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ABOUT THE COLLEGE

Hansraj College is one of the largest constituent colleges of the University of Delhi. The college was founded by the D.A.V. College Managing Committee on 26th July, 1948 in the sacred memories of Maharshi Dayanand Saraswati and Mahatma Hansraj who spent their magnificent lives emphasizing the importance of knowledge. It is one of the leading lights in the D.A.V. family of over 700 institutions.

Hansraj College is a premier institution dedicated to teaching and research. It has highly qualified academicians who impart education in Science, Commerce, and Arts at undergraduate and graduate levels to more than 5000 students. The college has consistently demonstrated outstanding performance in academics, sports, and extracurricular activities.

The college has completed 75 years in the realm of imparting higher education. It has made significant and unparalleled contributions in terms of producing scholars, bureaucrats, intellectuals, and sportsperson serving in different domains not only in our own country but even at international levels.

Hansraj College stands at the cusp between the past and the future today. While it retains inspiring facets of its proud history, with an equally sharp gaze it looks ahead, assimilating the exciting world of new knowledge as it unfolds in front of it, holding the promise of an experience seeped with exhilarating learning and holistic growth for all those who enter its portals.

About the Journal

The ***HRC Journal of Economics and Finance*** is a **double-blind peer–reviewed academic journal** for students, researchers, and faculty to showcase their research pertaining to the discipline of economics and business. It is an international journal. Our mission is to provide a platform through which scholars can publish their scholarly findings to showcase them with the research community at large. We invite research papers and articles on topics related to the field of economics, business and management for its quarterly journal publication.

Message from the Principal

The launch of the *HRC Journal of Economics and Finance* is a milestone that marks our dedication towards providing a platform to young researchers in the field of economics and finance. It is even more fortuitous that the launch has been manifested in the Platinum jubilee year of the college, the Centenary year of the University of Delhi and the 75th year of India's independence.

The New Education Policy, 2020 has launched a paradigm shift that encourages research both at the faculty and student level. Accordingly there is a growing need to provide credible platforms to present research outputs at all levels. This journal fills a significant gap and will contribute to fostering a research ecosystem thereby advancing the objectives of the NEP 2020. This journal will provide an opportunity to students, teachers and scholars, around the world to come together and showcase the links between classroom teaching and their practical training.

I congratulate the authors whose papers/articles have been published in the journal and encourage others to contribute to future issues. Appreciation is due to the editors of this journal, Dr. Apoorva Gupta and Dr. Arjun Mittal who have worked tirelessly for the successful launch of this journal. My best wishes for the success of this venture.

Prof. (Dr.) Rama
Principal
Hansraj College

From the Editor's Desk

Dear Readers,

It is our great pleasure and privilege that we present the third issue of the Journal of the Hansraj College, the *HRC Journal of Economics and Finance*. The journal provides a platform to young researchers in the field of economics, business, social sciences, finance and management to publish their scholarly articles. Our inclusive nature ensures that we cover the wide range of issues in the field. This issue features a diverse range of articles that provide insightful analyses and innovative perspectives on various contemporary economic topics.

We have received around thirty papers relevant to the field of development economics, political economy, macroeconomic policy, financial markets, international trade, and behavioral economics. All the papers went through three rounds of review process, first by the editors and then by the review board. All the papers have gone through double blind peer review process. The authors were communicated with the revisions. The papers were accepted only after the satisfactory revisions were being made. We strictly follow the research ethics and do not tolerate plagiarism. All the selected papers were tested for plagiarism before publication. We have worked tirelessly to bring out the first issue of the journal with high quality research work.

Writing quality research papers takes a lot of time and effort, and the authors must be congratulated for writing their research papers for the journal, which is launched in the Platinum Jubilee year of the college, the Centenary year of the University of Delhi and the 75^{th} year of India's independence. We also take this opportunity to congratulate the review board of this issue for their constant academic support for the timely release of the journal. We also thank the support received from the Principal of the college, Prof. (Dr.) Rama, the Advisory Board and the Editorial Board.

We hope that readers find the articles interesting, informative and engaging, and enjoy reading it. We believe that this effort of ours will stimulate further research and discussion in the field of economics and finance, and encourage readers to write for further issues of the journal. We look forward to receiving your feedback and suggestions for future issues.

Disclaimer: The opinions expressed in this journal belong to the contributors and do not necessarily reflect the viewpoints of the college, the editors, the Advisory Board, the Editorial Board, and the Review Board of the *HRC Journal of Economics and Finance*.

Dr. Apoorva Gupta
Editor

Dr. Arjun Mittal
Editor

Email: editor.jef@hrc.du.ac.in
Website: Hansraj College, University of Delhi

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Publisher

Dr. Apoorva Gupta
Assistant Professor
Department of Economics
Hansraj College
Email: editor.jef@hrc.du.ac.in

Issuing Body

Hansraj College
University of Delhi
Mahatma Hansraj Marg
Malka Ganj
New Delhi - 110007

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Autonomy in Decision-Making and Empowerment – A Survey of Rural Women of Uttarakhand

Ms. Shalini Srivastava[1], Associate Professor, Department of Economics, Jesus and Mary College, University of Delhi, New Delhi

Dr. Jasmin, Assistant Professor, Department of Economics, Jesus and Mary College, University of Delhi, New Delhi

Abstract

This study investigates the degree of empowerment of women in rural hilly regions. With this intent 100 women from two villages of Nainital district in Uttarakhand, India, were interviewed to examine their autonomy in decision-making pertaining to self, children, and financial affairs. The research also examines freedom of physical mobility and political engagement of these women along with the work pattern for domestic and outdoor activities. A comprehensive questionnaire with a mix of objective, likert-type and qualitative questions addressing pivotal aspects of women's lives was employed to interview the respondents. The study reveals that rural women in the hilly regions, are not only discriminated against and exploited in the name of culture, tradition and social practices but are also subject to drudgery. They are an important workforce in agriculture and allied activities, although this work is quite often done seasonally and informally with little economic reward. They have to attend to domestic chores, take care of children and elderly, look after livestock, walk long distances to take their children to school, collect fodder, water and fuel wood. A large number of respondents expressed that they had little say in matters of employment and choice of a life partner. Financial matters are strictly handled my men in the family while the role of women in decision-making isquite

[1] Corresponding Author's Email Id: jasmin@jmc.du.ac.in

often confined to minor domestic affairs. Physical mobility of women is restricted and participation in political activities other than casting their vote is negligible. The paper utilises qualitative methods of analysis to delineate intricate details shared by the respondents, maintaining complete anonymity and confidentiality. An attempt has been made to propose ways to bolster the socio-economic status of women in the region under analysis, based on an exhaustive analysis of the responses received.

Keywords: Agency, Autonomy, Decision-Making, Women Empowerment, Rural Women, Hilly Regions

JEL Codes: D13, I31, J12, J16, P25

1. INTRODUCTION

Deep rooted patriarchy and socio-cultural norms of the Indian society limit the participation of women in decision-making, in turn curtailing their autonomy. Autonomy is the capacity of rational individuals to make informed decisions without any compulsion and coercion. Autonomy gives women the ability to make decisions related to their health, education, employment, family planning, domestic affairs, family and financial matters. Women, who have the authority to make such decisions independently, are more likely to be empowered. In fact, effective participation of women in the decision-making process is critical to their empowerment. Autonomy and a concept related to it, “Agency”, foster empowerment, bolstering the ability of the individual to fulfill their aspirations and take control of their lives (Kabeer 1999; Alkire 2007; Mishra and Tripathi 2011). It is important to understand, however, that though there is a thin line between empowerment and autonomy, they might not go hand in hand in several cases. There could be women who enjoy considerable autonomy but are not empowered on various socio-economic fronts and vice-versa.

Undoubtedly, women empowerment is a crucial element in the development process of any nation. Unfortunately, India is far from achieving the milestones of women empowerment and gender equality. A host of factors are responsible for this; patriarchal ideology, son preference, low priority given to education and health of women, restrictions on mobility of women and economic as well as social dependence on men.

It is believed that education and employment offer greater autonomy to the women and are a route to empowerment (Cochrane 1979; Jejeebhoy 1995; Kabeer 2008). This suggests that women in rural India who have not been able to achieve much in terms of quality education and employment, may not even be aware about the concept and the significance of empowerment, while women in urban areas might have a better footing on the fronts of agency and autonomy. In rural areas, it is common for the people to live in a joint family set up, wherein the decision making power lies in the hands of men or elderly women who perpetuate patriarchy. In such a scenario, the only way to improve the position in the family, for a woman, is through fertility and bearing sons.

More specifically for rural women in the hilly regions, the situation is worse since women are not only discriminated against and exploited in the name of culture, tradition and social taboos but are also subject to drudgery. They are an important workforce in the agriculture and allied activities, although this work is quite often done seasonally and informally with little economic reward. They have to attend to domestic chores, take care of children and elderly, look after livestock, walk long distances to take their children to school, collect fodder, water and fuel wood.

The focus of this research is the rural women of Uttarakhand; women in the hilly areas are burdened with both indoor and outdoor work. The traditions, religious norms and social practices in the rural areas restrict women's lives and work opportunities. Their freedom and autonomy is limited in multiple ways and their role in decision-making is negligible. The paper examines autonomy of these women and whether it has given way to empowerment. Section 2 explores the theoretical foundations of the study, Section 3 discusses in detail, existing literature on the subject. Data collection and methodology adopted for this research have been explained in Section 4, which is followed by an intricate analysis of each of the autonomy indices in Section 5. Sections 6 and 7 shed light on the political engagement of women in the region and their work burden, respectively. The paper concludes with Section 8 which discusses possible policy solutions to ensure effective agency, autonomy and empowerment of women in the rural hilly areas.

2. THEORETICAL BACKGROUND

Women empowerment, as a development agenda, has assumed great significance in the policy space at both national and international levels. In crude terms, to be empowered is to attain the ability to make choices. When a woman is denied choice, she is disempowered. Kabeer (1999) conceptualizes empowerment which in turn rests on three pivotal dimensions: resources (pre-conditions), agency (process) and achievements (outcomes). The ability to make choices relies, inescapably, on the availability of alternatives. An individual who has no resources will have limited possibilities to choose from. Resources, here, encompass a universe; economic, human and social resources, together determine the ability to exercise choice. Access to resources governs the current status of the individual as well as the state of being and level of authority in future as well. A resourceful person may be in a position of authority and hence command the norms that govern distribution and exchange amongst others. 'Authoritative Resources' usually endow heads of families, chiefs of villages or tribes with supreme power in decision-making.

Agency, as Kabeer (1999), defines it, is the ability to formulate goals for oneself and to work towards those goals. Agency is a process that encapsulates motivation, purpose and commitment and can take multiple forms like decision-making, bargaining, negotiations, manipulation, subversion. Agency, therefore, is a process to freedom; and expansion of agency can be defined as empowerment. Social and institutional set up can very well define an individual's agency and his/her ability to exert it.

Exercised by individuals and collectives, agency can have both positive and negative connotations. In the negative sense, an individual or a collective might use coercion, violence or threats to decimate agency of others. In fact, the norms, customs and existing institutions often over-ride agency of individuals, in the absence of certain actors deliberately trying to do so. Social paradigms in place, govern the distribution of resources, agency and shape the outcomes. The rigid constructs ensure that the same outcomes are reproduced and the status quo is maintained (Kabeer 1999).

Resources and Agency taken together constitute what Sen (1985) refers to as 'Capabilities': the potential of individuals to achieve the way of life they value the most. Disempowerment is the failure of individuals to achieve their valued goals due to deep-rooted socio-economic biases.

The discussion is reflective of the similarities and possible intersections between Agency, Autonomy and Empowerment. While a plethora of studies on women's autonomy have used these concepts interchangeably, this may not be appropriate. Experts on the subject argue that while autonomy calls for complete independence, an individual may be empowered through interdependence. It would therefore be quite useful to study each of them and demarcate their scope. Alkire (2007) is an important resource on the same; the author carefully disentangles Agency and Empowerment and Agency and Autonomy. Utilising Alkire's framework Mishra and Tripathi (2011) elucidate the relationship between the three concepts.

Empowerment is a process involving transition from one state to another as highlighted by Kabeer (2001), Rowlands (1995), Oxaal and Baden (1997). Autonomy as Jejeebhoy (2000) argues is a static process and can be measured with the help of indicators, unlike empowerment. However, the two ideas are tethered together. Any improvement in outcomes cannot be considered empowerment unless they are accompanied by agency. Women empowerment, in other words, requires women to be effective agents in the whole process of improvement in outcomes. Agency includes one's ability to formulate critical choices, control resources or pre-conditions and take strategic decisions concerning their lives. Agency is thus in-separable from empowerment, even though there are distinctions.

There could be more than one way to measure agency, namely through autonomy and ability. While ability is objective and relies on the powers and skills the individual possesses, autonomy, is somewhat subjective in the sense that it rests on an individual's assessment of their situation. These two may coincide in several cases but they could very likely diverge too. For instance, a woman having the ability to vote might be coerced (directly or indirectly) into voting for the candidate, the family favours. A woman might believe herself to be independent but to the outsiders the values on which her judgment is based might be shaped by her circumstances.

Having discussed the theoretical backdrop for the study, we discuss important literature on autonomy and empowerment of women, in the following section.

3. LITERATURE REVIEW

There exists a long history of research on women's autonomy and empowerment in India. The literature on this theme is rich with some pioneering work; Dyson and Moore (1983), Basu and Basu (1991), Jejeebhoy (1998), Jejeebhoy and Sathar (2001), Rammohan and Johar (2009) and many more. The extensive body of research identifies some important indicators impacting the status of women. This section reviews the studies addressing the indicators of autonomy.

Ghosh (2016) recognizes paid work as an important factor in elevating the agency, mobility and empowerment of women. When a woman engages in a paid economic activity, she gets social recognition for the work done too. Social scientists also suggest that past work experience of women and not just current employment, also adds to their confidence. For the married women therefore, pre-marital employment could also be effective in enabling their participation in decision-making.

All paid work, however, may not always be emancipatory. Women in India, often work out of necessity. However, it is common to see women involved in non-standard/informal forms of employment. Kabeer (2008) discusses how home-based work limits the scope for change. Home-based work, as she finds in her study, is a way for the families to minimize the contact of the women of the house with the outside world. This would keep the women restricted to their domestic responsibilities and the gender norms would remain unchallenged. Agriculture labour or craft work performed by women falls in line with this form of casual economic engagement, where the women do not get the required exposure, recognition and justified economic reward. Even if the women succeed in entering the labour market, having a job does not relieve them of the household chores; this usually results in increased work burden. Discrimination at work adds to the pressures that women face.

The impact of women's independent income or saving on their autonomy, as discussed by Acharya et al. 2010 cannot be overlooked. Income or savings are important resources; however, there could also be conflict over increased women's access to finances.

Education is believed to have strong positive association with women's autonomy (Cochrane 1979; Jejeebhoy 1995). Education opens up a sea of opportunities; it gives a better understanding of various aspects ranging from basic daily household activities to matters as advanced as handling finances. Undoubtedly, it is a pre-condition to be able to engage in productive employment. Studies have found positive individual and community effects of women's education. Education of other family members also has a great influence on the position of women of the house. But it could also be the case that education might be used as a means to domesticate women. Jeffrey and Basu (1996) find that schooling did not do much in terms of improving women's autonomy, it merely served as a prerequisite for marriage.

Age of a woman is a crucial determinant of a woman's autonomy (Conklin 1975; Mason and Smith 2003). For instance, position of a woman in the household hierarchy determines the authority she has. Elderly women in the family have better decision-making capacity this could be due to the fact that they have greater experience in running the household and have fulfilled their obligations towards the family. Age at marriage is equally important. Crandall et al. (2016) argue that marriage at a later age gives greater opportunities for education, employment and choosing a husband. Marriage at a younger age lowers the ability of the woman to participate in decision-making and negotiating with in-laws. The age difference between the spouses matters; lower the difference better is the interaction between husband and wife. This also improves women's participation in family planning (Hogan et al. 1999).

Rammohan and Johar (2009) shed light on the impact of size of the family on the status of women. Women enjoy lesser autonomy in large families. Also the wealth of the household does not necessitate greater autonomy for the women.

Apart from the factors discussed above, social norms and cultural practices have a considerable influence on the attitudes of the society, expectations of families and perceptions of the women about themselves, their status and their aspirations. The interplay of caste, religion and ethnicity shapes the outcomes for women.

The current research draws its motivation from a survey conducted by Kumaun University, Nainital, sponsored by Directorate of Economics & Statistics, Government of Uttarakhand in 2016, to assess women participation in decision making and women drudgery in high hilly districts of Uttarakhand. The survey was conducted during September 2016 to December 2016 and 320 women were interviewed from eight villages in two districts of Uttarakhand: Almora and Nainital. The study brought to the fore some very important insights, viz; while the women of the region play an important role in decisions related to domestic activities, there is almost zero participation when it comes to economic matters. Freedom of mobility is limited and the restriction is greater for younger women. The women are aware of their voting rights and most of them cast their votes also, participation in other political activities, however, is negligible. The lifestyle of women is strenuous as they have to work hard in the domestic space, agriculture, livestock management, water, fuel wood, fodder collection and other allied activities. The decision making capacity improves with age while the work burden reduces. We have modified the questionnaire of this study to make it more comprehensive and appropriate for the intended analysis. We have gone a step further by combining qualitative assessment of the responses with simple quantitative techniques like creating indices for autonomy in decision making on various fronts and freedom of mobility.

Hamid et al. (2021) is an important piece of literature that was used in developing the questionnaire for our study and qualitative analysis of the interviews we conducted. Hamid et al. (2021) explores the autonomy and decision making ability among Gujjar women of Kashmir. They employed interview and case study approach for data collection and they have beautifully incorporated excerpts from interviews, maintaining confidentiality. The findings are not very different from that of the Kumaun University's study, the decision making rights of the tribal Gujjar women were confined to household issues, while some significant positive correlations were found between decision-making ability, type of family, family size, age, level of education and employment.

Biswas et al. (2017) focuses on women's autonomy and control to exercise reproductive rights, 200 randomly selected married women from Hogladanga village in Bangladesh were interviewed. The authors discuss in detail, the methodology for data processing and tools for creation of autonomy indices and data analysis. We utilize these methods to create autonomy indices.

4. DATA AND METHODOLOGY

This study is based on a primary survey of 100 women: 50 each from two villages: Aghariya and Ladfora in block Dhari, district Nainital. Initially, 8 women were trained to fill up the questionnaire, they were asked to interview the respondents in pairs, such that two women cover one village. The survey was translated in Hindi and the pilot study was done in two phases; in the first phase 50 responses were collected from the villages: Aghariya, Panyali, Gunigaon and Gahatiya from 8th May 2022 to 9th May 2022. These forms were screened for mistakes in recording the responses and to improve upon the questionnaire, errors were discussed with the field investigators. The form was revised and the second pilot was done in two phases: 22nd May to 23rd May and 30th May to 1st June 2022, wherein 40 responses were received in each phase. This exercise helped us understand the problems with the questionnaire, which were corrected. We also realised that the 8 women we selected were not being able to record responses accurately. For the final survey, we finalized two villages: Aghariya and Ladfora and two male investigators were selected for this task. The villages were purposely selected due to the familiarity that the selected investigators had with the locals. It is important to know that majority of the population in both these villages belong to the Scheduled Caste. Familiarity of these investigators with the families in their respective villages helped the respondents participate in the survey without hesitation. It also ensured that the responses received were reliable. The male interviewers were accompanied by women, so that the respondents would not feel uncomfortable while answering. The survey was completed between 22nd June 2022 and 10th July 2022.

The form has five broad sections[2], Section A collects information on the social, economic and demographic profile of the respondent and her family including type of dwelling, if the respondent has any ownership rights on the house, if the husband and son (s) work outside Uttarakhand etc. Section B includes Likert type questions on aspects like autonomy in decision making for self, children, financial affairs and freedom of movement. The respondent is to rank the degree of autonomy she has and this choice is to be made out of five options: 1- very low, 2 – low, 3 – reasonable, 4 – high, 5 – very high. Section C assesses political engagement of the respondents by asking questions on political participation in rallies and political discussions, membership of political parties and organisations, contesting elections and casting vote. In Section D questions to understand work patterns and domestic and outdoor responsibilities have been asked, respondents are also asked if the men in the family help them in domestic chores and outdoor activities. Section E requires the respondents to discuss their aspirations.

The questionnaire encompasses pivotal aspects of women's life. The data on different variables has been summarised through tabular and pictorial representation. Responses that we found interesting and worth discussing have been incorporated in the paper maintaining complete anonymity.

The respondents were informed about the objective of the survey, they were assured that participation entailed zero risk and their information will remain strictly confidential. Each respondent has also put her signature at the end of the survey consenting to participate and validating the information shared. The data collected has been used purely for research purposes and no information of the respondent has been revealed. Excerpts from the interviews, wherever included, use fictional names.

5. AUTONOMY INDICES: ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

[2]https://drive.google.com/file/d/1SrN-cnlUTyMvBu5184bII5A7E5k6-LhX/view?usp=sharing

100 women, 50 from each village participated in the survey. Out of these 100 women respondents, 81 are married, the remaining responses have been received from unmarried (10) and widowed women (9). All the respondents are Hindus and belong to the Scheduled Caste category given our choice of villages. The findings of this research, therefore, are limited to Hindu, Scheduled Caste women, removing the layers of multiple identities. A comparative assessment of the status of women across various religions and caste categories has not been undertaken; our analysis nullifies the effect of religion and caste that may dilute the results which are very specific to Hindu, Scheduled Caste women.

We construct indices to analyse women's autonomy in decision-making on three major fronts, namely decision-making autonomy pertaining to; (1) Self, (2) Children, and (3) Financial Affairs. To examine freedom of mobility we construct a Physical Mobility index which is an indicator of autonomy of women to go out from the house. Each of these sections has a total of 8, 7, 13 and 11 questions, respectively. As discussed in the methodology the respondents were asked to rank their decision making capacity or freedom of mobility using the following options: 1- very low, 2 – low, 3 – reasonable, 4 – high, 5 – very high. We have adopted the methodology used by Biswas et al. (2017) to construct indices and categories. To construct any particular index, we summed the ranks chosen by the individual for various questions asked in the section pertaining to that index. This summation of ranks for the individual was then divided by the maximum score an individual could get in that section, for instance the minimum and maximum rank that an individual can have in the section on decision-making pertaining to self is 8 and 40 respectively. In this manner all the four indices were constructed for all the respondents, sequentially. Since the range for the four indices is different, dividing by the maximum score is important to make the indices comparable. The overall autonomy index was thereby constructed using the total of all responses (utilising the same method as for the aforementioned four autonomy indices, the maximum score for the overall autonomy index being 195). The respondents were then categorised into three different classes: low autonomy, moderate autonomy and high autonomy, depending on the value of the index. The class intervals for the three autonomy categories were worked out separately for each of the indices; the formula range/number of classes was used to determine the class intervals. Table 1 gives details of the socio-demographic characteristics of the women who participated in the survey.

Table 1: Socio-demographic attributes of the respondents

Variable	Category	Frequency	Percentage
Village	Aghariya	50	50.00
	Ladfora	50	50.00
		100	100.00
Age Group	15 - below 25	15	15.00
	25 - below 35	41	41.00
	35 - below 45	30	30.00
	45 - below 55	8	8.00
	55 - below 65	4	4.00
	65 - below 75	2	2.00
		100	100.00
Education Level	Not literate	6	6.00
	Literate without formal schooling	4	4.00
	Primary	32	32.00
	Middle	23	23.00
	Secondary	13	13.00
	Higher Secondary	12	12.00
	Graduate	8	8.00
	Post-graduate	2	2.00
		100	100.00
Marital Status	Married	81	81.00
	Widow	9	9.00
	Unmarried	10	10.00
		100	100.00
Age at the time of marriage	below 15	6	6.67
	15 - below 18	27	30.00
	18 - below 20	40	44.44
	20 and above	17	18.89
		90	100.00
Economic Category of the household†	APL	14	14.14
	BPL	73	73.74
	AAY	12	12.12
		99*	100.00
Occupational Status of	Unemployed	15#	15.00

the respondent			
	Seasonally Employed (Agriculture)	81	81.00
	Employed in the Government Sector with Contract	3	3.00
	Employed in NGO/Cooperative	1	1.00
		100	100.00
Family Type‡	Joint	51	51.00
	Nuclear	49	49.00
		100	100.00
Education Level of Husband	Not literate	3	3.70
	Literate without formal schooling	1	1.23
	Primary	10	12.35
	Middle	20	24.69
	Secondary	27	33.33
	Higher Secondary	12	14.81
	Graduate	7	8.64
	Post-graduate	1	1.23
		81^	100.00

Source: Authors' calculations based on survey data. Notes: † The households have been categorised as APL, BPL and AAY as per the information given by the respondent based on the ration card issued to her household. APL ration cards are issued to Above Poverty Line families with annual income above Rs. 15,000. APL ration cards are yellow in colour. BPL ration cards are issued to Below Poverty Line families. BPL ration cards are white in colour. AAY (Antyodaya Anna Yojna) ration cards are issued to the families identified by the state governments and covered under the AAY scheme. AAY ration cards are pink in colour.
*One of the respondents could not give information on the economic category the household falls in.
7 of these respondents are currently studying.
‡In the Indian context, we generally speak of a broad classification of families into Joint and Nuclear types. A commonly accepted definition of a nuclear family in India, is a single married couple living with or without unmarried children. For the analysis we have grouped households with a widowed adult living with or without unmarried children also under the nuclear family type. Joint families, on the other hand are extended families, where the nuclear family unit lives with the kin of any/both of the spouses in one homestead.
^Details on husband's education level were collected only for married women.

Table 2: Distribution of respondents in different classification of autonomy indices (%)

Autonomy Indices	Low	Moderate	High
Decision-Making autonomy pertaining to Self	23.00	56.00	21.00
Decision-Making autonomy pertaining to Children	16.00	62.00	22.00
Decision-Making autonomy in	53.00	36.00	11.00

Financial Affairs			
Freedom of Physical Mobility	29.00	57.00	14.00
Overall Autonomy	20.00	67.00	13.00

Source: Authors' calculations based on survey data.

Table 2 shows the percentage distribution of the respondents for various autonomy indices across the three levels: low autonomy, moderate autonomy and high autonomy. Reiterating that the ranks have been chosen by the respondents themselves, majority of the women feel that they enjoy a moderate level of autonomy when it comes to taking decision for themselves or children, there is a moderate freedom in physical mobility too. Resultantly, the overall autonomy index also suggests moderate levels of autonomy for the women of the two villages. The degree of autonomy in financial affairs, however, is low for more than half of the respondents. The subsequent sections discuss in detail, findings with respect to each of these indices.

5.1 AUTONOMY IN DECISION-MAKING PERTAINING TO SELF

To assess the degree of autonomy of women in decisions pertaining to their lives, they were asked to rank the level of authority they have in making decisions with respect to a balanced nutritious diet, medical care, domestic work, pursuing hobbies, education, vocational training, employment and choice of life partner. Table 3 shows the distribution of respondents as per the level of autonomy they have in decision-making pertaining to self. The autonomy is very high when it comes to a balanced nutritious diet and medical care. Autonomy in domestic work is also reasonably high, however, the decision-making capacity with respect to pivotal aspects like education, vocational training and choice of life partner ranges from very low to reasonable. Same is the case with pursuing hobbies.

Table 3: Autonomy in Decision-Making Pertaining to Self (Share of Respondents %)

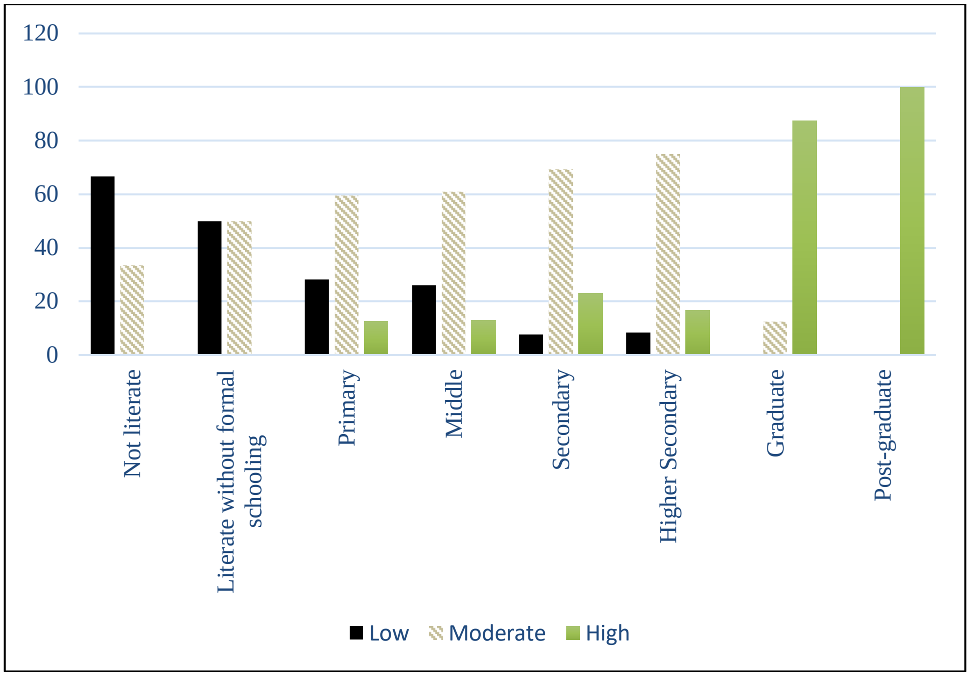
Activity	Very Low	Low	Reasonable	High	Very High

Balanced Nutritious Diet	0.00	0.00	8.00	34.00	58.00
Medical Care	0.00	1.00	22.00	25.00	52.00
Domestic Work	2.00	7.00	36.00	37.00	18.00
Education	22.00	16.00	35.00	15.00	12.00
Vocational Training	45.00	24.00	12.00	10.00	9.00
Pursuing Hobbies	5.00	35.00	29.00	16.00	15.00
Employment	41.00	22.00	21.00	7.00	9.00
Choice of Life Partner	29.00	11.00	34.00	14.00	12.00

Source: Authors' calculations based on survey data.

The data helps us identify factors influencing autonomy of women. As is evident from Figure 1 below, level of education of the respondent seems to positively impact autonomy in decision-making pertaining to self.

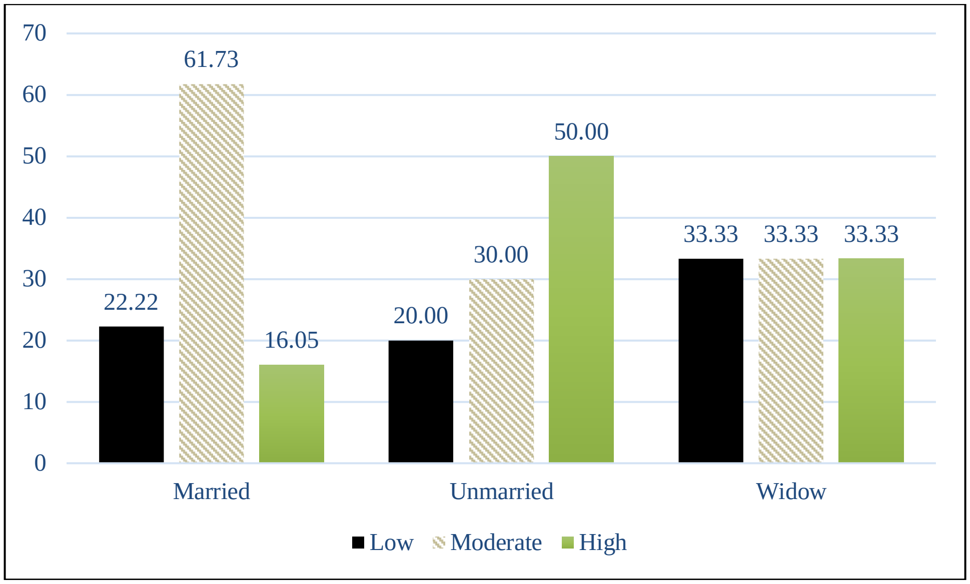
Figure 1: Decision-Making Autonomy Pertaining to Self and Level of Education of the Respondent



Source: Authors' calculations based on survey data.

Figure 2 examines the association of index on decision-making autonomy pertaining to self and the marital status of the respondent. While the relationship is not very clear for the widowed women, half of the unmarried respondents report high levels of autonomy compared to only 16% of married women falling in this category.

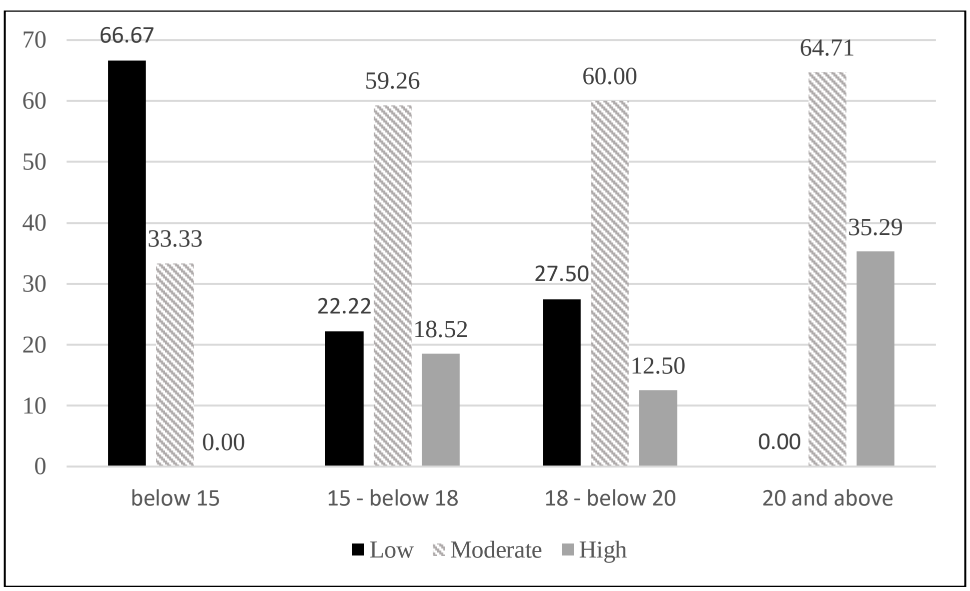
Figure 2: Decision-Making Autonomy Pertaining to Self and Marital Status of the Respondent



Source: Authors' calculations based on survey data.

Age at marriage also has considerable influence on the degree of autonomy. Women who got married at a later age enjoy greater autonomy as shown in Figure 3. As against this, a large fraction of women who got married at a young age report low levels of autonomy.

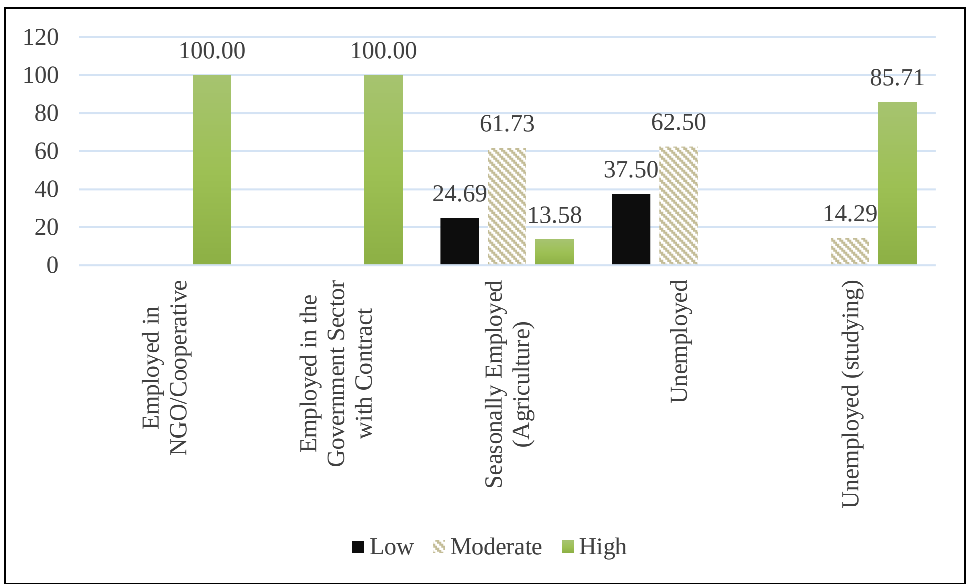
Figure 3: Decision-Making Autonomy Pertaining to Self and Age at the time of Marriage



Source: Authors' calculations based on survey data.

Occupational status has a definite bearing on the level of autonomy that the women enjoy with regards to decisions related to their lives. Women employed in NGOs/Cooperatives or in the government sector express that they have a high level of autonomy. Only a small fraction of women seasonally engaging in agriculture report high level of autonomy, for a majority of them the degree of autonomy is moderate. The pattern is not very different for women who are unemployed. Respondents who are unemployed because they are still studying, on the other hand, report high level of autonomy. The discussion suggests that the nature of employment plays an important role in determining one's decision-making ability. Education and quality employment are emancipatory.

Figure 4: Decision-Making Autonomy Pertaining to Self and Occupational Status of the Respondent



Source: Authors' calculations based on survey data.

Decisions about a woman's education, employment and marriage are usually taken by others in the family. Women shared their experiences; Aanchal Devi[3] got married at the age of 15, her husband is 12 years older than her. She hardly had any say in the choice of her spouse. 42 year old Ratna Devi is illiterate. She regrets her decision of not studying. In the interview, Ratna Devi shared that the lion's share of work falls on women. Because of multiple

[3]Names of the respondents have been changed to maintain anonymity.

responsibilities she never got the time to train herself in skills like sewing and knitting. Kanchan Devi, a 44 year old widow, has never been to school. She mentioned that schools in hilly regions are not completely accessible since they are located far away from the villages. Her parents were scared to send her long distance to attend school. She is not literate and has to depend on her son and brother-in-law a great deal especially when it comes to financial matters.

On the bright side there are women like Asha Devi, who were working before marriage and are continuing with their job. Asha Devi, a 29 year old woman, lives in a nuclear household. Even though her marriage took place as per her parents' wishes, her opinion was taken into consideration. She teaches in Anganwadi and takes pride in her work. She feels that employment is a great source of confidence in her. She is committed to educate her two daughters and will support them in their life choices. While Asha Devi has completed only secondary level of education, she wants to study further and has high aspirations for herself and her daughters.

5.2 AUTONOMY IN DECISION-MAKING PERTAINING TO CHILDREN

This section examines the degree of autonomy women have in making important decisions concerning their children[4] viz; family planning, education, nutrition, type of school/college, vaccination and health care, marriage and occupation of children. While the section has greater relevance for women who have children, even the married women without children and unmarried respondents were asked to give their ranks. These ranks serve as a perception of the level of autonomy, the married women with no children currently and unmarried respondents expect to have in future.

Table 4: Autonomy in Decision-Making Pertaining to Children (Share of Respondents %)

Activity	Very Low	Low	Reasonabl	High	Very High

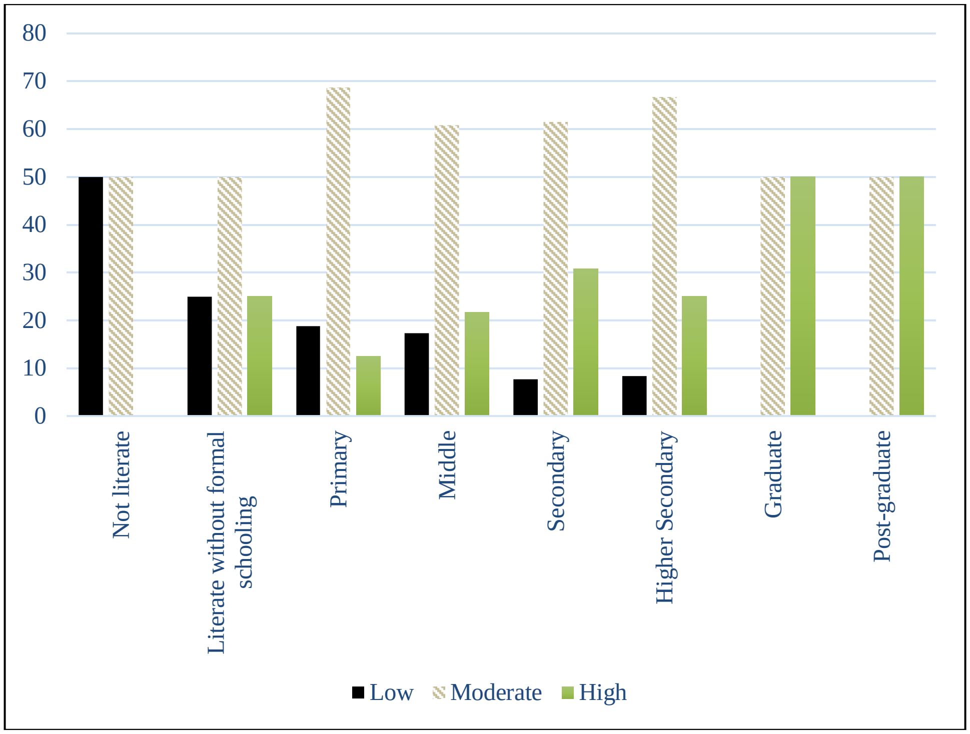
[4]This section has greater relevance for women with children, not all respondents in the sample have children.

			e		
Family Planning	2.00	9.00	37.00	24.00	28.00
Education of Children	1.00	8.00	32.00	25.00	34.00
Nutrition of Children	0.00	0.00	7.00	39.00	54.00
Type of School/College	5.00	5.00	39.00	16.00	35.00
Vaccination and Health Care of Children	0.00	1.00	10.00	22.00	67.00
Marriage of Children	2.00	19.00	65.00	12.00	2.00
Occupation of Children	4.00	42.00	41.00	11.00	2.00

Source: Authors' calculations based on survey data.

As can be gathered from Table 4, women seem to have reasonably high autonomy in family planning, but a closer look at the data on family size and details of family members suggests otherwise. The subjective assessment of respondents therefore may not necessarily be in line with actual definition and standards of empowerment on various fronts. Participation of women and the value of their opinion are reasonably high in decisions on education, nutrition, vaccination and health care and even type of school/college. However, their opinion does not count much when it comes to pivotal decisions like marriage and occupation of their children. The respondents said that the men and elders in the house, quite often, take these decisions. Also a few women mentioned that children today, decide for themselves.

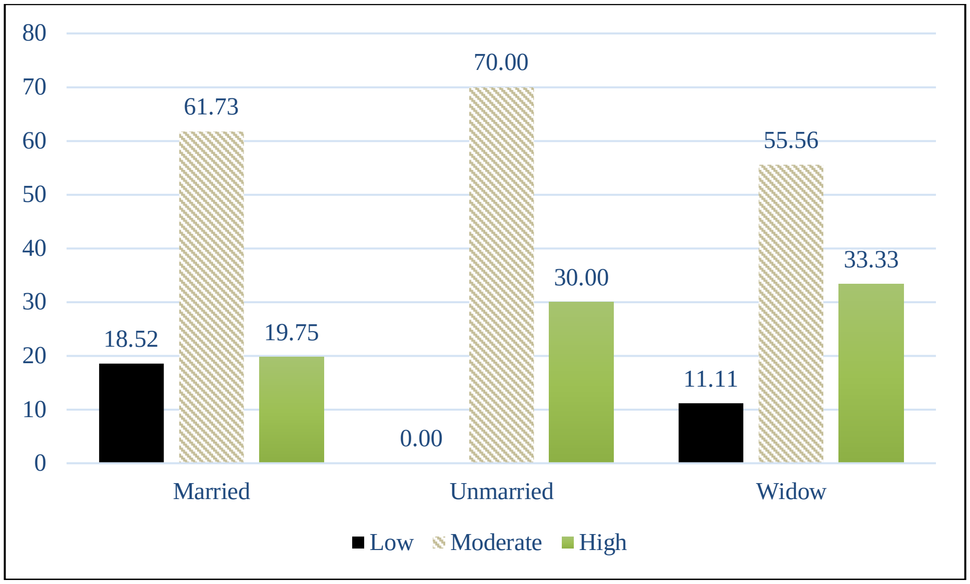
Figure 5: Decision-Making Autonomy Pertaining to Children and Level of Education of the Respondent



Source: Authors' calculations based on survey data.

The education level of respondent seems to have some positive association with the degree of autonomy in decision-making with respect to children. Women who are themselves educated are better able to participate in critical decisions related to their children's lives.

Figure 6: Decision-Making Autonomy Pertaining to Children and Marital Status of the Respondent

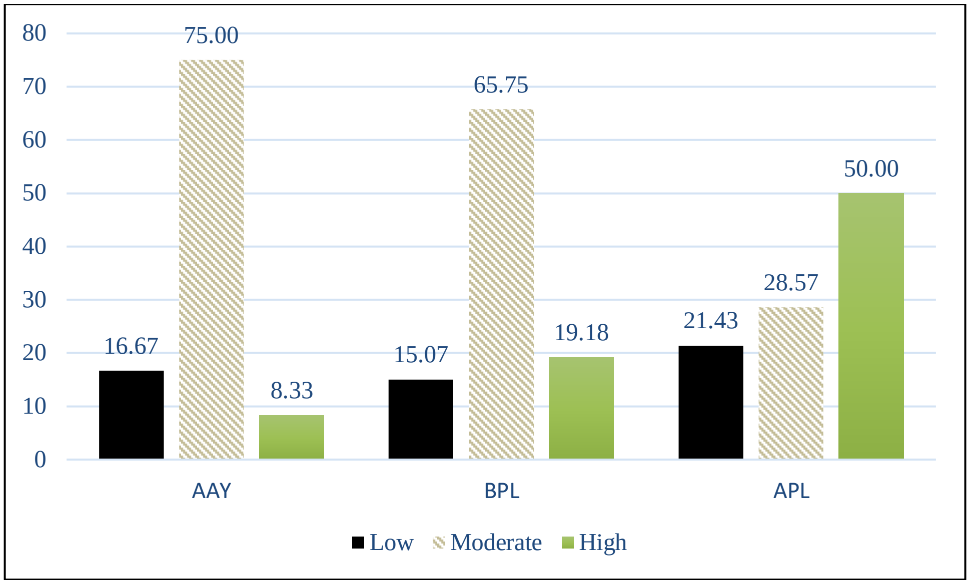


Source: Authors' calculations based on survey data.

The data reveals that women who have lost their husbands have better participation in decision-making pertaining to their children. Around 60% of married women feel that they have moderate autonomy and only 20% report high level of autonomy on this front[5]. It is worth adding that 70% of the unmarried respondents expect a moderate level of autonomy when they have children while the remaining 30% expect to have a high degree of autonomy in future.

[5]The data for married women also includes responses of married women without children; serving as a perception of the autonomy in decision-making pertaining to children they expect to have in future, when they have children.

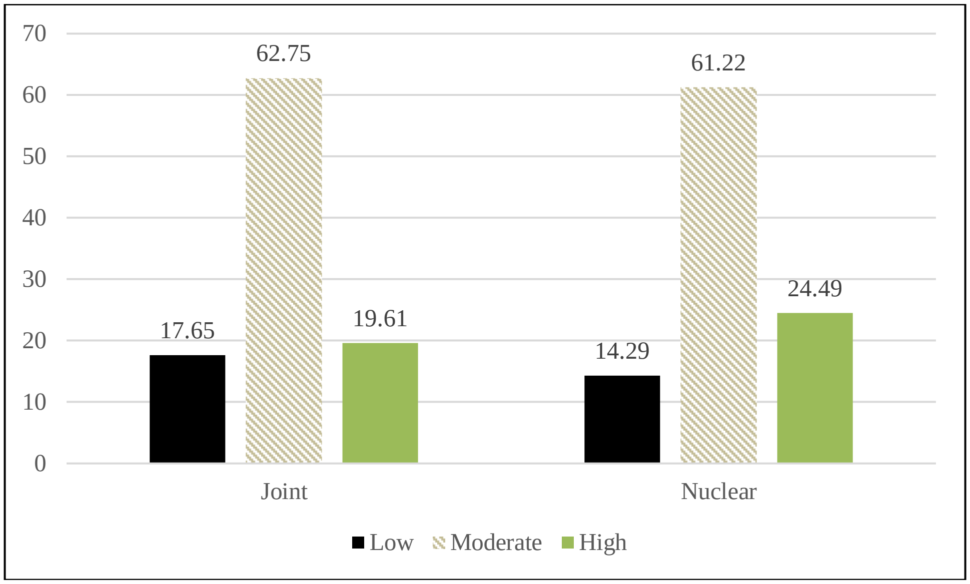
Figure 7: Decision-Making Autonomy Pertaining to Children and Economic Category of the Household



Source: Authors' calculations based on survey data.

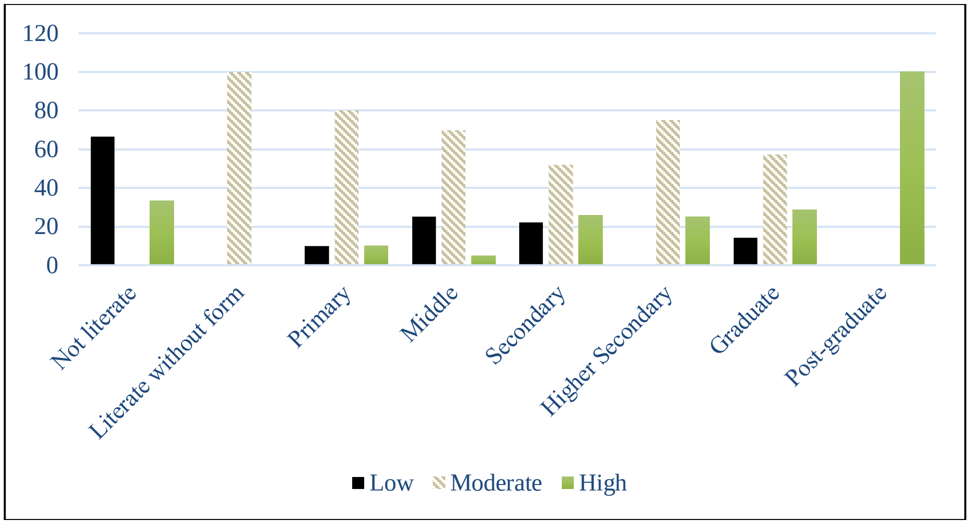
It is important to note that respondents from economically well off households report to have high autonomy in decision-making pertaining to children. Also, as can be observed from Figure 8, women have better say in matters concerning their children in a nuclear family set up.

Figure 8: Decision-Making Autonomy Pertaining to Children and Family Type



Source: Authors' calculations based on survey data.

Figure 9: Decision-Making Autonomy Pertaining to Children and Education Level of Husband



Source: Authors' calculations based on survey data.

A positive association between the education level of the husband and the degree of autonomy enjoyed by women in decisions pertaining to children needs to be highlighted, the same is depicted by Figure 9.

Needless to say, every mother wants the best for her child and yearns to be a part of their life decisions. Women put their best efforts to nourish their children, take care of their health and educate them. All the mothers we interviewed seemed to be completely invested in the lives of their children. However, many instances were reported, where women were left out of many important decisions taken about their children, particularly their marriage and occupation. A few women also shared that they could not fulfil their wish to better educate their children due to lack of economic resources and their financial dependence.

5.3 DECISION-MAKING AUTONOMY IN FINANCIAL AFFAIRS

Financial independence is the key to empowerment for any individual. It is often seen that the one who handles the finances in the household has considerable say on the decision-making front. Illiteracy, constraints on engagement in quality employment and a weaker socio-economic status of women compels them to depend on the "bread-winners", men of the house. In fact low financial autonomy, impacts the degree of authority that women have on many pivotal fronts.

Table 5: Decision-Making Autonomy in Financial Affairs (Share of Respondents %)

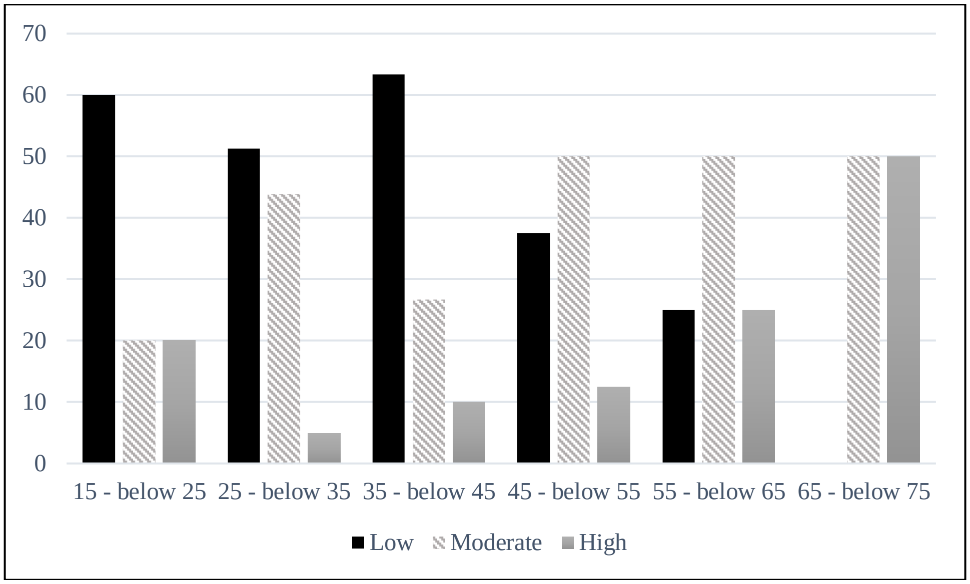
Activity	Very Low	Low	Reasonable	High	Very High
Use of one's own income	16.00	10.00	17.00	35.00	22.00
Purchase of items for daily domestic use (food/clothing)	4.00	7.00	41.00	33.00	15.00
Purchase of Domestic amenities (Television, refrigerator, furniture etc.)	19.00	13.00	47.00	15.00	6.00

Renovation of house/construction of new house	25.00	35.00	32.00	4.00	4.00
Purchase of property	36.00	34.00	24.00	4.00	2.00
Incurring Debt	42.00	21.00	28.00	4.00	5.00
Saving	24.00	8.00	19.00	29.00	20.00
Investment	34.00	24.00	29.00	8.00	5.00
Sale or Purchase of Livestock	34.00	22.00	29.00	8.00	7.00
Sale or Purchase of gold/ornaments	21.00	26.00	39.00	8.00	6.00
Expenditure on marriage of Children	12.00	31.00	50.00	4.00	3.00
Sale of agriculture output	47.00	32.00	13.00	7.00	1.00
To give house on rent	76.00	11.00	10.00	2.00	1.00

Source: Authors' calculations based on survey data.

As has been discussed earlier, a substantial fraction of respondents feel that they have a low autonomy in financial affairs. Table 5 shows the percentage distribution of respondents as per their ranking of degree of autonomy with respect to various financial decisions. It can be observed that unlike the previous sections, a large share of women fall in the categories of very low and low autonomy.

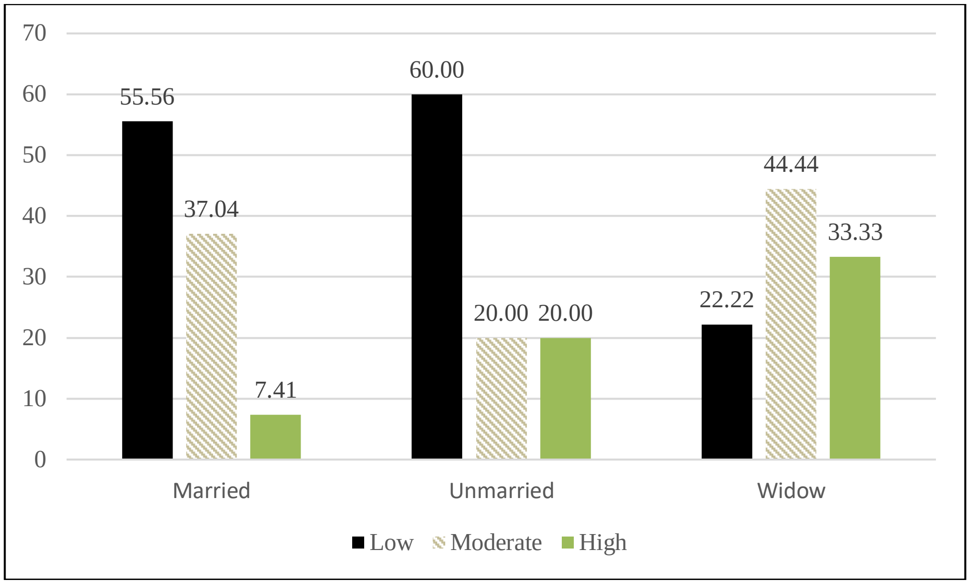
Figure 10: Decision-Making Autonomy in Financial Affairs and Age of the Respondent



Source: Authors' calculations based on survey data.

It is interesting to find that the financial autonomy of women increases with their age. As is shown in Figure 10, large fractions of women falling in the lower age cohorts report low autonomy. Older women who would have accumulated "Authoritative Resources" during their lifetime are thus able to assert greater autonomy.

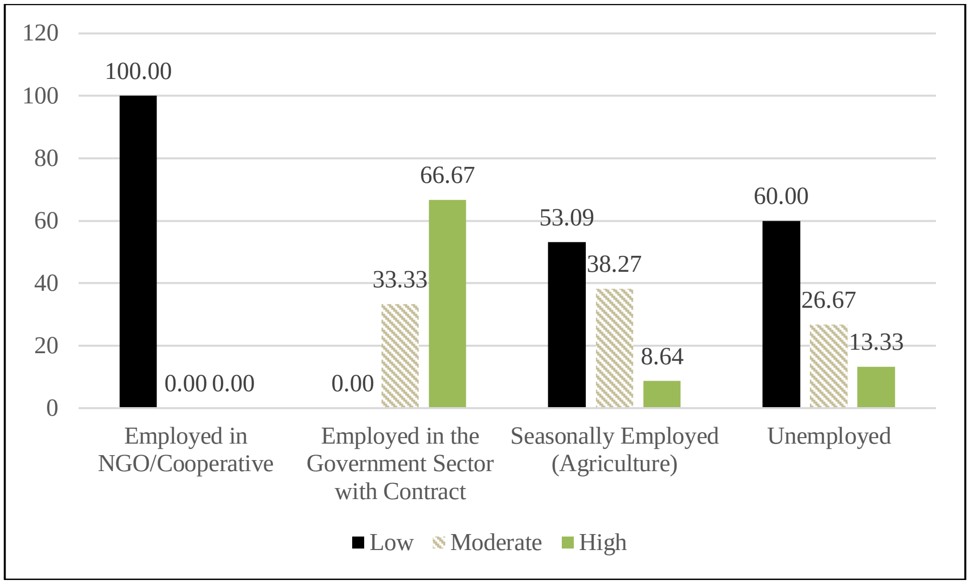
Figure 11: Decision-Making Autonomy in Financial Affairs and Marital Status of the Respondent



Source: Authors' calculations based on survey data.

Analysing the relationship between the marital status and financial autonomy, we find that widowed women have greater autonomy compared to married women who often depend on their families in financial matters and unmarried women who could be continuing with studies and are not employed.

Figure 12: Decision-Making Autonomy in Financial Affairs and Occupational Status of the Respondent

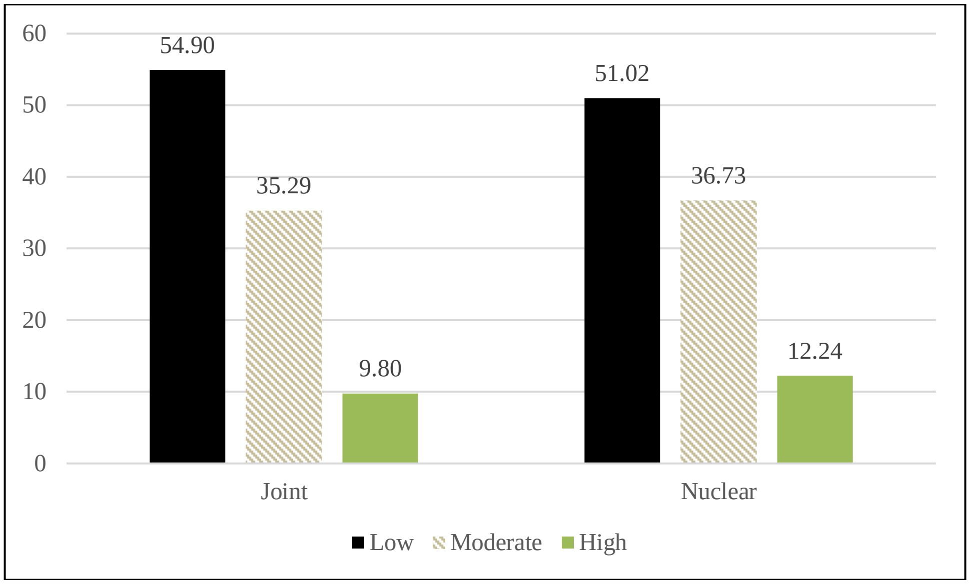


Source: Authors' calculations based on survey data.

Figure 12 shows that employment and nature of employment has an influence on financial autonomy. While the women who are unemployed (this category includes the respondents who are currently studying) or are seasonally employed in the agriculture sector have low autonomy on the financial front. As opposed to that women employed in the government sector enjoy greater authority[6]. Also, while there is not a drastic difference in the levels of autonomy for women from joint and nuclear families, the data suggests that women living in the nuclear family set up are slightly better off.

[6]Government jobs are relatively better compared to seasonal or private occupations, primarily due to job security and other benefits. Hence, women employed in government jobs have greater autonomy.

Figure 13: Decision-Making Autonomy in Financial Affairs and Family Type



Source: Authors' calculations based on survey data.

Respondents were also asked if they have any ownership rights on their house. Only 6 women out of 100 interviewed own their house. It is important to note that these women are widows and the ownership rights came to them because there was no other male family member to assume the ownership. A total of 9 widowed women responded to the survey, not all of them own the house, for instance, Aarti and Kavita Devi mentioned that the ownership of the house rests with their father-in-law, Urvashi Devi's brother-in-law owns the house.

Radha Devi, a 55 year old widow lives in a joint family of 13. While she is the eldest member of the household and owns the house, all the financial decisions are taken by her sons. Godavari Devi is seasonally employed in agriculture, she spends half the day working on the fields, however, the sale of farm produce is handled solely by her husband. 27 year old Asha Devi has studied till 12th standard and is the Gram Pradhan. She mentions that women in her village work very hard, they have to manage domestic chores, agriculture, livestock and much more but financial matters are seldom discussed with them. They usually decide what to cook and are what all to buy for daily use, major financial decisions rest in the hands of men. Women in the region do not adequate financial literacy to manage their savings and small investments. Women employed in agriculture have no autonomy. She adds that effective government policies to generate employment and encourage financial literacy among women are needed in the village.

5.4 FREEDOM OF PHYSICAL MOBILITY

This section analyses the freedom of physical mobility of women. Table 6 shares the percentage distribution of respondents as per their ranking of freedom of movement. Almost half of the women expressed that they have no freedom in travelling for a job. Even those women, who have some freedom, need to acquire permission from family members. Freedom in visiting friends, going to community centres or clubs, going out of village for work is considerable low. Going out or returning home late at night is out of question for many women. Going to the temple or the hospital and visiting children's school is not much of a problem for the women; however, they need permission to see their family and relatives or to attend social or religious functions. Not many women are allowed to go to far off markets, men of the house shop from markets that are located at a long distance from the village.

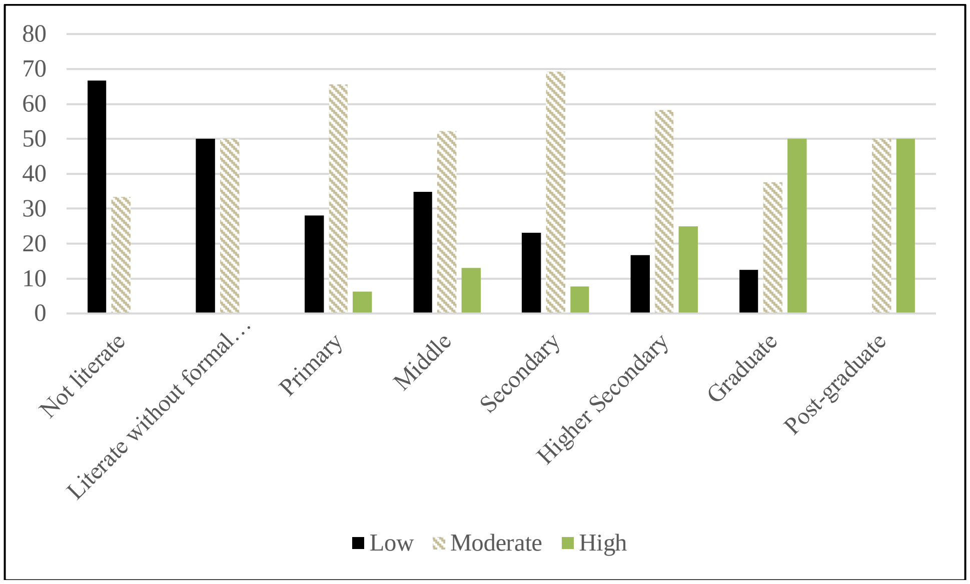
Table 6: Freedom of Physical Mobility (Share of Respondents %)

Activity	Very Low	Low	Reasonable	High	Very High
For a Job	47.00	17.00	14.00	12.00	10.00
Market	5.00	16.00	38.00	26.00	15.00
Temple	0.00	3.00	22.00	43.00	32.00
Social/religious function	2.00	18.00	36.00	27.00	17.00
Doctor/Hospital	0.00	2.00	17.00	35.00	46.00
Visit family and relatives	9.00	19.00	39.00	25.00	8.00
Visit Friends	23.00	30.00	30.00	10.00	7.00
Visit to Children's School	13.00	4.00	19.00	23.00	41.00
Visiting community centres or clubs	56.00	20.00	14.00	7.00	3.00

Go out of village for work	41.00	20.00	29.00	8.00	2.00
Going out late at night/ returning home late at night	91.00	5.00	3.00	0.00	1.00

Source: Authors' calculations based on survey data.

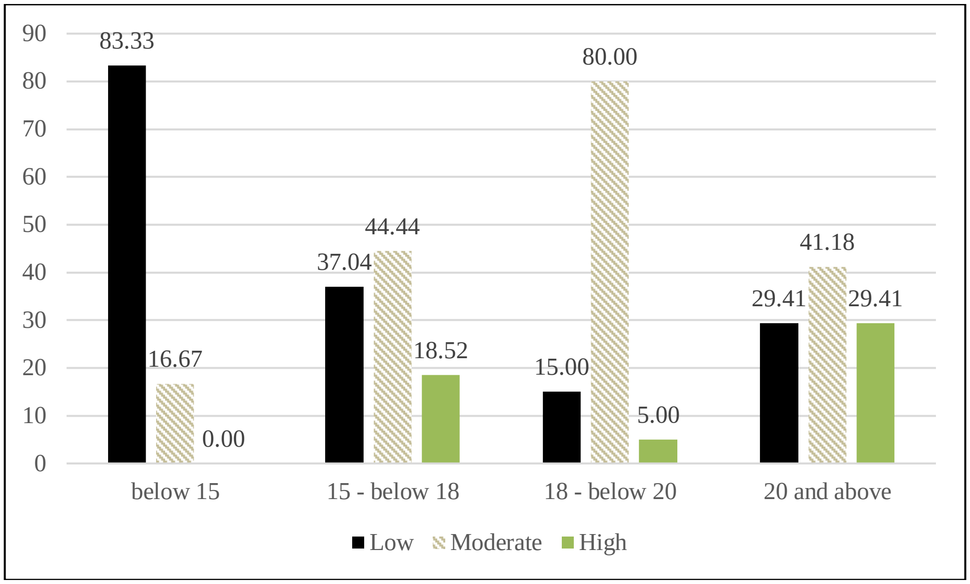
Figure 14: Freedom of Physical Mobility and Level of Education of the Respondent



Source: Authors' calculations based on survey data.

A clear pattern of improvement in freedom of physical mobility with better education is visible in Figure 14. Education, therefore, seems to be positively impacting freedom of movement as well. Figure 15 examines the association of freedom of physical mobility with age of the respondent at the time of marriage. It can be easily observed that the women who married young face greater restrictions on mobility compared to those who married at a later age.

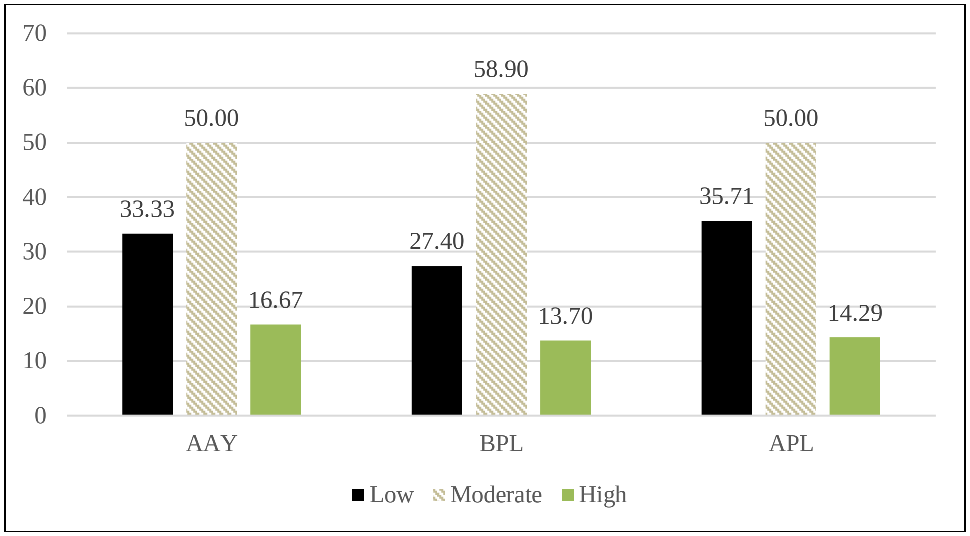
Figure 15: Freedom of Physical Mobility and Age at the Time of Marriage



Source: Authors' calculations based on survey data.

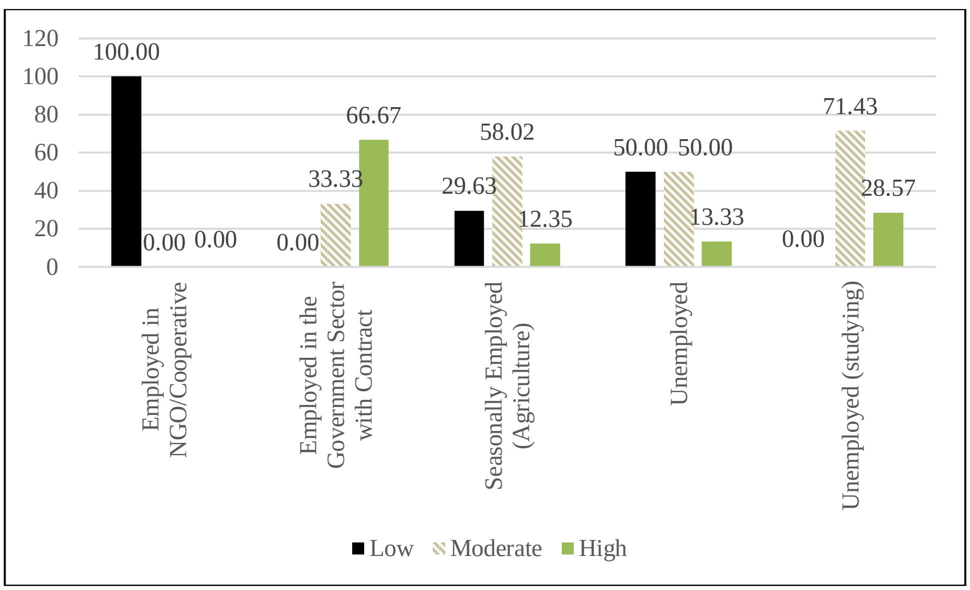
It is noteworthy that women belonging to relatively economic weak backgrounds have greater freedom in mobility. This could be understood from the perspective of the need of the household for the woman to be employed or arrange for resources for the household. Families that are economically well off usually do not allow the women to go to work or travel long distances to fetch water, fodder, fuel wood etc.

Figure 16: Freedom of Physical Mobility and Economic Category of the Household



Source: Authors' calculations based on survey data.

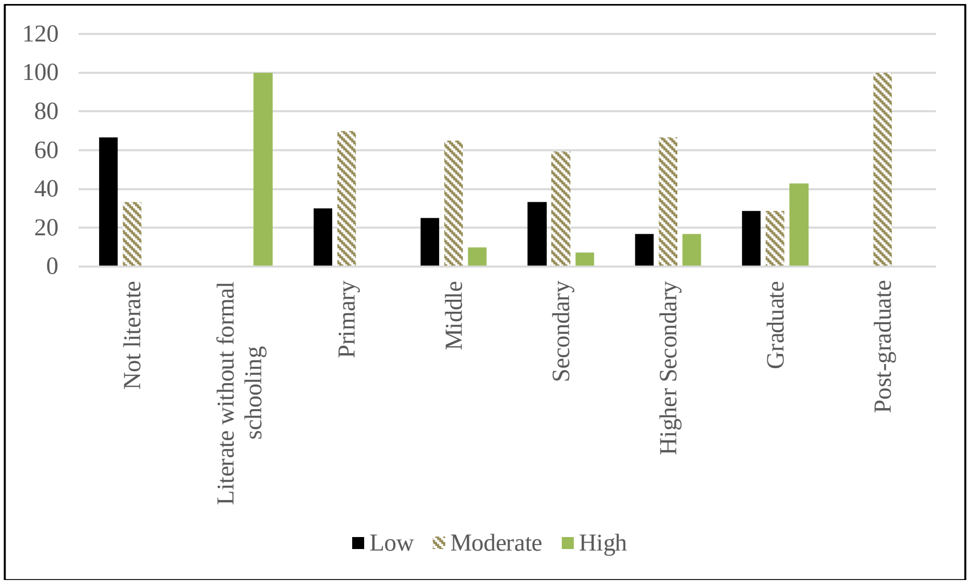
Figure 17: Freedom of Physical Mobility and Occupational Status of the Respondent



Source: Authors' calculations based on survey data.

It is important to note that the respondents who are employed (in the government sector in this case) or are studying report greater freedom in movement. On the other hand, unemployed women and the ones engaged in agriculture are far more constrained.

Figure 18: Freedom of Physical Mobility and Education Level of the Husband



Source: Authors' calculations based on survey data.

Freedom of improvement also improves with an improvement in the education level of the spouse, as shown in Figure 18.

Mamta Devi, comes from an APL, nuclear family. She is 40 and has completed primary level of education. She shared that her level of education will not fetch her job; and her husband also does not allow her to work. Mamta Devi is engaged in seasonal agriculture and restricts herself to her fields and home. She goes to the market occasionally as these affairs are handled by her husband. Leela Devi is a graduate; she trains women in sewing in an NGO. She is 21 and has got married recently. Her in-laws are not supportive of her job and impose a lot of restrictions on her mobility.

These instances highlight that women's lives are not theirs. Most of the decisions no matter how big or small are taken by the others. To improve the socio-economic status of women a lot needs to be done to ensure their autonomy, agency and empowerment.

5.5 OVERALL AUTONOMY

In the previous sections each of the subcomponents of overall autonomy index, namely autonomy in decision-making pertaining to self, children, financial affairs and freedom of physical mobility and the factors influencing the autonomy on these fronts have been discussed in detail. Table 7 shows the distribution of respondents across the three levels of overall autonomy based on the socio-demographic characteristics. Each of these characteristics viz; age of the respondent, education level, marital status, respondent's age at the time of marriage, economic status of the household, occupation of the respondent, family structure as well as husband's education level play an important role determining women's autonomy. A substantial share of women respondents has moderate levels of autonomy and a lot needs to be done to ensure high autonomy and empowerment.

Table 7: Overall Autonomy (Share of Respondents %)

Variable	Category	Low	Moderate	High
Village	Aghariya	28.00	56.00	16.00
	Ladfora	12.00	78.00	10.00
Age Group	15 - below 25	20.00	53.33	26.67
	25 - below 35	12.20	78.05	9.76
	35 - below 45	26.67	63.33	10.00
	45 - below 55	37.50	50.00	12.50
	55 - below 65	25.00	75.00	0.00
	65 - below 75	0.00	50.00	50.00
Education Level	Not literate	66.67	33.33	0.00

	Literate without formal schooling	50.00	50.00	0.00
	Primary	21.88	71.88	6.25
	Middle	17.39	69.57	13.04
	Secondary	7.69	84.62	7.69
	Higher Secondary	16.67	66.67	16.67
	Graduate	0.00	50.00	50.00
	Post-graduate	0.00	50.00	50.00
Marital Status	Married	20.99	69.14	9.88
	Widow	11.11	66.67	22.22
	Unmarried	20.00	50.00	30.00
Age at the time of marriage	below 15	66.67	33.33	0.00
	15 - below 18	25.93	55.56	18.52
	18 - below 20	10.00	85.00	5.00
	20 and above	17.65	64.71	17.65
Economic Category of the household	APL	28.57	50.00	21.43
	BPL	17.81	71.23	10.96
	AAY	25.00	58.33	16.67
Occupational Status of the respondent	Unemployed#	20.00	60.00	20.00
	Seasonally Employed (Agriculture)	20.99	69.14	9.88
	Employed in the Government Sector with Contract	0.00	33.33	66.67
	Employed in NGO/Cooperative	0.00	100.00	0.00

Family Type	Joint	21.57	62.75	15.69
	Nuclear	18.37	71.43	10.20
Education Level of Husband	Not literate	66.67	33.33	0.00
	Literate without formal schooling	0.00	0.00	100.00
	Primary	30.00	70.00	0.00
	Middle	25.00	65.00	10.00
	Secondary	25.93	70.37	3.70
	Higher Secondary	0.00	83.33	16.67
	Graduate	0.00	71.43	28.57
	Post-graduate	0.00	100.00	0.00

Source: Authors' calculations based on survey data. Note: # 7 of these respondents are currently studying.

6. POLITICAL ENGAGEMENT OF WOMEN

To examine political engagement and awareness of women in the region, they were asked if they vote in elections and at what level (Panchayat/State/National), if their vote is influenced by family's opinion, are they members of any political parties and organizations, have they ever contested in elections, participated in rallies and political discussions. They were also asked if they were aware of reservations/quotas for women's political representation.

Table 8: Political Participation of Women (Share of Respondents %)

Political Engagement	Yes	No
Participation in voting in elections	93.00	7.00
Is your vote dependent on your family's opinion	56.00	44.00
Membership of political parties and organizations	4.00	96.00
Contesting in elections	6.00	94.00

Participation in rallies and political discussions	5.00	95.00

Source: Authors' calculations based on survey data.

Majority of the women are aware of their voting rights and exercise them. In the last round of elections, 92% of the respondents voted at the panchayat level, 86% of them casted their vote in the state elections and a smaller share, 83% voted in the national level elections. Close to half of the respondents reported that their vote depended on the choice of their family. Membership of political parties and organizations and participations in rallies and discussions is negligible. Only 6% of the respondents have ever contested in elections, however, there are women who want to contest. A few of them mentioned that they will contest in the next round of elections for panchayat representation. Khushboo Arya, a 28 year old married woman from an antyodaya household, expressed her wish to contest in elections but has no support from her husband or inlaws. Parvati Devi's husband works as a private supervisor out of Uttarakhand. Parvati is a post graduate; she is aware of voting rights and wants to cast her vote. However she has never been able to vote, since she has to travel to her husband's place frequently. She is usually not in the village when elections happen; she is not a member of any political party and has no political engagement.

It is unfortunate that the respondents of the two villages are unaware or have wrong information about political reservations for women. 85 respondents were unaware of any such quotas; one of them stated that there was no reservation for women at all. Only 14 women had some information on the issue.

Political participation of women can bring a sea change in their socio-economic status. Greater representation of women in the local bodies in the village can have positive spillover effects. The results of our paper speak volumes of negligible political engagement of women in the region. Government programs can certainly help make women aware of what all they can achieve for themselves, other women and their village through political participation.

7. DRUDGERY IN THE HILLS

We have highlighted several instances in this paper, where a woman could not attend school because the schools are located far away from the village or a mother could not educate her children well because of economic constraints and the fact that she has no employment (she would again have to travel a long distance to her workplace) to fulfill her children's needs or a woman who wants to study further or train in a vocation but does not get time due to engagement in domestic chores and responsibilities of agriculture and livestock. Women in hilly areas are overburdened with work and multiple responsibilities.

22 of the respondents mentioned that they live in a kuchha house, 21 in pucca house and the structure of dwelling for the remaining 57 is mixed. Table 9 below gives details of the amenities in the respondents' house. 43% of women cook without a separate kitchen in the house, it is surprising, that even in these times of advancement there are families who do not have a bathroom in the house.

Table 9: Basic Amenities in the House (Share of Respondents %)

Basic Amenities	Yes	No
Separate Kitchen	57.00	43.00
Bathroom	91.00	9.00
Electricity	99.00	1.00

Source: Authors' calculations based on survey data.

94% of the families also have livestock which is usually taken care of by the women. Also majority of families use fuel wood as the main source of fuel (nearly 90 families). Domestic chores and taking care of children or aged family members takes a lot of effort and time on the part of the women. Table 10 intends to give a rough idea about the same. It is known that there is no economic reward for the unconditional care that the women extend to their families, most of the times, they don't even get respect and recognition for the domestic work they do.

Table 10: Time Spent in Domestic Work (average estimates)

Domestic Work	No. of Hours Spent in a Day
Cooking	3 to 4
Washing clothes	2 to 3
Cleaning the house	1 to 2
Taking care of children/aged	2 to 3 (Entire day for some women)
Collection, grinding and cleaning of food grains/cereals for domestic consumption	3 to 4 (Half or the entire day for some women)

Source: Authors' calculations based on survey data.

Women were asked if the men in the family offered any help in the domestic work. Close to 40% of the respondents mentioned that they get help from the men in the family, 10% receive no help while roughly half of them stated that the men help only to some extent.

Table 11 shares details on the average time spent in a day on outdoor activities. Women devote a major part of their day in agriculture, managing the livestock, fetching water, fodder and fuel wood. Only four women out of all the respondents stated that they receive some income out of selling milk, fuel wood and fodder that they collect.

Purchasing items for daily domestic use requires going to the markets, located outside the village. This responsibility is usually managed by the men of the house.

Table 11: Time Spent in Outdoor Activities (average estimates)

Outdoor Activities	No. of Hours Spent in a Day
Agriculture	3 to 4
Animal Husbandry	2 to 3
Water Fetching	1 to 2

Fodder Collection	1 to 2
Fuel Wood Collection	1 to 2
Purchase of items for daily domestic use/consumption	4 to 6 (Men, do the shopping for most of the families)

Source: Authors' calculations based on survey data.

When it comes to outdoor activities, 70% of the respondents said that the men in the family help, 28 respondents receive help to some extent while 3 of them have no help from the men in the family.

Women have to walk long distances to fetch water, fodder and fuel wood. The data suggests that women in the hilly areas have to walk 2 kms on an average every day to gather fodder and fuel wood and nearly 1 km to fetch water.

Strenuous routine hardly leaves time for education, leisure, recreation or self-care. Table 12 gives an average estimate of time that the women get for themselves in a day.

Table 12: Time taken out for Education/Leisure/Recreation/ Self-care (average estimates)

Education/Leisure/recreation /self-care	No. of Hours Spent in a Day
Attending School	0 to 1 (Women who are studying spend 6 to 8 hours)
Reading and Writing	0 to 1 (Some women teach their children)
Training in a vocation	0 to 1
Craft work	0 to 1
Pursuing a hobby	1 to 2
Watching TV	1 to 2
Social Work	0 to 1
Religious Activities	1 to 2

Computer	0 to 0.5
Social Media - Whatsapp, Facebook	0 to 1
Self-care	1 to 2

Source: Authors' calculations based on survey data.

Extreme work burden and little time for self certainly impact the quality of life, physical health and mental state of being. Unfortunately, women remain trapped in this endless cycle of drudgery with little scope for self - development.

8. POLICY SUGGESTIONS AND CONCLUSION

India is infamous for its unfair gender norms, and gender discrimination gives rise to inequality between men and women in every sphere of life; personal, social, cultural, economic and political. More women than men live in poverty. Economic disparities persist partly because much of the unpaid work within families and communities falls on the shoulders of women and because they face discrimination in the economic sphere.

Social and legal institutions still do not guarantee women equality in basic legal and human rights, in access to or control of land or other resources, in employment and earning, and social and political participation. Laws against domestic violence are often not enforced on behalf of women.

Higher levels of women's education are strongly associated with both lower infant mortality and lower fertility, as well as with higher levels of education and economic opportunity for their children. Women are usually in charge of securing water, food and fuel and of overseeing family health and diet. Therefore, they tend to put into immediate practice whatever they learn about nutrition and preserving the environment and natural resources.

Addressing gender equality and women's empowerment requires strategic interventions at all levels of programming and policy-making (Kabeer 2005). Education is a very important factor to empower the women. Therefore literacy programmes should be properly implemented. There is an urgent need for cooperative and positive attitude of the bureaucrats and government to empower the women.

In the families the attitude of male members should be changed. They can provide a chance to the women in the family to participate in the political activities. A healthy environment should be created by eliminating the *parda* system, dowry system, and caste system. Generally it is also observed that women representatives of the Panchayat do not participate in the meetings. Effective measures are therefore needed to ensure not just local representation but participation of these women in the policy and decision-making space.

Economic, political, educational empowerment and stewardship of natural resources are critical to ensure development for all. It is crucial therefore:

- To create an ambience in the society for tolerance and mutual respect for women;
- To ensure that education becomes accessible to the socially and economically marginalized women and girls;
- To enhance participation of women and girls in formal and informal education programmes and to create an environment in which education can serve the objectives of women's equality;
- To encourage and promote a gender-based discourse in society;
- To enhance the self-image and self-confidence of women;
- To form women's groups at the village level so that the women's groups can take collective action to start the process of social change;
- To create an environment whereby women can seek knowledge and information and enable them to recognize their contribution to the economy as producers and as workers, and enable them to play a positive role in their own development and in the development of society.
- To work for the livelihoods enhancement of vulnerable and poor women through enterprise and business promotion.

The focus should be on practical gender needs by concentrating mostly on drudgery reduction, health, nutrition and basic education. SHGs and bank linkages could be created. It is these `groups' that can address issues that affect women's everyday lives -- relating to education, health, law, panchayats, and local issues such as `*jal*,' `*jungle*,' `*jameen*' (water, land, fodder).

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An Introduction to Machine Learning for Economists

Shailu Singh[1]

Associate Professor, Department of Economics, Hansraj College, University of Delhi

1. Introduction

Machine Learning is an area of rapidly growing importance in empirical economics. It uses data to identify complex relationships between economic variables which contribute to a better understanding of the underlying data generating processes with the potential to significantly enhance the accuracy and efficiency of economic models (Varian, 2014). Currently, machine learning algorithms are being widely used in the areas of economic forecasting, financial modeling (Gogas, P., & Papadimitriou, T., 2021), and risk management among many others. In this article, we conduct a very primitive review targeted mainly for undergraduate students, of the role of machine learning in economics by understanding its scope, approach, and link to the conventional methodology. Pointers to some current applications highlight the potential that young researchers can harness by including machine learning techniques in their toolbox.

2. Scope: Why Machine Learning?

Why have economists become so interested in machine learning? Empirical economics has its own toolbox consisting of conventional statistical and econometric techniques, regression analysis being its workhorse. Is it because machine learning offers new, more efficient ways of doing things? Or is it because it allows us to do things that the conventional techniques were ill equipped to handle? The answer to both the questions is in the affirmative. Machine learning uses more data driven methods to identify relationships between variables compared to the traditional more theory driven methods. Historically, these methods were not so widely

[1] Email id: shailusinghs@gmail.com

used in economic applications as the large amounts of data they required were typically unavailable. Today the kind of data available has undergone a sea change both quantitatively and qualitatively. Vast amounts of data are available which makes these methods not only very attractive, but often the only option as conventional methods is not geared to handle data sets of this size. Also, since the early 2000’s the use of multiprocessor graphic cards has sped up computer learning and made these tools easily implementable. However, current advances in machine learning allow the use of methods that work with smaller amounts of data as well and give more efficient results than the conventional techniques. The innovation derives from not just from using large datasets more efficiently but also from allowing the use of some very novel data sources for example text data (Khandayet al., 2020; Chatterjee et al., 2019).Also, scholarship has identified areas for combining conventional and machine learning methods and it is safe to say that the intersection between them is growing substantially.

3. Approach: How is it different?

Empirical economics has relied heavily on regression analysis, both parametric and non-parametric. Parametric models assume that we know the function that describes the relation between the dependent and the independent variable/s while non-parametric regression does not assume anything about the relationship between them. Since data is needed to discover the functional form besides estimation of the non-parametric model, these methods typically require more data.

The most basic parametric model, linear regression postulates the mean of the variable of interest as conditional on one or more explanatory variables. A random sample drawn from the population of interest is used to estimate the conditional means by minimizing a loss function such as the residual sum of squares. The R square is a measure of the goodness of fit. The estimated model performs three key functions: first, quantification of relations between economic variables i.e., estimation of the marginal effects; second, prediction based on the estimates obtained and third, hypothesis testing, while more complex methodologies aim to estimate causal effects.

Machine learning, methods are focused primarily on prediction though researchers are working on extending its use to hypothesis testing and causal analysis (Athey, S., 2015) as well. In short, data driven methods are used to get an efficient prediction of a dependent variable given a set of independent variables. The table below shows how the nomenclature of machine learning models differs from the conventional ones.

Table 1: Comparison of Conventional Analysis and Machine Learning

CONVENTIONAL ANALYSIS	**MACHINE LEARNING**
Model	Algorithm
Predictors	Features
Estimation, Prediction and Inference	Prediction
Prediction considered good if high R bar square	Prediction considered good if gives good out of sample predictions
Estimating the model	Training the model

While the number of machine learning algorithms in use is very large, those used for regression and classification such as Linear Regression, Logistic Regression, Stepwise Regression, Multivariate Adaptive Regression Splines (MARS), Locally Estimated Scatterplot Smoothing (LOESS) and Decision Trees are most popular, especially among economists. Other algorithms used are instance based such as k-Nearest Neighbor (kNN) and Support Vector Machines (SVM); Regularization algorithms such as Ridge Regression, Least Absolute Shrinkage and Selection Operator (LASSO) and Elastic Nets; Ensemble Algorithms such as Boosting, Bootstrapped Aggregation (Bagging) and Random Forests.StatQuest with Josh Starmer is a very useful YouTube channel (https://www.youtube.com/@statquest) to understand each of these methods clearly.

The numerous ML algorithms mentioned above are broadly classified under two categories - Supervised and Unsupervised. Supervised algorithms are used to construct predictive models. While the conventional applied economist will think only of linear regression if the dependent variable is continuous and logistic regression if it is binary, machine learning offers many other choices which could reveal aspects of the relationship between two or more variables that the traditional methods may not be able to grasp (Varian, 2014).These algorithms may be used for classification or numeric prediction. The target or the output feature is the variable that is being predicted using the input features. The algorithm gives clear instructions on what and how it will learn from data. Unsupervised algorithms are used to build descriptive models. This is done by looking for patterns in the data that can then be summarized in new and interesting ways. Unlike Supervised algorithms there is no target variable here; all features are at the same level. These algorithms are used for pattern discovery or clustering/segment analysis.

A key feature of all ML methods is that data is divided into two sets- a **training set** and a **testing set**. The training set is used for estimation or fitting the data. The estimates obtained are then used to see how well they describe the remaining data i.e., the testing set. This is unlike the traditional econometric approach where the entire data is used for estimation purposes and then the coefficient of determination is used to indicate the goodness of fit. This out of sample testing is a characteristic of machine learning methods that makes the prediction more efficient.

Another distinctive feature is the technique of **Cross Validation** (Zhang, Y., & Yang, Y., 2015; Bergmeir,2012). A problem frequently encountered by empirical economists is the choice of the functional form for the model to be estimated. There is a wide range of models that may be employed, parametric and non- parametric models both. Theory often does little to clarify matters in this regard. Students of basic econometrics will be reminded that if the model specified is linear in the parameters linear regression may be applied though the model does not have to be linear in the explanatory variables. In fact, polynomial terms are used to fit more flexible functional forms. For example, a linear relation between Y and X would require just one term in addition to the intercept whereas a U-shaped curve would imply a parabolic relation and hence a quadratic term in addition to the linear term. To go further, if the relation between Y and X involves a point of inflection then a cubic term needs to be added. Thus, the more flexible the relation that one wants to fit, the larger the number of polynomial terms that need to be incorporated in the specified model. The traditional regression techniques allow for the model to be as flexible as one wants, but in doing so degrees of freedom are lost and so the model becomes increasingly imprecise. Too many predictors than appropriate for estimation, force the use of data reduction techniques which need not be the only choice of the researcher if machine learning models are employed.

Cross validation uses data to choose between alternative models, the objective being to choose the one that gives the best predictions. So, for a particular application, one might think that either of Logistic regression, Support Vector Machine or K- nearest neighbors may be appropriate. The approach is to apply the train-test procedure to each method and compare their prediction performance. Each time a record is kept of how many incorrect predictions are made by each method. A factor contributing to the efficiency of these methods in predicting better is that the division of data used for training and testing is not arbitrary. All the data is divided into a certain number, say 4 blocks. It first uses blocks 1, 2 and 3 for training the data and then uses the block 4 data for testing and makes a note of how well the model predicted the block 4 data. It then repeats the process such that each block is used for testing the data once. It then summarizes the performance of each method and chooses the method that does the best job. Since the data was divided into 4 blocks, this is referred to as fourfold cross validation. If data is divided into k blocks, it is called k fold cross validation. In the extreme case, each block consists of one observation. So, if there are 10 data points and hence 10 blocks, 9 blocks are used for training and one for testing and then summarizing the performance. This is called “leave one out cross validation”. In general, 10-fold cross validation is practiced. Thus cross validation ensures maximum predictive efficiency and is being widely adopted even in conventional models.

4. Conclusion

One of the earliest uses of machine learning in economics was in finance where White (1988) used Neural Networks for predicting daily IBM stock returns. Advancements in the field of computing such as parallel computing made Deep Learning techniques like Recurrent Neural Networks and Convolutive Neural Networks available for economic applications. Currently, algorithms such as Support Vector Machines and Random Forests and techniques such as kernelization, bagging and boosting allow the application of these models to relatively small datasets (Gogas, P., & Papadimitriou, T. (2021) and make it a very potent tool for both

Macro and Micro forecasting. In many applications the results from the application of machine learning methods are more efficient than those obtained from adopting traditional econometric methods (Kreiner, A., & Duca, J., 2020). Increasingly, researchers are finding ways to combine both (Bertoletti et al., 2022) such as the GARCH-SVM (Chen et al., 2010) while integrating machine learning techniques such as cross validation into the traditional too (Bergmeir,,2012).

Machine learning has immense potential to advanceeconomic research and the literature is full of innovative applications such as prediction of household solid waste generation (Namoun, A., et al.,2022), time series forecasting (Masini et al., 2023), detecting Covid 19, using text data (Khanday et al., 2020), understanding emotions in text (Chatterjee et al., 2019), personality analysis, predicting personality with social media(Golbeck et al.,2011), selection and productivity of human capital (Chalfin et al., 2016) to cite a few. Table 2 lists some applications with the algorithms used in the studies respectively.

Table 1: Examples of machine learning methods applied in economics-related fields.

Sources	Machine Learning Models	Objectives
Lee et al. (2020)	Support Vector Regression (SVR)	Anomaly Detection
Husejinović (2020)	Naive Bayesian And C4.5 Decision Tree Classifiers	Credit Card Fraud Detection
Zhang (2019)	Improved BP Neural Network	Aquatic Product Export Volume Prediction
Sundar and Satyanarayana (2019)	Multilayer Feed Forward Neural Network	Stock Price Prediction
Hew et al. (2019)	Artificial Neural Network (ANN)	Mobile Social Commerce

Abdillah and Suharjito (2019)	Adaptive Neuro-Fuzzy Inference System (ANFIS)	E-Banking Failure
Sabaitytė et al. (2019)	Decision Tree (DT)	Customer Behavior
Zatevakhina, Dedyukhina, and Klioutchnikov (2019)	Deep Neural Network (ANN)	Recommender Systems
Benlahbib and Nfaoui (2020)	Naïve Bayes and Linear Support Vector Machine (LSVM)	Sentiment Analysis

Source: Extracted from Nosratabadiet al., 2020

Aspiring economists need to understand these methods to fully exploit their research potential, conduct extensive reviews of the applications of these methods in niche areas of economics such as Finance, Energy, Education, Development etc. to identify the gaps and contribute to the discipline.

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- https://www.youtube.com/@statquest

Stakeholder Capitalism: The Way Forward

Suwarn Subodh Bhagwat[1]

BA (H) Economics, III Yr, Satyawati College, University of Delhi

Abstract

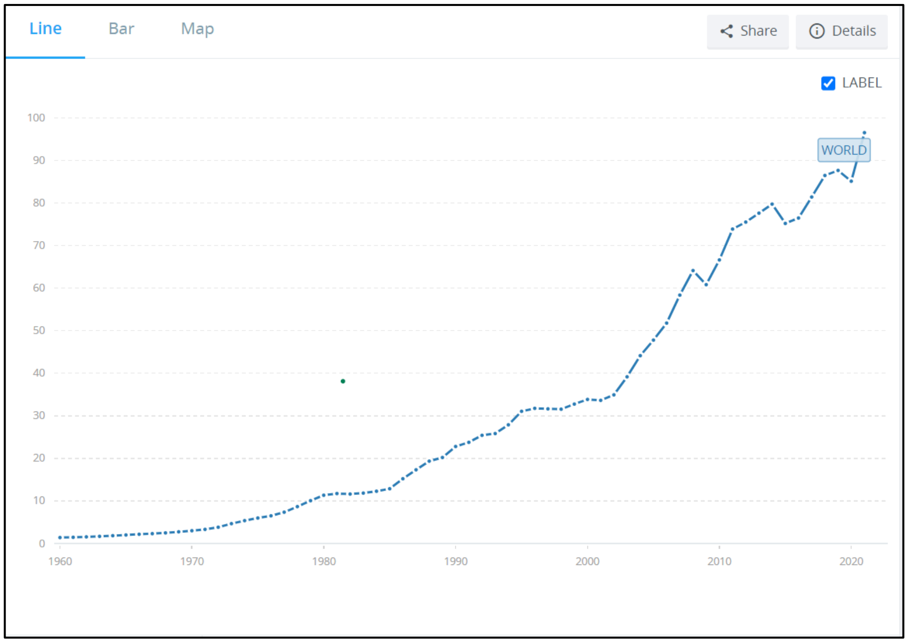
The paper revolves around the central idea of stakeholder capitalism and its evolution as an emerging form of capitalism. This evolution is rooted in the existing frameworks of shareholder capitalism, yet distinct from the latter in ways that are crucial for the sustainability of the planet. The concept was propounded by the World Economic Forum, and outlined quantitatively in terms of stakeholder metrics, which are also reviewed in this paper. The paper attempts to understand and review the concept of the term stakeholder and stakeholder capitalism. It also attempts to review the adoption of stakeholder capitalism by Indian firms using evidence on how these firms have begun to embrace stakeholder capitalism. This is in line with the adoption of stakeholder capitalism across the globe spearheaded by the World Economic Forum in 2020. This paper also discusses how stakeholder capitalism has evolved to become even more relevant in recent times. The paper posits that the post-COVID recovery period could encourage the adoption of stakeholder capitalism at an accelerating pace in India leading to a more sustainable growth trajectory for an emerging economy.

Keywords: *Sustainable, economic growth, wealth creation, corporate, social responsibility, Donut Economics, stakeholder.*
JEL Codes: M14, O4, Q01

[1] Email: suwarnsubodhbhagat04@gmail.com

1. Introduction

The world has experienced periods of wars, destruction, recovery and regeneration in the past century. The two world wars led to complete destruction of life, cities, countries and businesses. In terms of economic systems, socialism perished, while capitalism has survived and thrived leading to unprecedented economic growth in the world. Before the beginning of the 21st century, 45 countries were socialist in their chosen mode of development, which reduced to 5 by 2021. (World Population review, 2022). The world economy has grown spectacularly from 1.45 US$ trillion in 1960 to 96.51 trillion US$ in 2021 (World Bank, 2021).



Source: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?end=2021&most_recent_value_desc=true&start=1960

Despite such high growth, experts have debated on the sustainability of the growth, especially after the 2020 global pandemic. Zahoor et al. (2021) shows that China's economic growth is positively impacted by clean energy and investment in environmental sustainability. Moreover, clean energy investment improves environmental sustainability at the expense of economic growth.

Humanity in the 21st century faces to fulfil its need within the natural boundaries of the planet which emphasizes that no one falls short of life's essential needs along with ensuring the safety of mother earth with respect to environmental and social standards (Raworth, 2017).Since the onset of pandemic due to Covid -19 and the subsequent global shutdown in 2020 (Schwab and Wanham, 2021), the search for more sustainable routes for growth has accelerated.

Midttun and Atle (2022) have suggested rethinking business models and economic governance in a form which visualizes social and ecological responsibility. They argue that in spite of the corporate social responsibility agenda, business is too limited in its motivation to carry the regulatory burden. As a result, they are implying a much wider concept of 'partnered governance'. They exemplify the two crises of the first decades of the 21st century, 2008 financial crisis – with the subsequent 'Great Recession' and the major Covid – 19 pandemic, followed by an even larger recession where the world growth fell from 2.6% in 2019 to -3.1 in 2020 (World Bank report, 2021) and much of the private economy moved into lockdown. The global state of emergency caused by the first wave of COVID-19 has mostly receded, but a new wave of infections is putting the world once more on high alert. Countries around the world cautiously resumed social and economic life, but the economic recovery is very uneven. In this context, the concept of stakeholder capitalism has been put forward as a more sustainable, and viable economic system in recent times.

The paper uses document-based research analysis to assert its arguments. "Document analysis is a systematic procedure for reviewing and evaluating documents both printed and electronic". It demands data should be inspected and elucidated to create meaning, understanding and the development of empirical understanding (Mhlanga, 2022). The paper attempts to synthesise multiple facets of stakeholder capitalism, tracing its roots and its resurgence after Covid pandemic.

The structure of the paper begins with an understanding of who constitutes a 'stakeholder' and the notion of capitalism that considers goals of all stakeholders, not just shareholders. It traces the journey of expansion in the list of stakeholders that businesses need to care and account for. This expanded list of stakeholders spurred the World Economic Forum (WEF)

(2020) to compile a list of metrics based on planet, people, prosperity and governance, which were subsequently adopted by multinational companies across the world. The paper discusses the low adoption of stakeholder capitalism by Indian firms and acknowledges the limitations faced by the framework globally during and after the pandemic. Drawing on these developments a few suggestions are offered to make the stakeholder capitalism framework more adoptable in the post pandemic times by developing countries like India.

2. From Stakeholder – To – Stakeholder capitalism

As per Gomes (2006), the word stakeholder found a place in management literature as early as 1963 in an internal memorandum of the Stanford Research institute. However, the focus on delivering value to shareholders meant that firms ended up maximizing profits, rather than expanding to look at other stakeholders in the system. Philips et al. (2003: 479) asserts, "*the term stakeholder is a powerful one due, to a significant degree, as the term means different things to different people*". The term stakeholder is broad in perspective and refers to any group, person, or business that can claim a business's resources or is affected by it.

From the word stakeholder derives stakeholder theory and according to Freeman and Phillips (2002), 'stakeholder theory is a managerial conception of business strategy and ethics' The key to any business's success is the management of their relations with their main stakeholders. These include individuals in the form of customers, vendors, suppliers and numerous people engaged in the delivery of the products of the business. The second set of stakeholders pertain to the environment -natural resources extracted from the core of the earth, water, air, gases, soil, plant life, animal life and any non-human aspect of nature. Brandt and Georgiou's (2016) seminal paper reinforces this view and asserts that the stakeholder approach is about understanding and using relationships between the corporation and the groups that have a stake in it so that the best possible economic results can be reached for all stakeholders, and not selected ones like shareholders alone.

While there is considerable interest in recent times over the framework of stakeholder capitalism, its concept can be traced to Schwab (1971), who based it on the idea of

'WEALTH CREATION' signifying that a company or a business requires all the stakeholders involved in the venture to prosper. Businesses should care about the stakeholder value, they have to begin with how wealth is created in the first place and if wealth is created collectively then it is meant to be distributed adequately (Mazzucato, 2021).

The concerns of adequate wealth creation and equitable distribution were part of theParis Agreement (2016)[2] and the Thunberg effect (2018)[3]. At the 2019 Summer Meeting in Geneva, the International Business Council set in motion a project focused on developing proposals for consideration at the 2020 meeting in Davos-Klosters. In the same year, in August 2019, at the Business Roundtable[4], a group of CEOs from leading US companies challenged the age - old rule of shareholders' profit maximization by pledging to modernize their corporate purpose with a more sustainable way to help their customers. As a result, they agreed that stakeholders, such as suppliers and society at large must also be valued. This sentiment is also reflected in 'The Universal Purpose of Business in the Fourth Industrial Revolution', published by the World Economic Forum (2019). Founded in 1971, World Economic Forum[5], has become an epicentre for the promotion of the stakeholder capitalism framework after the 2019 Round Table Conference in Davos. Subsequently in September 2020, the world's first standardized ESG (Environment, social, and governance) metrics were released by WEF, which makes member businesses to measure and disclose meaningful and relevant aspects of their performance on environmental, social and governance issues as a contribution to the progress of sustainable development goals on a consistent and comparable basis. Stakeholder capitalism is also gaining adhesion in the Fourth Industrial revolution amongst academic enthusiasts Mhlanga (2022). Briyan Moynihan (2023) adds that it is time

[2] Paris Agreement 2016: - As per the United Nation Framework Convention on Climate Change(UNFCCC), Paris Agreement is a legally binding treaty on climate change adopted by 196 parties at Conference of the parties (COP) 21 on December 12, 2015 in Paris and enforced on November 4, 2016 with the aim to limit global warming to preferably to 1.5 degrees Celsius.
https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement

[3] Thunberg Effect 2018:-Greta Thunberg, is an environmental activist from Sweden who gained fame due to her address for climate change in 2018 with a strike. The effect of this address is studied by Sabherwal et.al., in an article published by Journal of applied psychology in 2021. (https://onlinelibrary.wiley.com/doi/10.1111/jasp.12737)

[4]Business Roundable, 2019 :- (https://purpose.businessroundtable.org/) (Accessed on 15/01/2023)

[5] World Economic Forum (https://www.weforum.org/events/world-economic-forum-annual-meeting-2023/) (Accessed on 14/01/2023)

to measure more progress and spend less time worrying about what and how to measure sustainable growth.

However, Freeman et al. (2007) asserts that “stakeholder capitalism is not solely based on private property, self-interest, competition, and free markets - such a view requires constant justification based on achieving good outcomes or avoiding authoritarian alternatives" but Stieb (2009) tries to point out that Freeman’s appeal to legal, economic, and ethical constraints ultimately produce arguments that are invalid. To my knowledge these assertions make a firm attempt to bring out the key feature of stakeholder capitalism, people and their management is the base for stakeholdersim.

The definitions have varied over time and Schwab in his book on stakeholder capitalism tries to draw attention to a major difference between the stakeholder capitalism in the 1970s and modern (21st century) stakeholder capitalism by addressing the bigger and more global stakes today and hence the metrics of stakeholder framework can be an apt measurement tool in the near future.

3. Metrics of Stakeholder Capitalism

The basic tenet of stakeholder capitalism is founded on the inclusion of more stakeholders in the capitalist model of doing business. The impact of business activities on profitability is a subset of its impact on social and environmental factors, which contribute to lowering inequality and encouraging sustainability.

Sustainability of any business has become dependent on sustainability of the ecosystem it operates in. Sustainability is associated with multidimensional long-term survival; socially, environmentally and economically (Doane and MacGillivary, 2001: 9). Sustainable development calls for meeting the needs of the present generation without compromising the ability of future generations to meet their own needs. The pioneering work by the United Nations to monitor sustainability through 17 Sustainable Development goals (SDGs) is critical for the future of any business (Mhlanga, 2022: 5). Sustainable Development Goals work on the logic that optimization of the balance of social, economic, and environmental sustainability is must in any form of development.

Economic sustainability as a subset of sustainability and can be interpreted as the ways companies use to stay in business (Doane and MacGillivary, 2001: 9).Business operations are beginning to be affected by a variety of factors: climate change, nature loss, social unrest around the working conditions, COVID-19, and changing expectations of the role of corporations. Transition risks which arise from society's response to changing surroundings such as changes in technologies, can increase in the business costs and undermine the existing products and asset values. Coppola and Blohmke (2019) in an article mention about the climate related risk faced by businesses in the form of legal cases where the business has been held accountable for damaging effects of climate change. The pandemic has exposed business' vulnerability to factors beyond individual control; yet their actions collectively contribute to these factors- climate change is one such factor, further aggravating the long-lasting failures regarding equality and access to economic opportunities.

While many countries require sustainability reports as part of annual reports, there is an absence of standards to measure the impact of business activities on the environment, different sections of society, climate, and inequality levels. Bank of America (2023) contends that stakeholder capitalism helps the private sector advance needed progress as a result 90% of the major U.S. business issue ESG practices compared to 20% a decade back. Beck and Ferasso (2023) assert the close link between sustainable development goals and stakeholder capitalism, as the former includes all stakeholders in any ecosystem. Such inclusion implies that adoption of stakeholder capitalism as the guiding model for businesses will implicitly take businesses closer to achievement of sustainable development goals. It is plausible that adoption of stakeholder capitalism could promote partnerships between businesses and with different stakeholders in greater push towards advance economic growth and development in a sustainable manner.

Towards a better and uniform measurement of efforts, to include stakeholders beyond shareholders, a set of 21 core and 34 expanded metrics have been developed by involving 140 stakeholders (Hillyer, 2021). These metrics are inextricably linked to sustainable development goals and consequently align with the goals of sustainability. The logic of these metrics is rooted in a changing world that necessitates changes in business goals and objectives and measurement of 'success' of any business. These metrics involve non-financial disclosures by business and are based on four key pillars: people, planet, prosperity and principles of governance and '..*reflect six-month consultation process with more than 200 companies, investors and other interested parties"* (WEF, 2020: 13). These metrics revolve around the 4 pillars, which can also be treated as stakeholders within any ecosystem.

Pillar 1- **People**: Broadly classified into three stems, people metrics is the path laid for the companies to encourage dignity and equality, provide better health and wellbeing, and shape skills for the future. In the category of dignity and equality, businesses need to draw special attention to key problems faced by employees (major stakeholders) related to diversity and inclusion, pay and equality, wage level and risk for incidents of child, forced or compulsory labour. The measures that can be taken to prevent such problems include, paying equal wages/basic salaries to people at the same level, keeping a check on the availability of job positions for people from all caste, gender, minor- major groups, and other relevant equality areas. Apart from just providing fair jobs and healthy environments for work, the business should also look for a sustainable and skilful future for their firm and their country. To accomplish this, development of training programs and recruitment of expert mentors for training and skilling the youth can be beneficial in the long run.

Pillar 2- **Planet:** Future generations and what we leave behind for them is a critical area of concern amongst experts. The world's resources are limited and there is always a trade-off between the present use of resources and conserving them for our future generations. The need for greater and tighter regulation for use of resources to ensure their optimal and sustainable use has been highlighted by the Paris Agreement as well as subsequent discussions in WEF. The planet metrics has been segmented into seven major concerns about the planet - air pollution, climate change, fresh water availability, nature loss, resource availability, solid waste, and water pollution. The WEF has recommended abiding by the regulations and suggestions offered by the Task Force on Climate-related Financial Disclosures (TCFD). The WEF suggests the disclosure of a timeline of at most three years for implementation, along with commitment to GHG (Greenhouse Gases) emission targets that are in line with the goals of Paris Agreement. Businesses should provide detailed reports of the number and area (in hectares) of sites owned, leased or managed in or adjacent to protected areas and/ or key biodiversity areas (WEF, 2020). Water serves as a major lubricant and the most important element for survival of all living beings and therefore companies have been asked to provide their water consumption details and the percentage of risk for water contamination.

Pillar 3- **Prosperity:** This pillar is expansive as it refers to prosperity of society at large. As society may include all living beings, it makes it difficult to define and measure prosperity as such. According to stakeholder capitalism metrics the prosperity metrics are broadly classified into three areas - prospects, community and social vitality, employment and wealth generation, innovation in better products and services. The report by WEF (2020), lays emphasis on employment and wealth creation by the people and for the people. It is advised that companies indulge themselves in community research and development activities (R&D), payment of taxes in due time, employment and wealth generation.

Pillar 4-**Governance:** Government is an important stakeholder for all businesses. Since the government is the regulator, as well as the creator of rules, it is advisable for businesses to work in tandem with governments to keep any 'friction' to the minimum for the betterment of the society, planet and people. The government as a stakeholder encourages ethical behaviour, purpose, quality of the governance, risk and opportunities oversight for all. In a nutshell, we can assume governance to be the deciding factor to keep all the above three metrics in check.

4. Adoption of Stakeholder Capitalism metrics

The metrics for stakeholder capitalism provide guidelines to businesses on how to value resources which they 'borrow' from the society, rather than 'own' from the narrow perspective of shareholder capitalism. These metrics are akin to a set of dos and don'ts for the companies to abide by, reflecting their commitment to grow their businesses sustainably.

The adoption of stakeholder capitalism can become noteworthy as some businesses have a market capitalization or profit levels that exceed the GDP of many small countries. Apple Inc., a technology company has a market capitalization of $2.65 trillion (Johnston, 2022), greater than the GDP of Italy that stands at $2.10 trillion; Italy is the 8th largest country by GDP in 2021 as per the World Bank. Saudi Aramco, an oil company based in Saudi Arabia has a market capitalization of $2.33 trillion which is also greater than Italy's GDP. The adoption of stakeholder capitalism as a business model by such large businesses with multinational operations can be a game changer for this model of capitalism.

After consulting over 200 business and continuous efforts of the WEF in collaboration with the Big 4s, Bank of America and International Business Council, 137 businesses have provided space to stakeholder metrics as part of their annual reports, which has lent greater credibility to the concept and the viability of its adoption at a larger scale. Accenture, Bank of America, Dell Technologies, Deloitte, HSBC holdings, Nestlé, Nasdaq, KPMG, EY, PwC and many large groups have lent space to specific metrics in their annual reports, lending their support to adoption of stakeholder capitalism as a new framework of doing business.

Nestle in its sustainability report of 2021 states that it has reduced greenhouse gas emissions by 4.0 million tonnes since 2018, stating that by 2030 it will be reduced by 50% from 2018 levels and eventually 0 by 2050. Similarly in the area of nature and biodiversity the company is emphasizing on recyclable plastic with 74.9% of its packaging designed for recycling along with 100% deforestation free primary supply chains till 2050 for cocoa and coffee. The company pledges to plant 200 million trees by 2030. Nestle Waters assures that it will use its expertise to attempt the revival of local water cycles through more than 100 projects for its 48 sites by 2025. In the people's metrics Nestle has provided employment opportunities to 1.44 million young people along with 27.2% women in the top 200+ senior executive positions and ambitionizes to help 10 million young people around the world to have employment opportunities (Nestle, 2021).

Accenture in its annual report (2022) of ESG metrics declares that it promoted 157,000 of its employees, along with delivering 40 million training hours and 47% of the staff employed are female with a target of gender parity by 2025. Accenture by 2025 aims to reach a net-zero emissions stage by 2025 and currently working with 85% renewable electricity as their power source and 100% renewable by 2023.

Addressing the need for a more sustainable food system, Bain and Company (2022) claims that addressing this issue and working on it is one of the best chances at reversing climate change. It has invested $54 Million in pro bono work with leading environment non- profits since 2015 and completed 650+ climate projects in the past five years. The company has signed partnerships with 12 world class universities and expected 3000+ employees to have participated in upskilling programmes by the end of 2022. The company has achieved their emission targets in the year 2019 with 92% reduction and has purchased sustainable aviation fuel to cover 100% of North American flights.

5. India's Evidence

Since the Covid pandemic there has been a growing need to develop some of the more efficient and sustainable ways of business. India is a developing country and requires to focus more on sustainable development. With a population of about 1.4 billion people and around 65% population is below the age of 35, India has a great opportunity to succeed in the metrics. Since it is easier to teach the young generation the benefits of sustainability and convince them to work for it, India should be one of the lead countries for adoption and successful implementation of the metrics in upcoming years. There is a strong need to develop infrastructure and guidelines according to the market of India by the government. India has been sitting in the back seat of the development and innovation car but has always implemented policies with full backup and minimum loopholes. Will this be the case for stakeholder capitalism also or will the country be able to take first mover advantage?

The current position of India in the world economy is satisfactory and tends to grow faster than most of the developing countries. Three giant Indian groups, Reliance Industries, Mahindra Group and Wipro have agreed to abide by the metrics of stakeholder capitalism making them the first ones from India to shake hands on it in Davos 2020 (WEF, 2021). The world responses on the metrics have been of a mixed perception i.e., some companies who have implemented the metrics have started to show better results while others have just fulfilled it on papers. Anand Mahindra in his interview quotes "*Purpose driven businesses are likely to be more resilient than those that do not embrace people and planet. Investors recognize that. We support the World Economic Forum's effort to standardise reporting through the development of comprehensive ESG metrics and believe that this will be a step forward for a sustainable world"* (Mahindra, 2021).

The evidence of the three Indian companies participating in this sustainable method of capitalism can be gathered from their ESG integrated financial reports of previous years. Reliance industries (2022) reports the total monetary stakeholder value added amounting to ₹ 3,38,208 crore in FY 2021-22 from ₹ 2,57,030 in FY 2020-21. During the covid pandemic the company provided the community with 1000+ MT of high purity liquid oxygen for meeting requirements of 1,00,000 patients per day. In addition, the company under Mission *anna seva* provided 8.5 crore free meals to the needy and also distributed 40+ lakh free covid- 19 vaccinations. Reliance has committed to a net zero carbon emissions goal by 2035 with the help of a new energy proposition. For this purpose, the company signed a MoU with the government of Gujrat worth ₹5.95 lakh crore and also commenced development for Dhirubhai Ambani Green Energy Giga Complex ('DAGEGC'). Reliance industries has created an inclusive ecosystem with 13,000+ MSME vendors as partners and has become one of the largest taxpayers in India along with empowering 50,600+ villages all over India in recent years (RIL, 2022).

Mahindra and Mahindra have claimed to have upgraded the skills of their 83% employees out 48,961 in the FY 2021-22. M&M has mitigated 10,432 tCO2 through energy saving measures in the reporting year (M&M, 2022). M&M through its children education initiatives have provided 83,591 girls benefits through 5,338 academic support centres in nine states.

Wipro has helped 3,85,562 people from disadvantaged communities to access primary healthcare through 10 healthcare projects across 5 states. In the social metrics Wipro aims to maintain and enhance an environment that is full of diversity and protective of human dignity for which company is targeting 80% and above retention after parental leaves and diversity in management to 20% by 2025. The company saved 2 million units of energy and avoided 63000 tonnes of CO_2 emissions.

Indian companies that have abided by the framework of stakeholder capitalism are limited which shows the lack of awareness of the sustainability concept in business. However, after the acceptance of G20 leadership in 2023 with the motto ‘One Earth’, ‘One Family’, ‘One Future’ the country expects more business groups to join this sustainability framework before the 2023 summit.

6. Limitations of Stakeholder Capitalism

A critical analysis of any theory is very necessary before its practical implementation and eventual success. In the case of adoption of stakeholder capitalism as a model of business and the consequent reporting of business activities under the proposed metrics, a major drawback is the absence of quantitative goals for businesses to chase. If profit maximization was the stated goal in shareholder capitalism, then there is a need to devise newer goals under stakeholder capitalism which business can follow in quantitative ways. Holding back productive investment is one of the major economic drawbacks of shareholder capitalism (Martin, 2021). In yet another report by New Economics Foundation (2017), society and environment are stated to be key domains of failure for shareholder capitalism, as the latter entails under-investing in innovation, skilled workforces or essential expenditures.

At a broad level, different stakeholders can be at loggerheads, leading to slower decisions and possible loss of profits. For example, safety measures for workers entail higher costs, causing profits to dip while increasing the welfare of workers. Keeping both stakeholders-workers and shareholders who seek profits, at the same level of importance is contradictory. A hierarchy of stakeholders is tough to devise, and is antithetical to the very notion of stakeholder capitalism. Yet, prioritization of stakeholders is necessary to allow decisions to be made transparently and quickly enough to benefit from unexpected opportunities. Bebchuk et. al. (2022) findings suggest that although many business leaders advocated for stakeholderism there hasn't been much negotiation done for the protection of stakeholder groups as compared to the substantial growth of shareholders.

A resolution of such conflicts between stakeholders is not easy, and this possibly explains the slow adoption of this framework by businesses. Almost everyone and every element of nature is a stakeholder, yet businesses need to acknowledge and take steps to expand their business goals beyond 'profits'. A slow evolution of the relative importance of stakeholders is the first step towards adoption of stakeholder capitalism, as a sustainable way forward that defocuses on economic growth.

7. Conclusion

The study of social sciences is an inaccurate one as it is based on principles and concepts that evolve over time. "*Economics is a tricky science as well as a dismal one. For every theory and framework about economics, there is another theory that counters it*" (Doane and MacGillivary, 2001: 8). The evolution of ideas is based on the collective experience of economies and all the economic agents within the global ecosystem. Stakeholder capitalism is one such framework that is getting attention as it is believed to be more effective and efficient in terms of delivering sustainable growth. The theory of stakeholder capitalism is a possible key to the twin problems of rising inequality in a rapidly growing world in unsustainable ways. The Covid pandemic has acted as a break on growth of GDP, bringing the unsustainability of growth under limelight.

The multidimensionality of inequality- wealth, income, opportunities, incomes, resources - with adoption of the model of shareholder capitalism, can possibly be tackled by stringing all stakeholders in the business model making it more sustainable, albeit slower in its growth. The COVID led crisis and its attendant brakes on growth rates of economies has highlighted the need for business models that make businesses explicitly accountable to a mission and set of interests beyond shareholders returns. There is an urgent need to create, develop and implement sustainable models where the need for sustainable growth gets due recognition in spirit and action. It has been observed that global business leaders have started adopting stakeholder capitalism metrics with an understanding that increased attention on the 4 pillars on which these metrics rest would safeguard their businesses in the future. While many multinational businesses have adopted the metrics and have begun to take action on them, India's efforts are at best satisfactory. Only three big corporations- Reliance Industries, Mahindra Group and Wipro have signed the deal at Davos that calls for adoption of SC and reporting on the metrics designed on the pillars of sustainability of the planet and its people. India could take the lead as a president of G20 with the motto of "One Earth · One Family · One Future" that embodies the spirit of a common planet and its resources. The call for LIFE- Lifestyle for Environment places the environment at the centre of all efforts of the Indian government to lead the development journey in sustainable ways (PBNS, 2022).

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VICTORIA'S DIRTY SECRETS:
Analysing the collapse of the brand from a Marxist lens

Aditi Verma, Khushi Jain, Sharmi Das, Prashita Nath[1], Yashasvini Awasthy
BA (H) Economics, III Yr Students, Lady Shri Ram College

Abstract

Dialectical Materialism, the dialectic process to study the phenomenon of nature including class, labour and socioeconomic interactions has been a powerful instrument of knowledge since its development in the 19th century. Its applications have been seen in various processes with diametrically opposite forces or tendencies which are at clash and continue to be so until a solution is reached. Notable examples have been the evolution of society from a primitive community to a present-day capitalist society. This paper explores its application not just on a macro-level but on a micro-level system within a large capitalist framework of the United States (US). The micro-level system in question is Victoria's Secret, a US-based lingerie brand. This has been done by using *Grounded Theory*, the qualitative research methodology involving the discovery of emerging patterns in ideas by tracking the chronological stages of development of the brand within the ever-changing American society. The emerging patterns have been used to explain the evolution of the capitalist enterprise i.e. Victoria's Secret.

Keywords: Dialectical Materialism, Social Transformation, Split in Consciousness, Superstructure, Marxist Economics, Fashion, Apparel Industry

JEL Classification: B24 (Socialist; Marxist), Z11 (Economics of the Arts and Literature), Z13 (Economic Sociology)

[1] Email: prashitanath5@gmail.com

1. Introduction

Marx's theory of dialectical materialism, today, stands as an amalgamation of several of his rudimentary principles. It analyses the shift of society from one social formation to the next - an inevitable feat according to Marx.

The theory states that social transformation comes about as a result of contradictions and adjustments (of society to these contradictions) in society. It articulates **three** processes within its more significant principle. To understand these processes, a few essential terms must be defined.

- **Productive Forces:** Productive Forces are defined as the mode and means used by man on nature in the process of production and the subsequent abilities he develops in his activities. This means the tools and equipment he uses to produce, the natural resources he works on and more. Every social formation is characterised by different productive forces. Primitive times used hard, unfinished tools while capitalism is characterised by machinery *(Lange, 1963)*

- **Production Relations:** Production Relations are formed in the process of production between man and man, connected by a thing. They are social relations established through the process of production and distribution (Lange, 1963)

- **Mode of Production:** The Mode of Production is the amalgamation of social productive forces and production relations. Based on a given type of ownership of means of production, modes of production are internally balanced whole in which productive forces and their base are adjusted to the requirements of a given state of development of social productive forces *(Lange, 1963)*

- **Social Relations and Social Consciousness:** Besides these production relations there exist other social relations like those between family members. These are conscious relations that a man is aware of. Keeping this consciousness in mind, man has certain ideas about these relations - termed social ideas. A web of these ideas, then, becomes an ideology. Man also creates certain attitudes towards these relations - say, sentiments of hate against those with opposing ideas - which can be termed as social or socio-psychological attitudes. All these factors taken together form the social consciousness *(Lange, 1963)*

- **Superstructure:** The superstructure of a particular mode of production is that part of social relations (outside of production relations) and of social consciousness which is indispensable for the existence of that particular mode of production *(Lange, 1963)*

- **Social Formation and Economic Base:** The mode of production together with superstructure forms a social formation and the production relations specific to a social formation is an economic base *(Lange, 1963)*

Marx says, to begin with, that production - which is a dynamic process since man is constantly working on nature and hence constantly changing his artificial environment, brings about changes in the productive forces constantly. According to the "Law of Progressive Development of Productive Forces" *(Lange, 1963)*, the relationship between man and nature is dependent on the pre-existing means of production and human experience available to man. In the social process of labour, man transforms his environment by creating new means of production consisting of the products of his labour like houses, towns, villages etc. and by simultaneously acquiring new skills while creating those means. These new surroundings are called the artificial environment.

The new material environment gives man the ability to make changes in the social process of production as a stimulus. Man's increased skill then further brings about a change in the artificial environment yet again. The complexity of each artificial environment following the last keeps increasing - the productive potential of the environment keeps increasing (thus strengthening man's domination over nature) until the productive forces are forced to change altogether. Herein arises the first contradiction i.e., by the creation of an artificial environment, contradictions are set up between his previous activity and the stimulus to which the new environment gives rise. These contradictions are eliminated by a change in the activity - by a change in the productive forces. This is the first process of the theory.

Herein begins the second process. This process takes into account productive forces and modes of production. Having defined them both, the contradiction and its adjustment are now analysed. According to the “Law of Necessary Conformity between Production Relations and Character of Productive Forces” *(Lange, 1963)* (or the First Law of Sociology), these production relations must always be adjusted to the productive forces prevalent in each social formation. For example, a large factory requiring a large quantity of labour to use specified machinery and technical installations cannot exist under a feudal society - capitalism must persist i.e., capitalist production relations of capitalists and a reserve army of labour must exist.

The second contradiction can be seen here. Following a change in the productive forces in the first step, a contradiction now arises in the new productive forces and old production relations. The mode of production ceases to be an internally balanced whole. The first law of sociology provides the adjustment for this contradiction as the production relations adjust to the new productive forces to end this step of the process of a changing social formation.

Now begins the last step of this process which considers the superstructure and economic base. As is natural, an appropriate superstructure is required to adjust to production relations under each social formation i.e., since production relations or economic bases are specific to a social formation, the superstructure must be adjusted to this economic base for the social formation to properly exist. The necessity of conformity between the economic base and superstructure is the “Second Law of Sociology” or the “Law of necessary conformity between the economic base and superstructure” *(Lange, 1963)*. This law is the adjustment to the last contradiction that arises between new production relations (the economic base) in the second process and the old superstructure. The new superstructure that arises has elements of the old and nuclei of the future as well. As an example, Christianity originated in ancient times but persists even today.

This paper aims to trace the process of dialectical materialism in the timeline of Victoria's Secret - its establishment, rise and fall and the various changes that can be connected to the elements of this process. It does so by explaining the transformation of the brand from one stage to another using the processes given by Marx.

2. Literature Review

The evolution of society seen through the lens of Marx's theory of dialectical materialism can be considered all-encompassing in nature in its scope. Contrastingly, the application of this theory can be - and has been - linked to certain fragments of the economy or industry as a whole.

The authors have studied the basic premise of the process in question through research by O. Lange (1963) and J. Gurley (1978). Their elucidation of the process is made through its division into three steps - each a contradiction and adjustment of variables in the sphere of political economy. Reiterating Marx's definitions of political economy and all its relevant variables, Lange and Gurley state a series of changes in the environment of man, thing and their social relations. These changes are then followed by a chain of adjustments that lead to the transformation of one social formation to another like that from feudalism to capitalism.

While Lange and Gurley have tried to simplify Marx's theory directly in their work, research has also been done on the evolution of fashion and Victoria's Secret specifically - albeit not under the sphere of political economy.

A paper by Marc Ouellette analyses the catalogues of Victoria's Secrets published between the years 1996 to 2006. It highlights the fact that during the decade under consideration, the imagery of women in the catalogues has been hypersexualised and argues that feminism has been used as a marketing tool. Further analysis has been done on how empowerment was related to hypersexualisation in these catalogues. In the later sections of the paper, a detailed analysis of images from the catalogues of the decade under consideration has been carried out - showing the passivity of the poses and how women were marketed as objects in the early years of the decade to how hyper-femininity and empowerment have been related to each other by incorporating aggressivity in poses in the later years of the decade.

Furthermore, research by Djurdja Bartlett studies transnational fashion and how the two factors of transnational fashion - regulated trade and inequality - are a result of the capitalist mode of production. Transnational fashion has then been studied as a harmful effect of globalisation - including economic and cultural exploitation of less developed countries. On the other hand, the paper also studies how fashion has proved to be an important tool in freeing women from autocratic regimes such as mandatory dress codes. The later sections of the paper highlight the relations of power in the fashion industry through the views of Karl Marx and David Harvey analysing the appropriation of tools, the division of labour and the distribution of capital. The study is concluded by analysing the possibility of a crisis in the fashion industry under capitalism along with the climate crisis.

3. Methodology

This paper has primarily adopted a qualitative approach to the analysis of the research hypotheses. The theory of Dialectical Materialism, as devised by Marx has been used to study social transformation. The theory has been put to test to check whether it explains the phenomenon at the microeconomic level. The paper uses the example of Victoria's Secret - a US-based lingerie company as the microeconomic unit. This has mandated the alteration of the scope of certain terms used in Marx's original theory. Furthermore, the paper has incorporated Grounded Theory to substantiate the assertion made in the hypothesis. The chronological stages of the development of the brand have been discussed briefly. This ensures the secondary data obtained from business metrics sets the basis for theory construction. The timeline of Victoria's Secret from its inception to the present time provides contextual clarity. Subsequently, the paper has attempted to link the changing patterns in business operations to the forces of emerging contradictions and adjustments. The evident trajectory has been explained using Dialectical Materialism.

Hypothesis:

Is Marx's theory valid on a micro level?

The theory of Dialectical Materialism has been applied to a macro-economic environment. By explaining the transformation of one social formation to the other, the theory encompasses several macroeconomic elements and a collective consciousness of the masses which is essential for the existence of any social formation.

The question to answer now is this - can the theory of Dialectical Materialism be applied on a microeconomic level as well? Can firms and their history be connected to the elements of the theory? Seeing as the terms defined by Marx apply to a macro-environment, one may need to alter their scope. The paper does this and tries to answer this question using Victoria's Secret and its existence in the prevailing environment.

4. Body

4.1 The Political and Economic Environment: A brief timeline of all major events before the brand's decline

1977-1981: Where it all begins

Victoria's Secret came into existence on June 12, 1977, inspired by American businessman Gaye Raymond's uncomfortable trip to a department store to buy undergarments for his wife. Raymond spent almost eight years studying the lingerie market and set out to create a place where men would feel comfortable shopping for lingerie. He planned to open a store selling women's undergarments that would cater to guys.

Catering to a very specific market, the store's launch was a huge success. It grosses a whopping $500,000 in its first year of business. It quickly expanded to four new local stores and a mail-order operation. At the time, Victoria's Secret was a little participant in the underwear industry, with the company being referred to be "more burlesque than Main Street."

1982-1990: Sold to Les Wexner and witnessed a complete transformation

In 1982, Raymond sold the company to Les Wexner, creator of Limited Stores Inc of Columbus, Ohio which followed a 360-degree transformation of the brand's image towards a greater focus on female customers. Wexner revamped the stores to evoke 19th-century England and he continued Raymond's practice of listing the company's headquarters on catalogues at a fake London address while the actual headquarters were in Columbus, Ohio.

This worked well for the company and by the 1990s it became the fastest-growing mail-order business. Sales and profits from the catalogue continued to expand due to the addition of clothing, swimwear, and shoes and wider circulation.

The early 1990s: The beginning of problems

In 1990, problems started surfacing concerning the brand’s product quality, especially underwear. Howard Gross, the then-president, was assigned to fix this. During this time, the profit growth slowed down.

The late 1990s: A turnaround with a new market and a fashion show

Victoria's Secret expanded beyond apparel in the 1990s with the launch of its line of fragrances in 1991, followed by its entrance into the billion-dollar cosmetics market in 1998. In 1995, New York hosted the inaugural Victoria's Secret Fashion Show, which is today extremely well-known. This became a mainstay for the company's image for the next 23 years. The following year, in 1999, the company added the Body by Victoria line which received a cult-like following.

2000-2016: Moving away from 19th-century England's image

To boost catalogue sales that were falling behind other divisions, Wexner appointed Sharen Jester Turney, formerly of Neiman Marcus Direct, as the new chief executive of Victoria's Secret Direct in May 2000. In 2000, Turney started to reimagine the Victoria's Secret catalogue, moving it away from "breasts—spilling over the tops of black, purple and reptile-print underthings" to one that would appeal to an "upscale customer who now feels more comfortable buying La Perla or Wolford lingerie" and toward a layout that was more akin to a Vogue lifestyle. By 2006, one-third of all purchases in the intimate apparel market were made by Victoria's Secret, which had 1,000 locations all throughout the United States.

2016: Split into three divisions- Lingerie, Beauty, and Pink

In February 2016, after Turney stepped down as CEO Victoria's Secret was split into three divisions: Victoria's Secret Lingerie, Victoria's Secret Beauty, and Pink, each with a separate CEO. During this period, sales revenue continued to stagnate and drop in early 2017. (Watson 2019).

2018-2022: The beginning of controversies leading to the company's demise

Several events led to the company's gradual decline. Let's look at all of them in chronological order.

- ***November 2018: board level issues***

In his now-famous interview with Vogue, chief marketing officer of Victoria's Secret Ed Razek stated that the company will not be hiring transgender or plus-size models for its catwalk show. This came with a lot of public backlashes that the brand was out of touch and only propagated monolithic beauty ideals. In the week following, Victoria's Secret's chief exec Jan Singer resigned after just two years in the role. Singer's exit came in the wake of the lingerie industry giant's decreasing revenues and rumours that the stock price had fallen by roughly 39%.

- ***February 2019: sales continues to fall things became worse***

When compared to January 2018, when same-store sales increased by 4%, the company said that the intense promotions negatively impacted its total sales figures and resulted in an even smaller profit. Nearly 53 of its 1143 outlets in America were closed.

- ***May 2018: The iconic Victoria's Secret Fashion Show is taken off air***

The fashion show was cancelled after seeing the worst TV ratings in its history, and Wexner said the company would be "taking a new look at every area" of the operation that needs to "adapt and change to expand."

- ***July 2018: Jeffrey Epstein was arrested for crimes with close relations to Victoria's Secret***

Billionaire Jeffrey Epstein was charged in July with offences allegedly committed in connection with sex trafficking between 2002 and 2005 involving victims as young as 14. Although the financier never held a position with the lingerie business, he was close with L Brands' chief executive Wexner, and it has been hypothesised that Epstein used this connection to Victoria's Secret to further his alleged wrongdoings.

- ***July 2014: more models come out and speak about sexual abuse***

A few weeks following Epstein's arrest, numerous models came forward to discuss alleged sexual abuse they suffered at the hands of Timur Emek, the photographer for Victoria's Secret. Two women accused photographer Greg Kadel of making unwelcome attempts in February 2018.

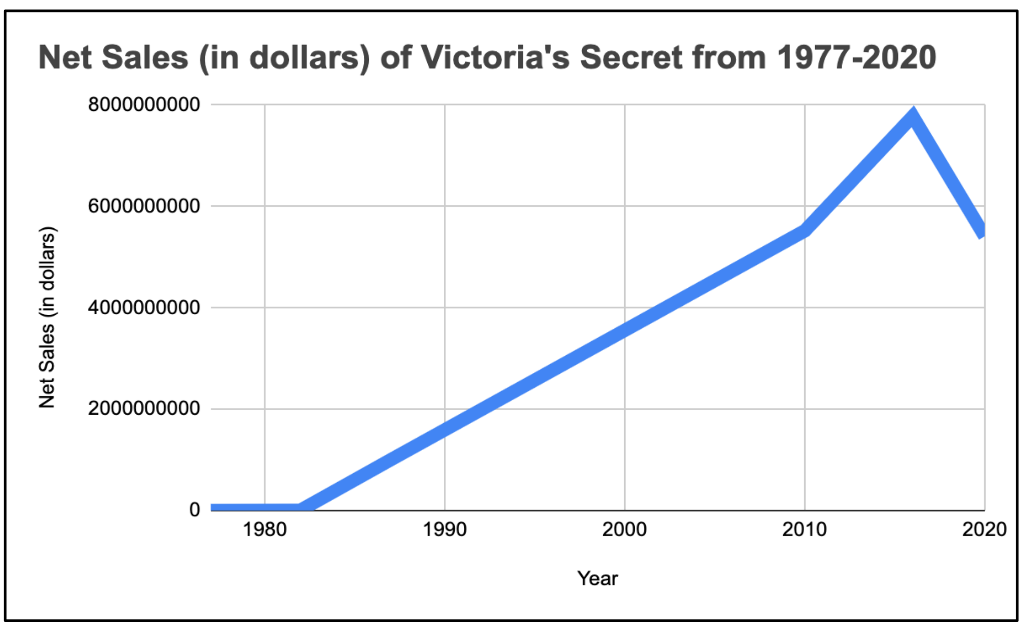
- ***August: Models Alliance stands together against the brand***

Models banded together and wrote an open letter to Victoria's Secret the day after Ed Razek announced his retirement. The Models Alliance wrote the letter asking the lingerie company to take specific steps to safeguard models from sexual misconduct.

- ***February 2020- the company sold to Sycamore Partners***

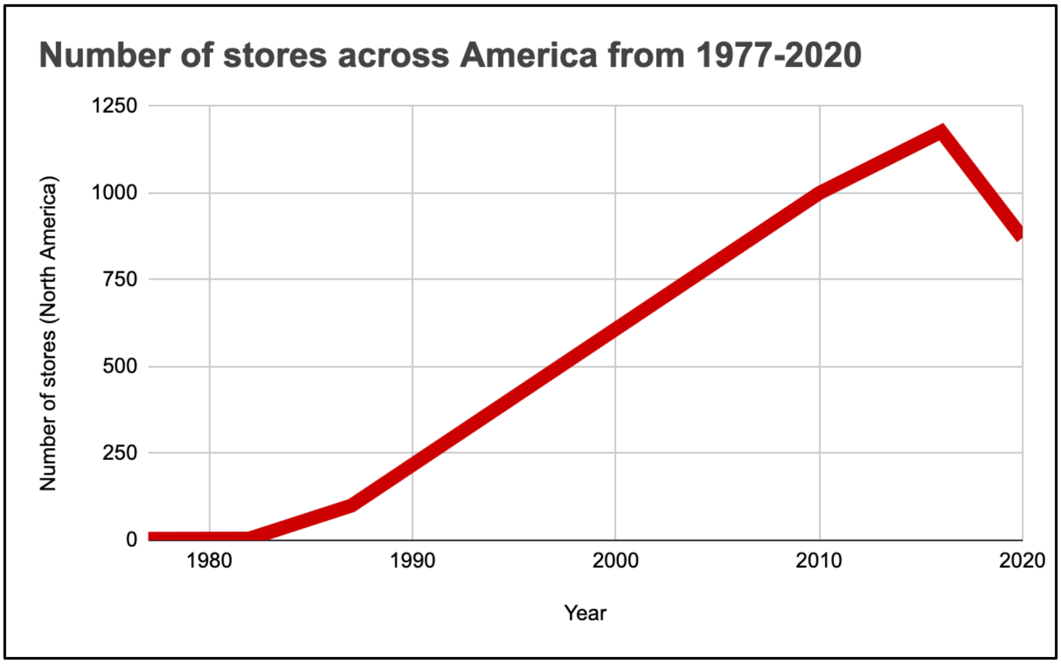
L Brands would keep a 45% minority ownership in the business when it was sold to private equity firm Sycamore Partners for $525 million in February 2020. In the end, the transaction failed, and Wexner resigned. Following allegations of harassment, discrimination, and retribution at Victoria's Secret, a shareholder sued the corporation in June 2020 for failing to take action.

Figure 1: Graphical Representation of the timeline: Net Sales



Source: Statista

Figure 1: Graphical Representation of the timeline: Number of stores



Source: Statista 2022

4.2 Born Capitalist - The making of the Merlin of the Mall

"I wanted to be successful, whatever that meant" - *Les Wexner*

An undying profit motive is perhaps an identifying attribute of a modern capitalist. While this sentiment can be traced as far back as the establishment of a capitalist society, the vehemence with which it seizes the masses has only gotten stronger over the decades.

One such case of a (successful) capitalist in the making between one generation and the next is Les Wexner. Wexner always worked odd jobs from a young age for a little extra income. His retailer parents opened a women's store by the name of Leslie's store in Columbus where Wexner - in his teenage years - took a keen interest in data and sales patterns, profit sources, and cost reduction. He identified with his father an irregularity in the already identified sales patterns to increase profits. Wexner was adamant that high-ticket products like coats were not, in fact, the largest source of profits for the store (as his father identified). Rather, he identified lower-cost casual wear as having the highest profit potential in the store.

Wexner then founded a brand of his own in 1963 - Leslie's Limited - because it sold a limited range of products i.e., only sportswear, to prove his hypothesis. This famously became known as the Limited brand - a global empire - and went public only 6 years after its establishment. Wexner's acumen for business allowed the group to grow at such a pace that it bought the original Leslie's in only two years. Soon, Wexner's increasing profits went into large-scale investments - one being in Mast industries, a shipping company. This investment, paired with an increasing number of L brand stores around the world, was his final leap in establishing a successful international brand.

It was in 1982 that Wexner finally acquired Victoria's Secret. Having identified the potential in a lingerie store at the time, VS became one of the Limited's biggest successes. Wexner also expanded to other luxurious brands - Abercrombie and Fitch being one of them. He also founded other luxury brands like Bath and Body Works (The Limited Inc. n.d.).

The journey from a single sportswear store to the global empire that the L brand became came with multiple milestone changes in the companies working. Wexner backed his successes with constant technological progress and an ever-growing market share. With his investment in Mast industries, the L brand was able to procure materials for all its subsidiaries from one source - ensuring efficient operations. Furthermore, other advancements like financial controls through point-of-purchase terminals to better understand data patterns gave the brand a significant advantage (NowThis News 2021).

4.3 Dialectical Materialism

Moving from one social formation to another - the social development of mankind

The rise of capitalism can be studied through the case of Victoria's Secret by using the three dialectical processes. To do so, the expansion of the scope of the definitions of typically Marxist terms like the artificial environment, productive forces, production relations and superstructure to cover the modern-day complexities subsumed in today's brands is required.

The process of transition from one social formation to another consists of the appearance of several contradictions and adjustments leading to the subsequent disappearances of these contradictions. This is the dialectical process. The working process can be observed through the timeline of Victoria's Secret.

The first dialectical process is found in the continual emergence of contradiction between man and nature. This can be traced back to 1977 when Roy Raymond went to buy lingerie for his wife and was extremely dissatisfied with his experience. This uncomfortable trip of Roy Raymond became the stimulus that prompted Roy to open his lingerie store. This implied a change in the social process of production. Roy began to produce catalogues and opened stores that showcased lingerie from a man’s point of view. He promoted the image of a woman from the Victorian era in England. The woman-centric idea - which was a defining feature of the old lingerie business - was missing in Roy’s catalogues. This led to the emergence of contradictions between the previous activity and the new stimuli. As a result, Roy’s company went nearly bankrupt in 1982. This was when Les Wexner - having discovered the reason Roy's idea was failing - came in and took over Victoria’s Secrets. Les shifted the brand's image to target women, the ones who would be wearing the lingerie - leading to an adjustment and hence disappearance of previous contradictions. Les brought the entire aesthetic of European expensive and luxurious lingerie to the US but in an affordable manner.

The second dialectical process - that starts with the appearance of a contradiction between new productive forces and old production relations that first hampers the productive forces - disappears when the production relations have adjusted to the new productive forces. This can be observed post-Les’ takeover. Women viewed lingerie as a necessary commodity that they bought when the need arose and not during every single visit to the mall. A woman’s view of lingerie initially contradicted Les's view as he was more focused on the commoditization of lingerie, something that a woman bought whenever she visited the store. Les made the style of expensive and luxurious lingerie affordable in the US. Now every woman could afford the kind of lingerie she was seeing in fashion magazines. He did so by mass producing the products using cheap labour from Asian countries and maximising profitability by promising quality at the lowest cost. Victoria’s Secret made sure that there were more than enough designs in their stores and catalogues to get women to keep shopping for their products. They went to fashion festivals in Europe more than any other brand and got the most popular designs from Europe to the US before anyone else could, making the most of the first mover advantage. The older ways of producing and selling lingerie in 'sophisticated' and small stores with limited designs, prints and colours were completely transformed by Victoria's Secret through the introduction of a large variety of economical options and due to the popularity of Victoria's Secret in which advertisement played a major role, the old production relations adjusted to the new productive forces.

The third dialectical process starts with the emergence of the contradiction between new production relations and the old superstructure. In the 90s the entire branding of Victoria's Secret was about breaking the taboo around lingerie and being bold and strong. Women were made to feel desirable and independent through the experience that they were getting by being in Victoria's Secret stores, watching their runway shows and using their products. The initial image of Victoria, who was a refined, educated English woman was no longer relevant and was taken over by the hypersexualised image of Victoria's Secret angels. The entire superstructure adjusted to the new production relations and the image of the angels. This hypersexualisation worked for a very long time for Victoria's Secret, it reached its peak in 2008 when it owned almost half of the entire market share. Victoria's Secret created a culture throughout the 90s and the first decade of the 21st century. Eventually, their way of working became a 20-year-old force of habit which ignored the emergence of the nuclei of the new superstructure. When the world at large changed, Victoria's Secret did not. The Barbie doll image of their models was no longer catering to the needs of women when other brands were successful in realising and adjusting to the emerging superstructure which was inclusive and identified women from all racial backgrounds and body types. The fantasy world of Victoria's Secret became invalid and unattainable, which led to a decline in their profits from 2016. The water behind the dam kept building up and the dam broke when the runway show of Victoria's Secret was cancelled in 2019 for the first time in its history. The world no longer wanted to see models of that stereotypical body type walking the runway and promoting an unattainable image of a woman when other brands were representing a more realistic image on their runways. Victoria's Secrets failed to keep up with the social transformation and is now trying to catch up with the new superstructure by letting go of the angels and launching more inclusive campaigns.

5. RESULTS AND ANALYSIS

5.1. Why couldn't Victoria's Secret angels fly anymore?

5.1.1 Hypersexualisation of women and young girls

Victoria's Secret was catering to the demographic of women between 16 to 49 years thereby marking fashion to be a marker of youthfulness and also reinforcing the myth that women lose sexual interest as they age.

In total, the catalogues always suggested and promoted sexuality formulated through the "male gaze" which seemed to empower and gave the appearance of asserting power by being sexually available thereby simultaneously demeaning prudishness, sexual conservatism, and "vanilla" sex. The very basis of sexual empowerment was flawed. This was particularly well placed in the overall cultural context where women are routinely told that "groping ain't no big deal".

Since 2006, the brand also made huge investments to target the Youth segment with Pink post terminating the office wear clothing line and adding activewear items like yoga pants, leggings, shorts, etc thereby promoting the same youthfulness. Further, they focused on the college life of typical white middle-class women and also on bridal items of the same group. Moreover, the teenage fashion archetype with a cropped tank top, mini skirt, and fishnet reinforced the "skank" trope leading to status-quo with the present white beauty ideal that sexualizes women (Ouellette 2018).

More offensive than the main brand was Pink's 2013 marketing campaign called "Bright Young Things," which drew attention to lacy underwear emblazoned with "I dare you" across the back, beach towels and tote bags that read kiss me, and T-shirt with a low neckline that readers enjoyed the view. Most disturbing: a pink-and-orange thong with call me printed on the crotch properly promoting Vladimir Nabokov's Lolitacore aesthetic and in essence, paedophilia. (Donegan 2019)

5.1.2 White Euro-American centrism and lack of inclusion

As if the hypersexualization of women and children was not enough, the brand also remained largely a white, Euro-American-centric, and middle-class project. Despite using Tyra Banks in the catalogues following the post-feminism wave, her overall positioning and poses remained fundamentally white leading to assimilation instead of inclusion. Moreover, another issue that was largely observed included the lack of representation. As written by Erica Barry in "There Has Never Been an Asian Victoria's Secret Angel"— And Maybe That's a Good Thing, the 20th annual Victoria's Secret Fashion Show featured 15 Victoria's Secret Angels yet no women of Asian descent.

This was not an exception but the rule since the brand had rarely featured women of Asian/Asian American descent. However, even when it happened when Liu Wen walked the runaway in 2009, some people considered it empowering yet on the flip side, others argued whether the catwalk in tight underwear, towering high heels, and eight-foot plastic wings in a culture where Asian women have been objectified and fetishized for centuries would be anything but empowering. The portrayal of Asian women as exotic, geishas, bar hostesses and hula dancers objectified women has always been dominant. Hence, even if angels are on the runway for predominantly male viewing pleasure, it will only promote more women's marginalised status, fetishization, and submissiveness. (Barry 2017)

5.1.3 Propagation of unrealistic "Zero Size" bodies

Adding on to the sexualization and exclusion, the idea of a perfect body was also perpetuated through unrealistic photos of women in the media and extremely low BMI along with the prevalent diet culture leading to massive physical and mental disorders. For example, the average American woman is 5 ft 4 in. and 140 lb, whereas the average model is 5 ft 11 in. and 117 lb (National Eating Disorders Association 2002). Researchers also find those fashion models are thinner than 98% of American women. (Smolak 1996). (Strahan et al. 2007)

5.2. Victoria's dirty secrets behind the split in consciousness

Despite the hypersexualized models and lack of plus sizing becoming outdated in the #MeToo era, Victoria's Secret was still stuck in the ideology of the past. While this was going on, lingerie rivals like Aerie reported an increase in sales after using models of different sizes and promoting body positivity. Moreover, even when the brand tried to change by launching a new maternity line, it ended up sexualizing pregnant bodies and failed to gain the consumer's trust with its window dressing strategies. Rebranding with female leadership or focusing on non-profit initiatives like breast cancer, etc also did not take place.

Moreover, Victoria's Secret parent company L Brands scored 17 out of 100 in a 2021 Gender Benchmark Index (GRRR.nl 2021) released on June 29. 35 of the major garment firms in the world were assessed by the World Benchmarking Alliance on their commitment to gender equality and women's empowerment. The organisation was formed in part by the U.N. Foundation to promote sustainability and inclusivity in business. The North Face and Gap topped the rankings with fewer than 50 points each (Chabot 2021).

Furthermore, in this era of inclusivity, feminism, and body positivity, the comments by Ed Razek the chief marketing officer of the company were not tolerated and labelled as trans-phobic and fat-phobic forcing him to step down. But these questions were not new but woven into the very fabric of Victoria's secret since the old days. In a 2019 New York Times exposé titled "How Jeffrey Epstein Used the Billionaire Behind Victoria's Secret for Wealth and Women," a team of journalists found that in the 1990s Epstein served as an adviser to Les Wexner, Victoria's Secret chief executive and he posted as a recruiter for the brand to have access to young models. He sexually assaulted hundreds of women and was charged with multiple counts of molestation and unlawful sexual activity with a minor (Steel et al. 2019).

5.3 The fallen angel

All these changes taking place in economic and social life led to the fight against the power of the ruling class including big capitalists like the brand. It did not stop in the factories, the streets, parliament, and local councils but was also carried to the ideological field, where the influence of the bourgeoisie is no less destructive and harmful by being hidden under the guise of false impartiality and superficial objectivity.

Moreover, the degeneration of the system was felt at all levels including economic, morality, cultural, art, music, and philosophy boosting demoralisation and the compensation of entire layers of society, with disastrous consequences for the future leading to the split in consciousness and the simultaneous decline of the brand. Millions of people were beginning to react and show their rebellion against the prevalent social norms be it through supporting same-scale brands, engaging in protests, etc indicating the beginnings of awakening and showing the willingness to fight for its emancipation (Woods 2013).

The culmination of these factors including the Wexner-Epstein connection, the hypersexualization of women, the exclusion of racial communities, the growth of feminism and #metoo, the body positivity movement, and the rise in more inclusive competitors led to the setting of the sun on Wexner's empire and regime built on the exploitation of women ultimately paving way for social transformation. (Bhattarai 2020)

5.4 Emergence of New Systems

The world underwent a sea of changes since the time Victoria's Secret was at peak popularity and lauded as the most successful lingerie brand. The downfall of the company coincides with the social transformation that took place in the recent past. It is pertinent to study these forces which were at play, shaping the new systems. These new systems in turn would determine how the fashion and apparel industry would have to remould itself and adhere to them.

Amid these sweeping changes, Victoria's Secret suffered backlash for propagating unrealistic standards of beauty for decades. It drew ire for lack of inclusivity, racial bias and advocating negative body image. The failure of Victoria's Secret to maintain its brand relevance and uphold consumer expectations became one of the reasons for its downfall. It resulted in sales plummeting and a reduction in market share. Meanwhile, there were companies which rose to prominence, building their business models on the lines of new conceptions of beauty. For example, Aerie and SavagexFenty can be hailed as trailblazers, quick to sail on the winds of change.

The profound effect was seen in brands breaking away from catering to the stereotypes. Marketing strategies and advertising campaigns had to be revamped to meet these changing notions of beauty (Nhalungo, 2021; Bali, 2022). Henceforth, to secure their place in the market companies had to incorporate such ideas and stay relevant.

Despite a tainted brand image, Victoria's Secret had made a last-ditch effort to regain brand relevance through the VS Collective. The newly launched VS Collective consists of a group of accomplished women who will drive a positive change. The new “VS Collective” representatives include professional soccer player Megan Rapinoe; world champion free skier Eileen Gu; actress and entrepreneur Priyanka Chopra; equality advocate Amanda de Cadenet and model activists Paloma Elsesser, Adut Akech, and Valentina Sampaio (Safdar & Grunwald 2022).

This turnaround strategy of replacing 'Angels' with 'Activists' has been the recipient of mixed responses. Whether decades of damage could be compensated with a rebrand is like an unsolved riddle (Sehdev 2021).

6. Conclusion

Marx’s theory of Dialectical Materialism provides a framework to systematically analyse the social transformation which occurs at large on a macroeconomic level. The contradictions and adjustments are key to such changes. The various laws offer a chronological explanation of the transformational process. This paper attempts to apply this theory to implore such transformation at a microeconomic level using the example of Victoria’s Secret in the intimate apparel industry. The adaptation of the theory to microeconomic units has necessitated the alteration of the scopes of the original terms used by Marx.

The overall trajectory of Victoria’s Secret as a company has been presented through the brief timeline. An understanding of the political and economic environment in which the company operated sets the basis on which the dialectical materialism theory can be applied. The three dialectical processes identify the significant events wherein contradictions are followed by adjustments. Firstly, the contradiction between man and nature compels Raymond to establish Victoria’s Secret. The second process marked by the appearance of a contradiction between new productive forces and old production relations was observed by Les’s takeover of the company. The third and final process, of the contradiction between new production relations and the old superstructure, explains the downfall of Victoria’s Secret, as a failure to make the timely adjustment.

Victoria’s Secret had built its entire brand reputation and pursued marketing on exploitative principles. The propagation of monolithic beauty standards, the hypersexualization of young women, the promotion of negative body image and the lack of inclusion proved to be detrimental to the company. Furthermore, the Wexner-Epstein connection added salt to injury. While Victoria’s Secret was embroiled in such controversies, it fell way behind its contemporary rival companies.

The new systems led to the emergence of healthier and more realistic standards of beauty to be acceptable. Victoria’s Secret struggled to maintain its position in the market amid the social transformation. In a desperate bid to save brand relevance, the VS Collective was launched recently to usher in a new era for the company. The rebranding has been highly debatable given the company’s past reputation. There is no doubt such a progressive outreach campaign will only be applauded when followed by credible actions.

Overall, the paper makes extensive use of Marx's Dialectical Materialism theory to explain the rise and fall of the company Victoria's Secret. However, applying this theory to a microeconomic unit has necessitated a change in the scope of some of Marx's original terms. This method allows the analysis to account for modern complexities. The evolution of the intimate apparel industry, which is a subset of the larger fashion and apparel industry, has been used to study social transformation. Further, the paper focuses primarily on the domestic market of the United States in order to highlight the company's market performance. For the available time period, the data and graphs were obtained from secondary sources. Furthermore, the paper has moved away from the sole focus of production relations and has examined the company's services. While this paper attempted to be as detailed as possible, these limitations must be acknowledged.

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Declaration

We, the authors, Aditi Verma, Khushi Jain, Prashita Nath, Sharmi Das and Yashaswini Awasthy, state that, the research paper titled "*Victoria's Dirty Secret: Analysing the collapse of a brand from a Marxist lens*" is an original work co-authored by the five of us. The theories and ideas of Marx have been applied to a microeconomic unit in contemporary work. This paper shall contribute to the field of Marxian research literature. There were no funding agencies involved during the conduct of this research.

Competing Interest

The authors declare that there was no potential financial or non-financial competing interest.

Author's Contribution

There has been an equal contribution from all authors. Aditi Verma studied the timeline and contributed to the preparation of the manuscript. Khushi Jain introduced the research question and contributed to the preparation of the manuscript. Sharmi Das contributed to the preparation of the manuscript and concluded the study. Prashita Nath reviewed literature and contributed to the preparation of the manuscript. Yashasvini awasthy reviewed literature and contributed to preparation of the manuscript.

All authors read and approved the final manuscript.

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Creating Safe and Encouraging Public Spaces for Women

Manoj[1]

BA (H) Economics, III Yr, Hansraj College

Abstract

This paper attempts to analyze the status of safe public spaces for women or the female gender in India particularly and highlights issues and challenges for the same. Data for this study is taken from the period of 2002-2020 to examine the relation between the number of crimes against women, abduction, and their impact on women's participation in economic activities. The data shows that there is an increase in the number of victims of sexual harassment, assault, violence, and social evils against women. Socially women come under the category of vulnerable section. Access to public spaces such as corporate, public institutions, and educational one (schools, universities, etc.) are often restricted, and there are fewer women seen in the professional background due to a lack of equal opportunity for women as that for men which is categorically obvious and simmering discontent on a global level is purported. They are restricted to public spaces due to non-safety, and not participatory too because of incipient trends of rape, crimes against women, and sexual offenses which are analyzed in this paper by info graphs and using statistical tools. This paper also advances in the realm of safety measures and thereon repercussions of the same on a lesser number of crimes against women.

Keywords: public spaces, education, crimes against women, empowerment

[1] Email: manojrpvv2002@gmail.com

1. Introduction

Our society has ended up being sexist as palpable threats of harassment, sexual violence, and prejudices in domestic and public spaces, with unwelcome remarks and gesture, creates unsafe space for the female gender whether private or public, restricting rights of movement along with human rights violation in forms of femicide, ravishment, assault, it is as if living in a public brothel without access to rights and opportunities.

Widespread awareness led to the culmination in the global forum of sustainable goals 5 and 11, dealing with gender equality and sustainable cities or communities of inclusive characteristics respectively, therefore it's an urgent requirement for a safer, resilient, and encouraging public space with equal access to others too. Although "right to the city" has been intersected by various religions, caste, ethnicity, superstition and belief system, etc., particularly in India, it is deep-rooted in so-called religion and sacredness. Varied experiences of women and men in public spaces fuelled fears and threats of violence and assault.

Certainly, unsafe public spaces work as an impediment to individual and economic growth with unintentional repercussion, which can-not be replenished sooner or later. The female gender treads on a tightrope and hangs on tenterhooks, tethered in the bondage of bangles. Women's safety is often compromised due to negligence either in the urban sector due to the lackadaisical nature of urban bodies. Victims of violence in public spaces and purported remarks even worsen the situation that led to ghettoization within this male-centric society.

True empowerment of women lies in their freedom to publicly spearhead fearlessly in a confident manner and loiter purposefully and engage in public events. Women are generally regarded as a vulnerable section in this manner because they are tethered to household chores, serving household, etc. they are not considered an appropriate candidate for work in the private or corporate sector which limit their ability and accessibility to religious places, educational institution, etc., therefore, issue of women's safety must be included in urban planning and city design.

Limited public space is an indirect form of social exclusion and ostracism, by sentinels in form of patriarchal ideated society and their dominance. Multiple approaches should be followed such as better security measures, an appropriate surveillance system through CCTVs, community engagement, increasing women's participation in public events, and strict legal actions in place for cognizance offenses such as sexual abuse, assault, or any kind of discrimination.

An increase in economic opportunities, addressing health, education, and safety could do to change the structure of society with women encouraging and reducing the number of victims, facing offenses. Today's social reality is the manifestation of the unequal relationship between men and women historically, need of the hour is to reduce this social inequality and imbalance lopsided towards that of men which is abhorrent from the point of view of an ideal society for which world is striving for.

2. Literature review

Potential act of violence annihilates women's "virtue", not their "autonomy" therefore, teaching such as protecting and preserving virtue is imperative. Women's sanctity is deciphered from their virtue in primitive society, therefore violence against women and girls (VAWG)in public space is seen as a threat to her virtue, which takes the various form of prescribed and rigid norms in society(Sur,2014).

Public spaces are often not safe due to victims' ordeal telling the brutal interface of their personal experiences and interface with harsh realities of the social environment therefore public spaces should be truly 'public' in their real sense; they must be accessible to everyone without discrimination or prejudices. Public space terms, the right of every citizen—across class, caste, gender, religion, and sexual orientation must be protected. The city or public spaces can only belong to the female gender when it belongs to everyone (Phadke, 2007).

Women face violence in urban spaces by various means such as either they are scolded for 'being out at the wrong time' or 'provoking the men' though it may doesn't have any existential reality therefore, they are advised to protect themselves by carrying pepper sprays or of any kind, small sharp objects though not to harm, bags of heavy material to hit, key chains between their knuckles, wear heels or enrolling themselves in self-defence classes and various measures. Restricting mobility in the city cannot be an appropriate measure to tackle the issue of women's safety; as women have as much right to loiter in the city as men in general (Phadke et al., 2009)

There still exists a lacuna between safety standards and proper planning of urban and rural spaces thus, much more is needed to be done which requires the collaborative efforts of various stakeholders viz- government officials, international organizations, women activists, and academicians (John, 1999 &Vaughan, 2013)

Women usually avoid deserted and empty oversight in public spaces, by informal surveillance of different users of public spaces such as 'old-aged people', 'families', 'known vendors', etc. because from there they could get help and get away quickly which ensures better safety majors, therefore, a prerequisite is the active environment, thronging with people round the clock. Active public spaces ensure that they could be heard and helped at the time of the mishap or ill-activity. It is also seen that these activities are most prevalent in JJ clusters, slums, temporary shanties, etc. (Jagori, 2010, pp.17)

Status of women in public spaces report mentions that there have been several instances of molestation, stalking, harassment, rape, and abduction in spaces with poor public facilities, especially in rural areas where inadequate facilities for defecation are less and washrooms are not well maintained, therefore, it increases vulnerability and instances of visual violence. Women encounter and reportedly mention that they are falling victims to staring, and stalking that questions the modesty of women (department of women and child development, Delhi)

By applying an intersectional gender lens, policymakers could encounter differences and experiences of women in public spaces that can lead to culmination in the form of an inclusive and encouraging environment which ensures better safety and community development. In this framework, the role of public policy is so significant for accessible and welcoming spaces that can have an extent bearing on women's social, civic, and economic participation (Women Health, 2021).

3. Research Gaps

While there is existing literature on the analysis of crime in India, no extensive research has been done to analyze the relationship between crimes, violence against women (VAW) in public spaces, and its surrogate response on females in the form of restricted participation in economic activities. Although research has been done on changing scenarios that were for a limited period, however for a better conclusion trend analysis for a longer period is required, therefore, this paper covers the period the year from 2002 to 2020 that would give changing trends. Although there is no dearth of literature and theoretical analysis but less research has been done on empirical, therefore empirical analysis is done to supplement the results for better conclusion.

4. Objectives

This study aims to analyze the prevalence of grim situation of unsafe public spaces for women particularly, besides this, it also tries to identify, review and mention deep-rooted causes of violence against women (VAW) in public spaces. Analyzing the relationship between the development of public spaces and women's safety will help us to provide valuable suggestions in order to improve the condition of victims of congested unsafe urban spaces in India to achieve new heights in an economic and social outlook.

5. Research Questions

The paper has various research objectives. First, what is the relation between the labor force participation rate of women and crimes against women? Second, how does time reflect a bid towards reducing VAW (violence against women) in public spaces? Third, how does the development of public spaces contribute to a lesser number of VAW (violence against women)?

6. Hypothesis Tested

a. Ho (null hypothesis 1): There is a negative relationship between women's engagement in the labor force and crimes against women.

   Ha (alternative hypothesis): There is a positive relationship between women's engagement in the labor force and crimes against women.

b. Ho (null hypothesis 2): There exists a strong positive correlation between the total number of crimes (IPC and SLL) and rape, sexual assault, abduction and kidnapping, and time.

   Ha (alternative hypotheses): there exists a strong negative correlation between the total number of crimes (IPC and SLL) and rape, sexual assault, abduction and kidnapping, and time

c. Ho (null hypothesis 3): Existence of a positive relationship between the developments of public spaces with better planning and less number of crimes against women.

   Ha (alternative hypothesis): there exists a negative relationship between the development of public spaces with better planning and less number of crimes against women.

7. Research methodology

This study restricts itself to statistical and quantitative analysis of certain economic variables such as labor force participation rate of women, crimes against women, the total number of crimes, number of sexual assaults in India, abduction, etc., and data has been taken mostly from National Crime Record Bureau (NCRB) and others are mentioned in references along with period ranging from 2002 to 2020to avoid novel pandemic i.e. Covid-19 as one of the exceptional circumstance. The paper through these variables highlights how the public spaces for women are unsafe and what is the repercussion on the same in labor force participation rate. Unaddressed issues which require adequate attention are also highlighted to the core with better representation through infographics, statistical summary, econometric tools, etc.

For regression analysis method of ordinary least square is adopted for multiple regression models, without dummy variables concerning time i.e., time series data. This paper follows both descriptive and analytical approaches for better representation with more accurate information. For the third hypothesis, GVI (gender vulnerability index) is used by taking samples from each group that shows which state ensures better safety measures for women in chronological order for better representation of the population and tries to establish the relationship, whether better safety measures for women in some state ensures a lesser number crimes or not.

8. Data collection

Data is purely from secondary data because of the limited scope for interface and primary survey. Most of the data are taken from NCRB (National Crime Record bureau), under the ministry of home affairs, for variables regarding VAW, and data for employment i.e., for women's participation in the labor force has been taken from the World Bank. For trend analysis, period of study is from the year2002 to 2020. In India, NCRB publishes criminal procedure code under different heads of IPC (Indian penal code) and SLL (special and local laws), however for total crimes both of the sections are included only as a single section. Data is shown in the appendix. The crimes against women for states are also taken from NCRB reports of 2017 and 2020.

9. Regression equations

a. For the first hypothesis, the relationship between women's engagement in the labor force and crimes against women is estimated using the following equation is estimated:

$$Y = B1 + B2(X) \quad \ldots\ldots\ldots\ldots.. (1)$$

Here, Y is our dependent variable i.e., labor force participation rate and X is our independent variable i.e., Crimes against women.

b. For the second hypothesis, the correlation between a total number of crimes and sexual assault, rape, abduction, etc, the following equation is estimated:

$$Y = B1 + B2 * (X1) + B3 * (X2) + B4 * (X3) \quad \ldots\ldots\ldots\ldots\ldots\ (2)$$

Here, Y is our dependent variable i.e., the total number of crimes (IPC and SLL). X1, X2, and X3 are our explanatory variables and represent sexual assault, rape, and abduction respectively.

c. For the third hypothesis, existence of a positive relationship between the development of public spaces with better planning and less number of crimes against women. The following equation is estimated:

$$Y = B1 + B2 * D1 + B3 * D2 + B4 * D3 \ \ldots\ldots\ldots\ldots\ldots\ldots\ (3)$$

Here Y is our dependent variable, and dummy variables D1, D2, and D3 are qualitative variables, where

D1 = 1, for Goa and 0 otherwise

D2 = 1, for Tamil Nādu and 0 otherwise

D3 = 1, for Haryana and 0 otherwise

Also, Delhi is here reference category and for comparison with other states.

10. Results

Results of the first regression:

Table 1: OLS, using observations 2002-2020 (T = 19)
Dependent variable: labour force participation

	Coefficient	SE	t-ratio	p-value
Constant	29.4034	0.564	52.09	0.000***
Crime against women	-0.000244	2.10E-06	-11.16	0.000***

Main Dependent Variable	23.25	SD Dependent variable	2.47	
Sum Squared residual	12.35	SE of Regression	0.85	
R-squared	0.88	Adjusted R-square	0.88	
F(1,17)	134.69	P-value (F)	1.67E-09	
Log Likelihood	-22.87	Akaike Criterion	49.74	
Schwarz Criterion	51.63	Hannan-Quinn	50.06	
rho	0.51	Durbin-Watson	0.97	

Source: Author's calculations

The slope coefficient of the first regression is negative and the interpretation is that as crimes against women increase by one unit then on average there is a fall in the labor force participation rate of women falls by approximately 0 percent which fulfils the pretension and graphically it seems clear that there is a negative relationship between labour force participation rate and crimes against women. R-square for the same is 0.887931 i.e., 88 percent of the variation in labour force participation rate is explained by the variation in crimes against women and 1- R square gives us the percentage that how much variation in the labour force is explained by other factors such as social, fewer availabilities of opportunities, less compatibility, etc. p-value of the slope coefficient is significant therefore we reject the null in favour of the alternative, that there is negative relationship between crimes against women and labour force participation rate.

Results of second regression:

Table 2: OLS, using observations 2002-2020 (T = 19)
Dependent variable: Total crimes (SLL+IPC)

	coefficient	Std. Error	t-ratio	p-Value
Constant	4.33707e+06	1.48923e+06	2.91	0.0107**
Total sexual offences	19.27	37.58	0.51	0.61

against women				
Rape	-8.94	55.5	-0.16	0.87
Kidnapping and abduction	-12.29	21.53	-0.57	0.57

Mean dependent var	4891605	S.D dependent var	840988.8	
Sum squared resid	122e+13	S.E of regression	903492.5	
R-squared	0.03	Adjusted R-squared	-0.15	
F(3,15)	0,19	P-value(F)	0.89	
Log-likelihood	-285.28	Akaike criterion	578.56	
Schwartz criterion	582.33	Hannan-Quinn	570.20	
rho	0.91	Durbink-Watson	0.32	

Source: Author's calculations

Table 3: Model 2.1: OLS, using observations 1-19
Dependent variable: rape

	coefficient	Std. Error	t-ratio	p-Value
Constant	17613.1	14916.9	1.181	0.2540
Total crimes (SLL+IPC)	0.00094	0.0030	0.3114	0.7593

Source: Author's calculations

By taking rape, sexual assault, and abduction as explanatory variables then there would be a problem of multicollinearity because of wrong signs as expectations are that there exists a positive relationship between the rape of women in public spaces and total crimes. As model 2.1 suggests that as total crimes increase by one unit it leads to an average increase in rape crimes by 0.00093 units, also supported by graphical analysis.

Based on the p-value, the slope coefficient is not statistically significant even at five percent therefore; we do not reject our null hypothesis that there exists a positive correlation between rape against the victim and total crimes (IPC + SLL).

Regression results of third equation:

Table 4: OLS, using observations 1-24
Dependent variable: Crimes against women

	Coefficient	Std. Error	T-ratio	P-value
Constant	13789.3	682.22	20.21	<0.0001***
D1	-13449.0	964.80	-13.94	<0.0001***
D2	-8095.17	964.80	-8.39	<0.0001***
D3	-1667.83	964.80	-1.72	0.0993*

Mean dependent var	7986.33	S.D. dependent var	5682.88
Sum squared resid	55851311	S.E. of regression	1671.09
R-squared	0.92	Adjusted R-squared	0.91
F(3,20)	81.99	P-value(F)	2.06e-11
Log-likelihood	-209.97	Akaike criterion	427,95
Schwarz criterion	432.66	Hannan-Quinn	429.20

Source: Author’s calculations

For the relation between the development of public spaces which ensures measures for safety for women and crimes against women, from GVI ranking of different countries Goa, Tamil Nadu, Haryana, and Delhi are given ranking 1, 10, 19, and 28 respectively therefore, we can confer that there exists a negative relation between better safety of women and crimes against women which could be explicitly seen in the above table that how the cities or state with better safety measures for women can ensure that lesser average number of crimes happens with women, therefore, Delhi which ranks 28th in terms of ensuring safety to women is the city which has highest no of crimes in the sample, whereas Goa which ranks 1st in all the states/UTs in terms of ensuring women safety led to the culmination in lesser number of crimes.

Although differential intercept coefficients of D1, and D2, are not statistically significant i.e., there is averagely no difference between crime rates in Goa, Tamil Nadu, and Delhi, for Haryana (D3) p-value of differential intercept coefficient is greater than five percent (5%), hence we can conclude that differential intercept coefficient is statically significant at five percent level, or there are averagely crimes in Haryana is less than Delhi by 1667.83. Therefore, for analysis, we cannot say that our null or alternative is accepted or rejected because of contradictory results.

Table 5: State and Crimes against Women

State	**Crimes against women**
Goa	340.3
Tamil Nādu	5694.13
Haryana	12121.5
Delhi	13789.3

11. Conclusion

Crimes against women are reportedly having an increasing trend in recent years although successful measures have been adopted especially in India in the form of free bus rides in some states, installation of closed-circuit televisions (CCTVs) at the nook of most deserted places to deride the purported remarks of violence against women (VAW). "Right to the city" has been conferred upon women which often have been taken for granted which is the pivot of all grievances and instances that have occurred. Sensitizing programs for women's encouragement have been dealt with enthusiasm for the involvement of men because it has been understood that in this patriarchal society dominated by the male gender does require a change in mindset therefore, better awareness programs such as zero tolerance policy for the crime against women with stringent punishments for reported abuse of rights of women.

Budgetary allocation and recent investment in “smart technologies” can spot miscreants and deploy surveillance technologies for hotspot areas where there isa large number of victims fall into the vicious cycle of embarrassment and shame.

There are various initiatives at the forefront to promote a rights-based approach to guarantee women’s equal rights in cities.

12. Suggestions

Regeneration of public spaces and attention towards healthy social spaces are significantly required due to the increasing number of crimes against the female gender. Safe public spaces involve a social dimension therefore, social equality is inevitable from proper safety measures to redressal of grievances. Gender-centric aspects should be included within the policy frameworks for fruitful results also, to safeguard and promote economic, social, political, and cultural justice for women. For better public facilities, informal and formal surveillance, and increasing participation of women, what is required is an urban renaissance and its regeneration. Revalorization of city centers with mixed-use experiences for a healthy breeding population and the New Deal Policy program (NDP) could replenish deserted space.

Urban planning for disorderly and congested places is required. Although nuanced measures to empower women can bring change with active involvement rather than voiceless beneficiaries.

For healthy and encouraging public spaces for women’s individual contribution, government attention, action-oriented policy, the establishment of redressal committee or organization, regulation of public spaces, self-awareness, empowerment, and active involvement of the public are required for fruitful results and the best outcome out of the resources at our disposal.

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Appendix

DISCUSSION ON GVI

Gender vulnerable Index (GVI), ranks India in terms of safety ensured to women, compiled under Ministry of Women and Child Development. Data from GVI has been used for regression model first and second, for the relationship between women safety measures or safe public spaces for women and crimes against women, sample states are taken from each four sub sections from GHI for the homogeneity and true representation of the population. States are as follows: Delhi, Haryana, Tamil Nādu, and Kerala. GVI index helped in selection of sample of states.

Table A1: States and GVI

Category	GVI	Rank
Goa	0.656	1
Kerala	0.634	2
Mizoram	0.627	3
Sikkim	0.613	4
Manipur	0.610	5
Himachal Pradesh	0.604	6
Karnataka	0.604	7
Punjab	0.592	8
Maharashtra	0.592	9
Tamil Nadu	0.582	10
Telangana	0.580	11
Andhra Pradesh	0.578	12
Uttarakhand	0.576	13
Nagaland	0.564	14
Chhattisgarh	0.552	15
Gujarat	0.543	16
Tripura	0.530	17
West Bengal	0.519	18
Haryana	0.516	19
Jammu and Kashmir	0.509	20
Meghalaya	0.504	21
Rajasthan	0.496	22
Odisha	0.483	23
Assam	0.483	24
Madhya Pradesh	0.467	25
Arunachal Pradesh	0.452	26
Jharkhand	0.450	27
Delhi	0.436	28
Uttar Pradesh	0.434	29
Bihar	0.410	30

Source: Ministry of Women and Child Development

Table A2: States and Crimes against Women, Data

s no	states	Crimes against women	D1	D2	D3	year
1	Goa	392	1	0	0	
2	Tamilnadu	5919	0	1	0	
3	Haryana	9511	0	0	1	2015
4	Delhi	17222	0	0	0	
5	Goa	371	1	0	0	
6	Tamilnadu	4463	0	1	0	
7	Haryana	9839	0	0	1	2016
8	Delhi	15310	0	0	0	
9	Goa	369	1	0	0	
10	Tamilnadu	5397	0	1	0	
11	Haryana	11370	0	0	1	2017
12	Delhi	13076	0	0	0	
13	Goa	362	1	0	0	
14	Tamilnadu	5822	0	1	0	
15	Haryana	14326	0	0	1	2018
16	Delhi	13640	0	0	0	
17	Goa	329	1	0	0	
18	Tamilnadu	5934	0	1	0	
19	Haryana	14683	0	0	1	2019
20	Delhi	13395	0	0	0	
21	Goa	219	1	0	0	
22	Tamilnadu	6630	0	1	0	
23	Haryana	13000	0	0	1	2020
24	Delhi	10093	0	0	0	

This data has been used in regression model third for showing change in crimes against women in different states.

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