initiative providing financial assistance upon the birth of a live girl. With guidance from the Anganwadi worker, Lalita registered under the scheme. The support of ₹ 10,000 she received through the scheme was transformative. Lalita was able to attend regular health check-ups without worrying about travel or medical costs. She received guidance on nutrition, hygiene, and childcare, which improved her confidence in managing her pregnancy safely. The scheme not only provided financial and health support but also empowered her socially, as she became more aware of her rights and the importance of maternal health. She now encourages other women in her village to utilise the Mamta Scheme, sharing her positive experience to promote safe motherhood.

Lalita Sawant's journey demonstrates how the Mamta Scheme in Goa effectively supports women after the delivery of girl child, promotes gender equality, improves maternal and child health, and fosters confidence, independence, and awareness.

Beneficiary of Pradhan Mantri Matru Vandana Yojana

Rachel Pereira, a 24-year-old woman from Sanguem taluka in South Goa, was expecting her first child when she faced the challenges of pregnancy with limited financial resources. Rachel and her husband worked in small-scale retail and housekeeping jobs, earning a modest income that barely covered daily household needs. With no savings and limited awareness of maternal health schemes, she was worried about affording proper antenatal care, nutrition, and delivery expenses.

During a visit to her local Anganwadi centre, Rachel learned about PMMVY which provides financial assistance to pregnant and lactating women to ensure proper healthcare, and nutrition. Guided by the Anganwadi worker, Rachel registered for the scheme and became eligible to receive cash incentives after her child's birth. The financial support under PMMVY significantly eased Rachel’s burden. She was able to attend regular health check-ups, purchase iron and vitamin supplements, and maintain a nutritious diet throughout her pregnancy.

Beyond financial relief, PMMVY empowered Rachel socially and emotionally. She gained knowledge about maternal health, childcare, and nutrition, which strengthened her confidence as a mother. She became more aware of her rights and actively participated in community health discussions. Rachel now encourages other expectant mothers in her village to utilise PMMVY.

Rachel Pereira’s journey illustrates how PMMVY in Goa can transform the lives of women after delivery, provide healthcare support, and awareness, enabling them to experience safe motherhood with confidence, dignity, and empowerment.

Beneficiary of Janani Suraksha Yojana

Nimra Shaikh, a 27-year-old woman from Salcete taluka in South Goa, comes from a lower-middle-class household and working as a househelp. Her husband was out job for a long time, and their combined income was just enough to cover daily expenses. During her first pregnancy, Nimra was anxious about accessing proper antenatal care, hospital delivery, and nutritional support, as her family could not afford private healthcare services.

During a visit to the primary health centre, she was informed about the Janani Suraksha Yojana (JSY), a government initiative providing financial assistance to encourage institutional deliveries among pregnant women from economically weaker sections. With the support of her Anganwadi worker and the health workers, Nimra registered under the scheme and became eligible for cash incentives to cover expenses related to antenatal check-ups, hospital delivery, and postnatal care.

The JSY support had a transformative impact on Nimra's pregnancy experience. She was able to attend all recommended antenatal visits, receive iron and vitamin supplements, and follow a proper nutrition plan. The cash assistance helped her to focus on her health and prepare for a safe institutional delivery. She delivered a healthy baby girl at a government hospital, fully supported by the JSY scheme. Beyond financial assistance, the scheme empowered Nimra socially. She gained awareness about maternal and child health, hygiene, and nutrition. She shared her experience with her friends and other pregnant women in her vicinity, encouraging them to opt for institutional delivery under JSY.

Nimra Shaikh's journey highlights how the JSY in Goa helps pregnant women access safe maternity care and fosters health awareness. Her story illustrates the program's role in ensuring safe motherhood.

Appendix B

SURVEY QUESTIONNAIRE

I am Dhumatkar Deepa Vishnudas, an academic researcher undertaking a study on "An Evaluation of Women Empowerment through Government Schemes in Goa: An Empirical Study". This Questionnaire forms a critical component of my thesis and is designed to systematically evaluate the efficacy of government initiatives in fostering women empowerment in the State of Goa. Participation is voluntary. All responses will be treated with utmost confidentiality and will be used exclusively for scholarly analysis. I request you to kindly spare a few minutes from your schedule to furnish responses. Your cooperation if highly appreciated.

[A] Criteria Based Questions

A1. Have you availed any of the following Government Schemes? Yes or No

Category of Government Schemes	Names of Schemes	Tick (√) if Yes
Welfare Schemes	Laadli Laxmi Scheme	
	Griha Aadhar Scheme	
	Dayanand Social Security Scheme	
Schemes for Entrepreneurship	Chief Minister's Rojgar Yojana	
	Prime Minister's Employment Generation Programme	
Health and Maternity Schemes	Mamta Scheme	
	Pradhan Mantri Matru Vandana Yojana	
	Janani Suraksha Yojana	

A2. Kindly indicate whether there is timely disbursal of the amount under the government schemes availed by you.

Government Schemes	Tick (√) if Yes
Laadli Laxmi Scheme	
Griha Aadhar Scheme	
Dayanand Social Security Scheme	
Chief Ministers Rozgar Yojana	
Prime Minister Employment Generation Programme	
Mamta Scheme	
Pradhan Mantri Matru Vandana Yojana	
Janani Suraksha Yojana	

[B] Demographic Profile of the Respondents

1.	District: North ☐ South ☐
2.	Age Group: 18-40 years ☐ 41-60 years ☐ 61 years and above ☐
3.	Education: Secondary ☐ Higher Secondary ☐ Graduation ☐ Post-Graduation ☐ Other Please Specify_____
4.	Marital Status: Married ☐ Unmarried ☐
5.	Occupation: Private Employee ☐ Government Employee ☐ Business ☐ Housewife ☐ Other Please Specify_____
6.	Annual Family Income: Less than ₹50,000 ☐ ₹50,000 - ₹1,50,000 ☐ ₹1,50,000-3,00,000 ☐ Above ₹ 3,00,000 ☐
7.	Residential Area: Municipal ☐ Panchayat ☐

[C] Awareness about Government Schemes among Women

C1. Kindly indicate your level of awareness about the government schemes for women: (5)-Fully Aware (4)-Aware (3)-Moderately Aware (2)-Slightly Aware (1)-Completely Unaware

Schemes	Level of Awareness				
Welfare Schemes					
I am aware of Laadli Laxmi Scheme	5	4	3	2	1
I am aware of Griha Aadhar Scheme	5	4	3	2	1
I am aware of Dayanand Social Security Scheme	5	4	3	2	1
Schemes For Entrepreneurship					
I am aware of Chief Ministers Rozgar Yojana	5	4	3	2	1
I am aware of Prime Minister Employment Generation Programme	5	4	3	2	1
Maternity And Reproductive Health					
I am aware of Mamta Scheme	5	4	3	2	1
I am aware of Pradhan Mantri Matru Vandana Yojana	5	4	3	2	1
I am aware of Janani Suraksha Yojana	5	4	3	2	1

C2. Kindly indicate the sources of information regarding the government schemes availed by you. ((Multiple responses allowed)

Sources of Awareness	Tick (√) which is applicable
Electronic Media	
Friends/Relatives/Neighbours	
Non-Government Organisation	
Public Hoardings	
Awareness Programmes by Government Departments	
Anganwadi Workers	
Local Bodies	
Social Media	
Print Media	
Hospital authorities	

[D] Social and Economic Empowerment

D1. Kindly indicate your level of agreement for economic empowerment after availing the schemes:

5 = Strongly Agree 4= Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Financial Independence	**Level of Agreement**				
I can arrange funds for my marriage	5	4	3	2	1
I support my family monetarily	5	4	3	2	1
I have access to bank	5	4	3	2	1
I am economically independent	5	4	3	2	1
I can lend money to the needy	5	4	3	2	1
I have access to government schemes and loans	5	4	3	2	1
I can bear the cost of medicines for myself and my child	5	4	3	2	1

Family Expenses	**Level of Agreement**				
I am providing healthy food to my family	5	4	3	2	1
I participate in household financial decisions	5	4	3	2	1
My family's purchasing power has increased	5	4	3	2	1
I can spend on tuition fees of my children	5	4	3	2	1
My standard of living has improved	5	4	3	2	1

Investments	**Level of Agreement**				
I can acquire household durables and other assets	5	4	3	2	1
My savings have increased	5	4	3	2	1
My investments have increased	5	4	3	2	1
My standard of living has improved	5	4	3	2	1
I could start my own entrepreneurial venture	5	4	3	2	1

D2. Kindly indicate your level of agreement for social empowerment after availing the schemes:

5 = Strongly Agree 4= Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Social Status and Security	**Level of Agreement**				
My family's social status has improved	5	4	3	2	1
I feel socially secure	5	4	3	2	1
Traditional gender stereotype practices such as dowry have reduced	5	4	3	2	1
Preference for male child has reduced	5	4	3	2	1
I can create jobs for the society	5	4	3	2	1
I can move independently	5	4	3	2	1
There is increase in social responsibility	5	4	3	2	1
My social network has improved	5	4	3	2	1

Decision Making	**Level of Agreement**				
I do not feel I am a burden on my family	5	4	3	2	1
My role in decision making in the family has increased	5	4	3	2	1
I can solve my problems independently	5	4	3	2	1
I feel free to share my views with others	5	4	3	2	1
I am involved in decisions regarding my children's education and health	5	4	3	2	1
I help other women	5	4	3	2	1

Personal Independence	**Level of Agreement**				
I do not face domestic violence	5	4	3	2	1
I feel less dependent on family members for personal needs	5	4	3	2	1
I can choose to start my own business/venture	5	4	3	2	1
I am involved in community works	5	4	3	2	1
I can access government services and benefits without assistance	5	4	3	2	1
I am able to take initiatives for improving my own well-being	5	4	3	2	1

D3. Kindly indicate your level of agreement for women empowerment after availing the schemes:

5 = Strongly Agree 4= Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Women Empowerment Indicators	**Level of Agreement**				
There is an increase in economic independence	5	4	3	2	1
There is improvement in my health and well-being	5	4	3	2	1
There is social transformation and decision-making autonomy	5	4	3	2	1
Enhanced participation in political and public life	5	4	3	2	1

[E] Challenges for Availing Government Schemes

E. Kindly indicate your level of agreement for challenges while availing the schemes:

5 = Strongly Agree 4= Agree 3 = Neutral 2 = Disagree 1 = Strongly Disagree

Challenges	**Level of Agreement**				
Inadequate knowledge about schemes	5	4	3	2	1
Inadequate institutional support	5	4	3	2	1
Inadequate family support	5	4	3	2	1
Inadequate infrastructure	5	4	3	2	1
Delay in getting financial assistance	5	4	3	2	1
Insufficient financial assistance	5	4	3	2	1
Political interference	5	4	3	2	1
Improper response from authority	5	4	3	2	1
Inadequate information provided	5	4	3	2	1
Difficult procedure	5	4	3	2	1
Lack of mobility	5	4	3	2	1
Issues with documents	5	4	3	2	1
Lack of education	5	4	3	2	1
Late fulfilment of conditionality	5	4	3	2	1
Difficulty in opening and operating bank account	5	4	3	2	1

Appendix C

Questionnaire for Challenges faced by Women Beneficiaries

Dear Madam,

I am Ms. Dhumatkar Deepa V., Research Scholar currently pursuing PhD on the research topic "An Evaluation of Women Empowerment through Government Schemes in Goa: An Empirical Study." I request you to kindly spare some time to answer the following questions. I assure you that any information furnished by you will be used only for the research purpose and will be strictly kept confidential.

	Inadequate knowledge about schemes	Inadequate infrastructure	Inadequate family support	Lack of mobility	Lack of education	Issues with documents	Late fulfilment of conditionality	Difficulty in opening/ operating bank A/C	Improper response from authority	Inadequate information provided	Difficult procedure	Insufficient financial assistance	Delay in getting financial assistance	Inadequate institutional support	Political interference
Inadequate knowledge about schemes	1														
Inadequate infrastructure	X	1													
Inadequate family support	X	X	1												
Lack of mobility	X	X	X	1											
Lack of education	X	X	X	X	1										
Issues with documents	X	X	X	X	X	1									
Late fulfilment of conditionality	X	X	X	X	X	X	1								
Difficulty in opening/operating bank A/C	X	X	X	X	X	X	X	1							
Improper response from authority	X	X	X	X	X	X	X	X	1						
Inadequate information provided	X	X	X	X	X	X	X	X	X	1					
Difficult procedure	X	X	X	X	X	X	X	X	X	X	1				
Insufficient financial assistance	X	X	X	X	X	X	X	X	X	X	X	1			
Delay in getting financial assistance	X	X	X	X	X	X	X	X	X	X	X	X	1		
Inadequate institutional support	X	X	X	X	X	X	X	X	X	X	X	X	X	1	
Political interference	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1

Appendix D

Publications and Papers Presented

1. Deepa V. Dhumatkar, Prof. Subrahmanya Bhat "Impact of Griha Aadhar Scheme on Economic Empowerment of Women Beneficiaries in Retail Business", ARTHAMIMANSA, Publisher- Vidarbha Arthashastra Parishad, Nagpur, July-December, 2024, 16 (2), pp. 108-115, ISSN No. 2320-0197 (UGC Care List Journal)

2. Deepa V. Dhumatkar, Prof. Subrahmanya Bhat, "Evaluating Women's Economic Empowerment through Entrepreneurship Schemes in Goa: A Beneficiary Perspective", SOUTH ASIAN JOURNAL OF MANAGEMENT RESEARCH (SAJMR), Central Library, Chhatrapati Shahu Institute of Business Education & Research (CSIBER), July 2025, 15 (3), pp. 90-101, ISSN No. 0974-763X (UGC Care List Journal)

3. Deepa V. Dhumatkar, Prof. Subrahmanya Bhat, "Bridging Health Interventions and Empowerment: An Analysis of Women Beneficiaries of Health and Maternity Schemes in Goa", ARTHAMIMANSA, Publisher- Vidarbha Arthashastra Parishad, Nagpur, July-December, 2025, 17 (2), pp. 11-21, ISSN No. 2320-0197 (UGC Care List Journal)

4. Presented a paper titled "Empowerment of Rural Women in Goa-With Special Reference to Griha Aadhar Scheme" in the National Conference on "Contemporary Practices in Management and Information Technology" on 26th November, 2021 (in virtual mode) organised by K.S. School of Business Management and Information Technology, Gujarat University, Ahmedabad.

5. Presented a paper titled "A Study on the Impact of the Griha Aadhar Scheme on Economic Empowerment of Women Beneficiaries in Retail Business in Goa" at the National Conference on 'Challenges of Retailing and its Coping Strategies' organised by Government College of Arts, Science & Commerce, Khandola-Marcel Goa on 23rd and 24th January, 2023.

6. Presented a paper titled "Role of Technology in the Empowerment of Women in Goa" at the National Conference on 'Economic Transformation – A Future Perspective vis-à-vis Technology' organised by Shree Damodar College of Commerce & Economics, Margao on 24th February, 2024.

7. Presented Research Paper titled "Assessing the Role of Women Empowerment Initiatives in Human Resource Management for Advancing Gender Equality at Work" at the Two Days State Level Seminar titled "Revitalizing Public Administration: Reforms for Efficiency and Effectiveness" organised by Public

Administration Programme, Manohar Parrikar School of Law, Governance & Public Policy, Goa University in Collaboration with Goa Institute of Public Administration & Rural Development (GIPARD), Goa on 26th and 27th September, 2024.

8. Presented Research Paper titled "Women's Economic Empowerment through Strategic Welfare Initiatives in Goa" at the National Seminar on "Empowering Women for a Better Tomorrow" organised by Department of Management Studies, JNN College of Engineering, Shivamogga on 8th and 9th November, 2024 and was awarded the 'Best Paper Award' of the Seminar.

9. A poster presentation on 'Women Empowerment through Government Schemes in Goa' at the 'Goa Research Scholars Meet 2025' under Vidyan Dhara 2025 organised by Directorate of Higher Education, Goa State Higher Education Council, Porvorim Goa on 6th March 2025.