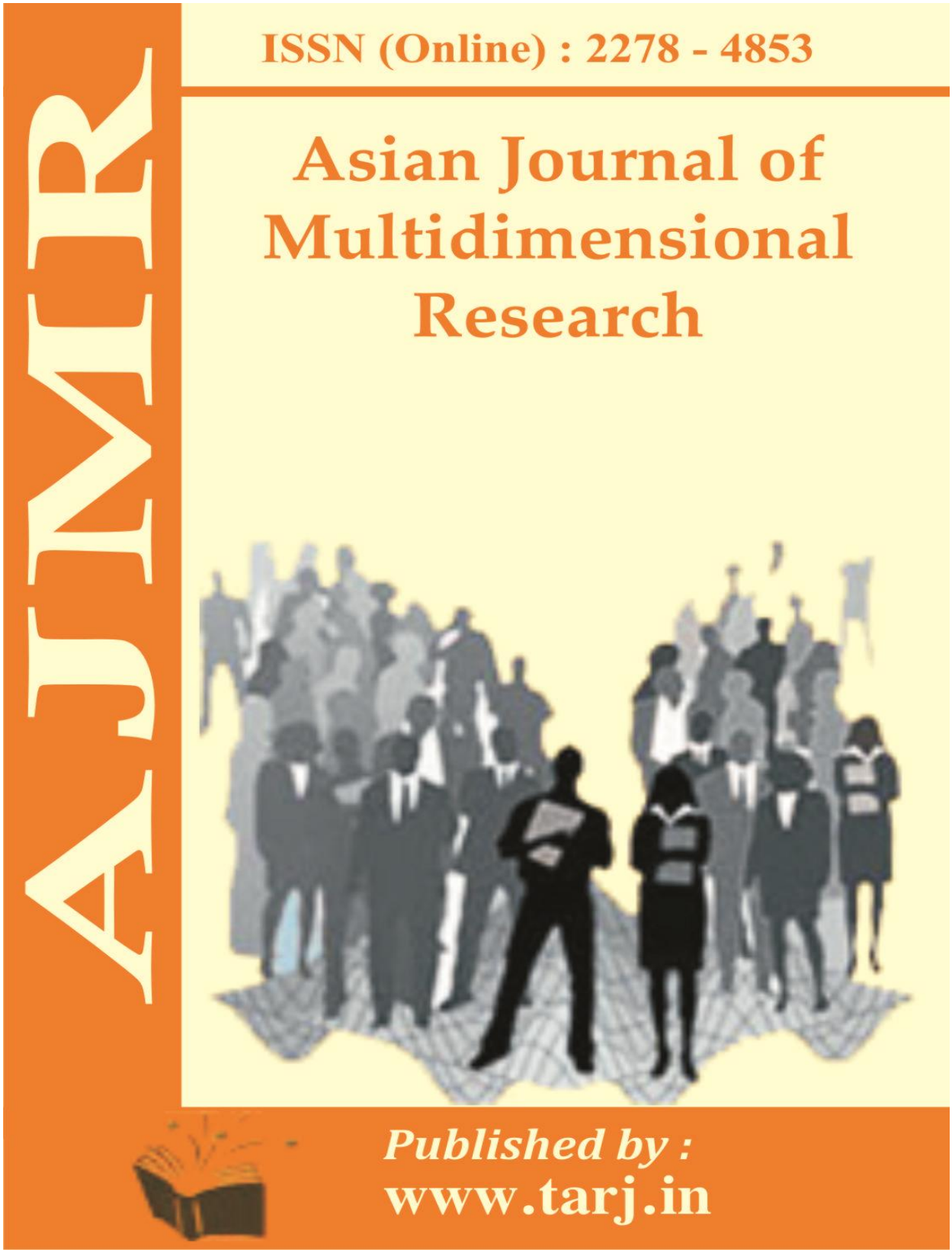

AJMR
ISSN (Online) : 2278 - 4853
Asian Journal of Multidimensional Research
Published by :
www.tarj.in

AJMR ISSN (online) : 2278-4853

Editor-in-Chief : Dr. Esha Jain

Impact Factor	:	SJIF 2022= 8.179
Frequency	:	Monthly
Country	:	India
Language	:	English
Start Year	:	2012

Published by : www.tarj.in

Indexed/ Listed at : Ulrich's Periodicals Directory, ProQuest, U.S.A.

E-mail id: tarjjournals@gmail.com

VISION

The vision of the journals is to provide an academic platform to scholars all over the world to publish their novel, original, empirical and high quality research work. It propose to encourage research relating to latest trends and practices in international business, finance, banking, service marketing, human resource management, corporate governance, social responsibility and emerging paradigms in allied areas of management. It intends to reach the researcher's with plethora of knowledge to generate a pool of research content and propose problem solving models to address the current and emerging issues at the national and international level. Further, it aims to share and disseminate the empirical research findings with academia, industry, policy makers, and consultants with an approach to incorporate the research recommendations for the benefit of one and all.

Asian Journal of Multidimensional Research
ISSN: 2278-4853 Vol. 14, Issue 4, April 2025 SJIF 2022 = 8.179
A peer reviewed journal

QUALITY OF WORK LIFEAS A PREDICTOR OF ORGANIZATIONAL COMMITMENT AMONG THE CO-OPERATIVE SECTOR BANKEMPLOYEES IN KERALA WITH SPECIAL REFERENCE TO THRISSUR DISTRICT

Dr Remya P R*

*Assistant Professor of Commerce,
Sree Vivekananda College, Kunnamkulam,
Thrissur, Kerala, INDIA
Email id: remyabinoy13@gmail.com

DOI: 10.5958/2278-4853.2025.00007.6

ABSTRACT

Quality of work life acts as an indicator of the overall human experience in the work place. If the employees feel satisfied with their work life, they will be committed to their organization as well. It expresses a special way of thinking about people, their work, and the organization in which their careers are fulfilled. This paper intends to study the extend of the level of quality of work life among the bank employees working in the co-operative sector and studies whether there exists a relationship between QWL and organizational commitment among the employees. It further studies whether QWL influences the organizational commitment among the co-operative sector bank employees in Thrissur district in Kerala.

KEYWORDS: *Quality Of Work Life, Organizational Commitment.*

INTRODUCTION

Today, most of the organizations have realized that managing human resources efficiently and effectively not only increases their performance in the organization, but also increases the employee's level of commitment towards the organization. To a major extend, the human resources of an organization is responsible for its productivity and profitability. At the broad level, companies are coming to understand that attracting, developing, and maintaining a competent and stable workforce is now of major strategic importance. Ensuring the quality of work life of employees is a part of this initiative.

Quality of work life has gained deserved prominence in the organizational behavior as an indicator of the overall human experience in the work place. It refers to the relationship between the worker and his environment, adding the human dimension to the technical and economic dimensions within which the work is normally viewed and designed. It comes from understanding and then fully meeting, the needs of all your employees, now and into the future and doing so with continual improvement in efficiency and effectiveness. It expresses a special way of thinking about people, their work, and the organization in which their careers are fulfilled.

The American Society of Training and Development defines QWL as "a process of work organizations which enables its members at all levels to actively participate in shaping the organization's environment, methods, and outcomes. This value-based process aimed towards

meeting the twin goals of enhanced effectiveness of organization and improved quality of life at work for employees". According to this definition, quality of work life is a process of work organisation designed to enhance the effectiveness of an organisation and improve the quality of work life of its employees.

Organizational commitment is an attitude or an approach which links one's identity to the organization. Employees who have a high level of organizational commitment are friendlier, more efficient, and more loyal towards the organization. It describes people's sense of belongingness and attachment to their organization. On the other hand, quality of work life is an approach concerned with the overall climate of work and the impact that the work has on people as well as on organizational effectiveness. Most of the studies have revealed that quality of work life has an impact on the organizational commitment and hence if the work life quality of the employees is ensured their commitment level towards organization will also improve.

Review of Literature

Afsar S T (2014) made a comparative study about the impact of quality of work life on organizational commitment among the academicians working for state and foundation universities in Turkey. The study revealed that the quality of work life has a positive impact on the affective and normative commitment while it has a negative impact on the continuance commitment among the academicians working in both the state and foundation universities.

Sajjad N K and Abbasi B (2014) in their study examined the relationship between quality of work life and organizational commitment among the customs employees of Iran/ Guilanprovince. The study revealed a positive and significant relationship between QWL and organizational commitment. A regression analysis was also used in the study to confirm the relationship between quality of work life and organizational commitment among the customs employees.

Farid H, Izadi Z, Ismail I am and Alipour F (2015) studied about the relationship between quality of work life and organizational commitment among lecturers at a Malaysian public research university. Correlation coefficient was used to study the relationship of organizational commitment with the dimensions of quality of work life and quality of work life with the dimensions of organizational commitment. The study revealed a highly significant relationship between quality of work life and organizational commitment among the lectures at Malaysian public research university.

Significance of the Study

QWL is a comprehensive program which tries to improve the efficiency of the employees by improving their working conditions and by integrating them with the organization and thereby influencing their organizational behavior such as organizational commitment. There is a general notion that the employees working in the co-operative banks have low level of work life quality and commitment level. Hence this study tries to assess the work life quality and the organizational commitment level of employees working in the co-operative banks in Thrissur district in Kerala.

Dimensions of QWL and Organizational Commitment

Walton's eight dimensions of quality of work life is used in this study to assess the quality of work life which include adequate and fair compensation, safe and healthy working conditions,

opportunity for career development, fair and equitable treatment, social integration in the work place, opportunity for individual development, total life space and social dependence or relevance of work life (Behzad Jhanmohammadi et al (2015)). With necessary modifications, these dimensions are used in this study.

Meyer and Allen's three factor model of organizational commitment are used in the study. They are affective commitment, continuance commitment and normative commitment.

i) Affective commitment refers to the employees' positive emotional attachment to the organization where he is happy to be a member of the organization. Employees with high affective commitment stay in the organization and are willing to take efforts for the benefits of the organization and hence this type of commitment is the most optimal.

ii) Continuance commitment is the tendency to stay in the organization to avoid the expenses of turnover or to enjoy the benefits of staying. They stay in their organization due to fewer job alternatives and show only a minimum level of performance required to be a member of the organization and therefore this type of commitment is not a favorable one.

ii) Normative commitment is a sense of obligation and loyalty of an employee to remain in the work place as an organization's member. A person with high normative commitment remains a member of the organization because they feel working for that organization is his duty since the organization has treated him well.

These three dimensions of the organizational commitment are used in this study.

Objectives of the Study

- To study the level of quality of work life among the co-operative sector bank employees in Thrissur district.
- To examine the relationship between quality of work life and organizational commitment among the co-operative sector bank employees.
- To identify the effect of quality of work life on the organizational commitment among the co-operative sector bank employees.

Methodology of the Study

The present study is descriptive in nature. Both primary and secondary data are used for the study. Primary data is collected using the structured questionnaire and secondary data is collected from various published sources and websites.

Sample selection

A sample of 60 employees working in the various co-operative banks in the Thrissur district in Kerala is selected for the study. Both the male and female employees are included in the study. An employee with at leastthreeyears' experience is selected as respondents for the study.

Tools used

Questionnaire is the tool used for data collection. It comprised of two parts: questions for measuring the dimensions of QWL and questions for measuring the dimensions of organizational commitment. The questionnaire comprised of 26 questions for measuring eight dimensions of quality of work life and 18 questions for measuring the three dimensions of organizational

commitment. For measuring the organizational commitment, the Organizational Commitment Scale (OCS) developed by Meyer and Allen (1993) was used in this study. These factors are observed to be appropriate and reliable within this context of study. A five-pointLikerts' scale ranging from strongly agree to strongly disagree was used for measuring the responses.

Statistical Analysis

Data are collected from a sample of 60 employees working in the co-operative banks. SPSS software is used for analyzing the data. The Cronbach's alpha of the questionnaire is calculated (0.897) which means it is highly reliable. Independent sample t test, correlation coefficient and linear regression methodare used in this study.

Results and Discussions

1. Profile of the Respondents

The profile of the respondents is shown in the tables given below. The characteristics of the sample selected in terms of their age, marital status and gender is given below.

Table 1.1 Age of the respondents

	Frequency	Valid Percent
Up to 35 Years	12	20.0
35 – 45 Years	31	51.7
Above 45 Years	17	28.3
Total	60	100.0

Source: Primary Data

Table 1.1 reveals that majority of the bank employees (51.7%) belong to the age group 35-45 years, while 28.3% employees belong to the age group above 45 years and the remaining employees (20%) belong to the age group up to 35 years.

Table 1.2 Gender of the respondents

	Frequency	Valid Percent
Male	28	46.7
Female	32	53.3
Total	60	100.0

Source: Primary Data

From table 1.2, we can conclude that majority of the respondents (53.3%) are female employees while the remaining (46.7%) are male employees.

Table 1.3 Marital Status of the respondents

	Frequency	Valid Percent
Unmarried	24	40.0
Married	36	60.0
Total	60	100.0

Source: Primary Data

The above table 1.3 reveals that majority of the respondents (60%) are married employees while the remaining (40%) are unmarried ones.

2. Dimensions of QWL and Organizational Commitment

Table 2.1 Dimensions of QWL

	Mean	Std. Deviation
1. Adequate and Fair Compensation	3.189	1.057
2. Constitutionalism in the Work Place	3.367	.760
3. Safe and Healthy Work Environment	3.683	.553
4. Social Integration in the Work Place	3.333	.727
5. Opportunity for Individual Development	3.275	.805
6. Opportunity for Career Development	3.144	.593
7. Total Life Space	2.553	.575
8. Social Relevance of the Work Space	3.100	.399

Source: Primary Data

From the table 2.1, we can conclude that safe and healthy working environment (3.683) is the major factor contributing to the quality of work life among the co-operative sector bank employees. Other factors like constitutionalism in the work place or fair treatment of the employees (3.367), social integration or coherence tin the work place (3.333), opportunity for individual development (3.275), adequate and fair compensation (3.189), opportunity for career development (3.144) and social relevance (3.100) also contributes to the quality of work life. Total life space or balancing the work and family life (2.553) is the least contributing factor to the quality of work life of bank employees working in the co-operative sector.

Table 2.2 Dimensions of Organizational Commitment

	Mean	Std. Deviation
Affective Commitment	2.993	.474
Continuance Commitment	3.006	.462
Normative Commitment	2.913	.422

Source: Primary Data

The table 2.2 shows that continuance commitment (3.006) is the major contributing factor to the organizational commitment among the bank employees while the affective commitment (2.993) and normative commitment (2.91) are the other contributing factors towards the organizational commitment. From this, we can conclude that majority of the bank employees have continuance commitment towards the organization which means they are staying in the organization since they have no other job alternatives or for saving the cost of their job turnover.

3. Level of QWL

Table 3.1 Level of QWL

	Frequency	Valid Percent
Low Level	20	33.3
Moderate Level	26	43.3
High Level	14	23.3
Total	60	100.0

Source: Primary Data

Table 3.1 explains the level of quality of work life among the bank employees. For assessing the level of QWL, a summated mean score of all the dimensions of QWL was calculated and was categorized in to three groups. The scores ranging from (17-23) is considered as low level, from (23-27) as moderate level and from (27-30) as high level. From the table, we can conclude that majority of the respondents (43.3%) are having moderate level of quality of work life while 33.3% bank employees are having low level of QWL and the remaining 23.3% bank employees fall in to the high-level group.

4. Correlation between QWL and Organizational Commitment

$H_{01:}$ There is no significant relationship between quality of work life and organizational commitment among the bank employees.

Table 4.1 Correlation Coefficient

		QWL	OC
QWL	Pearson Correlation	1	0.381*
	Sig. (2-tailed)		0.038
	N	60	60
OC	Pearson Correlation	0.381*	1
	Sig. (2-tailed)	0.038	
	N	60	60

* Correlation is significant at the 0.05 level (2-tailed). Source: Primary Data

The above table 4.1 indicates the correlation between the quality of work life and organizational commitment. The correlation coefficient is 0.381 which means the quality of work life is 38.1% positively correlated to organizational commitment and hence the null hypothesis, $H_{01:}$ There is no significant relationship between quality of work life and organizational commitment among the bank employees is rejected since there exist a positive correlation between quality of work life and organizational commitment.

5. Testing gender with QWL and Organizational Commitment

$H_{02:}$ Both the male and female employees experience the same level of quality of work life.

Table 5.1 QWL and Gender

	Gender	Mean	Std. Deviation	t value	p value
QWL	Male	24.687	3.681	3.323	0.048
	Female	26.741	2.156		

Source: Primary Data

An independent sample t test is used here to test whether both male and female employees experience the same level in the quality of work life. Since the p value (0.048) is less than 0.05, the null hypothesis, $H_{02:}$ Both the male and female employees experience the same level of quality of work life, is rejected which means the quality of work life is experienced or perceived differently among the male and female employees. The mean score reveals that female employees (26.741) are having better quality of work life compared to the male employees in the co-operative banking sector.

$H_{03:}$ The organizational commitment among both the male and female bank employees is same.

Table 5.2 Organizational Commitment and Gender

	Gender	Mean	Std. Deviation	t value	p value
OC	Male	8.876	1.025	1.397	0.247
	Female	8.944	0.760		

Source: Primary Data

An independent sample t test is also used here to test the organizational commitment among the male and female employees. From the table 6.2, we can conclude that the p value (0.247) is greater than 0.05 and hence the null hypothesis, $H_{03:}$ The organizational commitment among both the male and female bank employees is same, is accepted here which means organizational commitment among both the male and female employees is same. From the mean score, it is evident that female employees (8.944) are more committed towards their organization compared to the male employees.

6. Testing the effect of QWL on Organizational Commitment

$H_{04:}$ All variables of the quality of work life are positively related to organizational commitment.

Table 6.1 Linear Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.611[a]	.373	.134	.83404

a. Predictors: (Constant), SR, SHE, OCD, CWP, TLS, SI, AFC, OID

Table 6.2 Linear Regression Analysis Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	12.106	2.235		5.416	.000
	AFC	.154	.258	.181	.595	.558
	CWP	-.609	.386	-.516	-1.578	.129
	SHE	.056	.316	.035	.177	.861
	SI	.327	.334	.265	.979	.339
	OID	-.290	.403	-.260	-.718	.481
	OCD	-.611	.324	-.404	-1.889	.073
	TLS	-.098	.320	-.063	-.307	.762
	SR	.062	.472	.027	.130	.897

a. Dependent Variable: OC

Linear regression method is used to identify the effect of quality of work life on the organizational commitment of bank employees. From table 6.1, it can be concluded that the R value (correlation coefficient) is 0.611 and the R square value (the coefficient of determination) is 0.373, which means 37.3% of the organizational commitment is attributed or caused by the variables of quality of work life. Table 6.2 reveals that the four variables of quality of work life; adequate and fair compensation, safe and healthy work environment, social integration in the work place and social relevance of the work place are positively related to the organizational commitment while the other four variables constitutionalism in the work place, opportunity for individual development, opportunity for career development and total life space are negatively related to the organizational commitment of the bank employees. Thus, we can conclude that the variables of quality of work life have a positive effect on the organisational commitment of the co-operative sector bank employees.

CONCLUSION

From the results above, we can conclude that the quality of work life among the co-operative sector bank employees is in moderate level. Though the employees are satisfied with their working environment and the other dimensions, they are not able to manage their family life along with their work and this is indicated by the total life space as the least contributing factor. Regarding the organization commitment among the bank employees, they are having continuance commitment towards their organization which means they are staying in the organization since they are not having adequate job alternatives and for saving the cost of their job turnover. Thus, we can conclude that if the employees get a better job opportunity, they will leave their organization. The study further revealed that the quality of work life is positively correlated to the organizational commitment among the bank employees. Quality of work life among the male and female employees is different while gender does not influence the organizational commitment of the employees. The linear regression method revealed that the

variables of the quality of work life have a significant effect on the organizational commitment of the co-operative sector bank employees. Thus, it can be concluded that the employees shall be provided with adequate opportunities for improving their creativity and shall be given proper training for enriching their job.

REFERENCES

1. Abbasi, N. K. (Vol 3 (2), February 2014). Studying the Relationship between Quality of Work Life and Organisational Commitment. *Research Journal of Recent Sciences* , 92-99.

2. Afsar, S. T. (Vol 3 No 4, 2014). Impact of Quality of Work Life on Organisational Commitment: A Comparative Study on Academicians working for State and Foundation Universities in Turkey. *International Journal of Social Sciences* , 124- 152.

3. Hadi Farid, Z. I. (Vol 52, 2015). Relationship between quality of work life and organizational commitment among lecturers in a Malaysian public research university. *The Social Science Journal* , 54-61.

4. D.Chitra, V. (2012). A Study on Employees Perception on Quality of Work Life and Job Satisfaction in manufacturing organization- an Empirical study. *international journal of trade and commerce, 1* (2), 175-184.

5. Siengthai, M. Z. (2009). Quality of work life and organizational performance: Empirical evidence from Dhaka Export Processing Zone. (pp. 1 -19). Geneva: ILO Conference on 'Regulating for Decent Work, held at the International Labour Office, Geneva during July 8-10, 2009.

6. Abdullah, S. M. (7-9 December 2011). Quality Work Life among Factory Workers in Malaysia. *Procedia - Social and Behavioral Sciences 35 (2012)* (pp. 739 - 745). Famagusta, North Cyprus: Asia Pacific International Conference on Environment-Behaviour Studies, Salamis Bay.

7. Mukherjee, R. G. (2010). Quality of worklife and job satisfaction of a group of university employees. *Asian Journal of Manangement Research* , 209 - 216.

8. Abdullah, S. M. (7-9 December 2011). Quality Work Life among Factory Workers in Malaysia. *Procedia - Social and Behavioral Sciences 35 (2012)* (pp. 739 - 745). Famagusta, North Cyprus: Asia Pacific International Conference on Environment-Behaviour Studies, Salamis Bay.

9. Behzad Janmohammadi, E. S. (vol 5 (S1) 2015). Study of the dimensions of Quality of work life and Organizational Productivity of the staff of Tax Organization of Alborz Province. *Indian Journal of Fundamental and Applied Life Sciences* , 297 -308.

10. Cascio, W. F. (2003). *Managing Human Resources (Productivity, Quality of Work Life, Profits).* New Delhi: Tata Mc Graw Hill Edition.

11. Griffin, A. S. (2011). *Human Resource Management an Introduction.* New Delhi: Cengage Learning.

12. DeNisi, A S and Griffin, R W *"HRM An Introduction*", Cengage Learning India Edition New Delhi, 2nd edition, 2011.

13. Khanka, S S "*Organizational Behaviour (Text and Cases)",* S. Chand Publishing New Delhi, 3rd Revised edition, 2011.

14. Aswathappa, K "*Human Resources and Personnel Management*", TataMc Graw Hill Publishing Co. Ltd. NewDelhi.

Asian Journal of Multidimensional Research
ISSN: 2278-4853 Vol. 14, Issue 4, April 2025 SJIF 2022 = 8.179
A peer reviewed journal

OUT OF POCKET EXPENDITURE FOR CAESAREAN SECTION DELIVERIES IN SOUTH INDIAN STATES: A STUDY OF EFFECT OF INSURANCE AND ECONOMIC RANK RELATED INEQUALITY

Paul John Philip*; Gyana Ranjan Panda**

*Research Scholar,
Department of Public Policy,
Law and Governance, Central University of Rajasthan,
NH-8, Bandarsindari, Kishangarh, Ajmer, Rajasthan, INDIA
Email id: paulpolicy77@gmail.com

**Senior Assistant Professor,
Department of Public Policy,
Law and Governance, Central University of Rajasthan,
NH-8, Bandarsindari, Kishangarh, Ajmer, Rajasthan, INDIA
Email id: gyana_pplg@curaj.ac.in.
Email: paulpolicy77@gmail.com

DOI: 10.5958/2278-4853.2025.00009.9

Acknowledgements:

Authors acknowledge the critical feedback given by the Departmental Research Committee (DRC) on the research undertaken for the article.

ABSTRACT

Background: *The World Health Organization (WHO) has championed the adoption of prepayment health financing systems, such as public health insurance to address the escalating out-of-pocket expenditure for different healthcare services. This study aims to assess the effectiveness of public health insurance in providing financial risk protection for c-section deliveries and examine the concentration of out-of-pocket expenses across different wealth levels. Furthermore, the study seeks to identify the factors driving inequality in out-of-pocket expenditure.*

Methods: *The study makes use of survey results of 1000 women who had C section delivery history. The study employs Ordinary Least Square regression and Propensity Score Matching to analyze the relationship between insurance coverage and out-of-pocket expenses. Additionally, the Concentration index and its regression-based decomposition are utilized to investigate socioeconomic rank-related inequalities and determine contributing factors.*

Results: *The findings reveal that public-funded health insurance does not significantly reduce out-of-pocket expenses for c-section deliveries. Moreover, the study highlights that out-of-pocket expenditure is concentrated among the wealthier population. The analysis identifies the type of healthcare provider, whether public or private, as the primary driver of inequality in out-of-pocket expenditure, and the only significant predictor of such expenses.*

Conclusions: *The presence of supply-side moral hazards, including double billing, unnecessary care provision, and induced demand in the private facilities, underscores the necessity for*

comprehensive measures beyond revenue collection, risk pooling and strategic purchasing. This study emphasizes the crucial role of effective regulation of the private sector to improve healthcare outcomes and achieve comprehensive financial risk protection.

KEYWORDS: *Caesarean Section Delivery, Out Of Pocket Expenditure, Inequality, Supplier Induced Demand, Regulation.*

INTRODUCTION

Out-of-pocket (OOP) healthcare payments, known for their regressive nature (Edeh, 2022), pose a significant welfare issue (Al-Hanawi, 2021). The heavy reliance on OOP expenses often leads to adverse effects on households' health-seeking behavior, potentially pushing them into poverty. Achieving Universal Health Coverage necessitates the elimination of OOP payments (Ranjan et al., 2019). Notably, institutional delivery services have been found to generate high out-of-pocket expenses, particularly for women in developing countries who often incur charges even when services are intended to be free (Issac et al., 2016).

In this context, the World Health Organization (WHO) advocates for prepayment mechanisms, specifically public-funded health insurance, as a means to eliminate OOP and provide financial risk protection. State-sponsored health insurance programs have gained prominence as a strategy to mitigate overwhelming healthcare costs and prevent individuals from facing financial distress (Nandi & Schneider, 2020b). However, evidence regarding the effectiveness of such schemes in achieving financial risk protection remains inconclusive. While some authors argue that enhancing the benefits of public health insurance has a positive impact on individuals' health and shields them from unexpected medical expenses (Lim, 2016), others highlight the shortcomings of public insurance in achieving financial risk protection (Ahmed et al., 2018; Bredenkamp & Buisman, 2016).

Recently rolled out public health insurance in India has faced criticism for involving private sector providers and potentially exacerbating moral hazards and the delivery of suboptimal care. Private providers often deliver care of questionable quality and rely heavily on out-of-pocket payments. Furthermore, they sometimes engage in provision of unnecessary care, creating a demand that may not be medically justified, which further cause's financial distress for the households seeking care. One notable case where such induced demand is highly prevalent is c-section deliveries. The escalating prevalence of caesarean births, a global phenomenon (Betrán et al., 2016), has recently emerged as a notable trend in India (Mohanty et al., 2019). The exponential growth of caesarean deliveries in India is a matter of concern, necessitating the implementation of strategic interventions to address this issue.The escalating trend prompts us to contemplate on the implications and consequences associated with this mode of childbirth. Furthermore, studies have consistently shown that disadvantaged groups experience a disproportionate burden of out-of-pocket spending compared to their more privileged counterparts (Karan, Selvaraj, & Mahal, 2014), highlighting the importance of examining how out-of-pocket payments are distributed across socioeconomic differentials from a "social determinants of health" perspective. Within this framework, the paper asks three fundamental questions. Firstly, it investigates the potential impact of enrolling under public insurance on out-of-pocket expenditure (OOPE) for c-section deliveries. Secondly, recognizing the importance of understanding the discrepancies in out-of-pocket health expenditure and the underlying factors that contribute to these inequalities (Al-Hanawi, 2021), the present study explores the economic-

based disparities in out-of-pocket costs incurred specifically for c-section deliveries.The paper also delves into the core inquiry of what precisely causes these inequalities, thus unravelling the key drivers behind them. Understanding the underlying factors that fuel these disparities is of paramount significance in effectively eradicating them.

Method

The study makes use of survey results of 1000 women who had C section delivery history. To address recall bias, the study focused on cases with childbirth from 2018 onwards. This approach also ensured inclusion of cases coinciding with the rollout of the PMJAY program. Given the regional discrepancies and high rates of caesarean section deliveries observed in southern Indian states, specifically Telangana, Andhra Pradesh, Kerala, Tamil Nadu, Puducherry, and Karnataka, the analysis exclusively considered data from these states and union territories. The analysis accounted for 1000 caesarean deliveries, which provided an appropriate sample size for reliable findings.

The study examined Out of Pocket Expenditure (OOPE) and Log OOPE as outcome variables. The independent variables used were enrolment under public health insurance, facility type, education level, wealth index, caste, religion, state of residence, age category, and urban/rural sector. The logarithmic transformation of OOPE was employed based on prior literature (Garg et al., 2023), as it provides benefits in addressing potential skewness or extreme values in the data. The log of OOPE and OOPE itself were subjected to regression models. To ensure robustness of the results, Propensity Score Matching (PSM) was employed to investigate the impact of PFHI-enrolment on OOPE. Additionally decomposition of concentration index was carried out to find factors contributing to disparities in OOPE.

Results

Table 1: Table: Regression results for determinants of Log of OOPE for CS deliveries

Log (oope)	Coef.	Std. Err.	t	P>t	[95% Conf.	Interval]
PFHI	-0.034	0.117	-0.3	0.768	-0.266	0.196
Education	0.146	0.084	1.73	0.084	-0.019	0.313
wealth_index	0.097	0.064	1.52	0.129	-0.028	0.224
Caste	0.090	0.057	1.57	0.117	-0.022	0.203
State	-0.026	0.019	-1.36	0.176	-0.063	0.011
Facility type	0.191	0.012	15.35	0	0.166	0.215
age_cat	0.028	0.058	0.48	0.634	-0.087	0.143
urban_rural	0.0004	0.121	0	0.997	-0.239	0.240
_cons	3.9991	0.764	5.23	0	2.495	5.503

Table 2: Regression results for determinants of OOPE for CS deliveries

Oope	Coef.	Std. Err.	T	P>t	[95% Conf.	Interval]
PFHI	-924.152	1472.147	-0.63	0.53	-3816.11	1967.807
Education	3046.292	1037.875	2.94	0.003	1007.439	5085.145
wealth_index	676.3973	814.3624	0.83	0.407	-923.377	2276.172
Caste	-586.37	751.8102	-0.78	0.436	-2063.26	890.5239
State	-253.157	239.871	-1.06	0.292	-724.372	218.0573
Facility type	3031.14	156.6564	19.35	0	2723.396	3338.884
age_cat	515.3059	746.1024	0.69	0.49	-950.375	1980.987
urban_rural	-1460.94	1552.747	-0.94	0.347	-4511.24	1589.352
_cons	-61712.6	10053.88	-6.14	0	-81462.9	-41962.3

Table 3: ATE under PSM for OOPE and log of OOPE for c-section deliveries in southern Indian states

Average Treatment Effect	**Caesarean deliveries**	
	Coefficient	P value
OOPE	1266.28	0.471
Log of OOPE	0.099	0.318

Tables 1 and 2 display the outcomes of regression analyses aimed at identifying the factors influencing log-transformed Out-of-Pocket Expenditure (log OOPE) and the actual Out-of-Pocket Expenditure (OOPE) separately. We discern that the variable "Type of healthcare facility" stands resolute as the sole influential determinant, demonstrating a statistically significant association with OOPE for CS deliveries. Our analysis reveals that a plethora of other factors, such as Public funded health Insurance, education, wealth index, caste, state, age category, and place of residence (urban-rural), do not exhibit notable correlations with the said expenditure. In the context of our study, the variable enrolment under public health insurance (PFHI) surfaces as a noteworthy contender; yet the analysis indicates a lack of its association with OOPE for CS deliveries (p-value: 0.53), thereby beckoning for further inquiry into the underlying dynamics at play. However, the type of facility (Private or Public) has significant relationship with both OOPE and log of OOPE as indicated in the tables 1 and 2. To strengthen our argument regarding the limited impact of insurance on OOPE, we performed a validation using Propensity Score Matching, the results of which are presented in table 3. The analysis reaffirms our findings, indicating that there is no significant association between public health insurance and Out-of-Pocket Expenditure.

In Fig. 1 the distribution of OOPE for CS deliveries in southern Indian states by wealth quintile is presented. The calculation of the concentration index for out-of-pocket health expenditure resulted in a positive value (0.14405, p=0.0000), indicating that individuals with higher socioeconomic status are more likely to bear the burden of healthcare costs compared to those with lower socioeconomic status. The concentration curve depicting this relationship is illustrated in Figure 2.

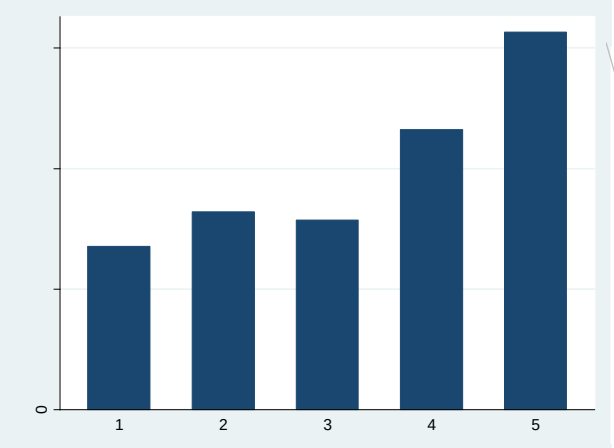


Fig 1: Distribution of OOPE by wealth index

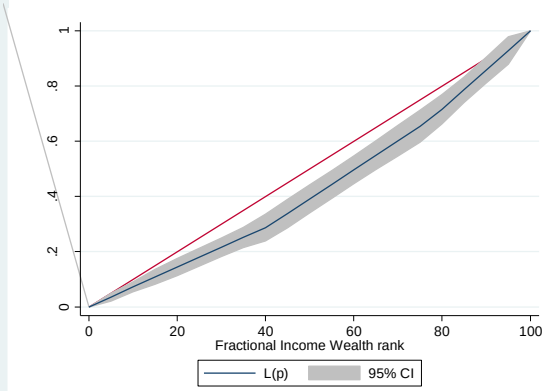


Fig.2 Concentration Curve

Table 4: Decomposition of inequalities in out-of-pocket (OOP) health expenditure

Variable	Elasticity	Concentration Index	Contribution	Percentage Contribution
Wealth Index	0.1702	0.1427	0.0243	0.1589
Caste	-0.0904	0.0064	-0.0005	-0.0038
State	0.3171	0.0007	0.0002	0.0014
Type of Provider	4.0353	0.0230	0.0927	0.6067
Public Insurance	0.0226	0.0213	0.0004	0.0031
Urban-Rural	-0.1382	-0.0635	0.0087	0.0574
Education	0.5039	0.0393	0.0198	0.1298
Religion	-0.0126	0.0489	-0.0006	-0.0040

Table 4showcases the outcomes of decomposition analysis. The objective of decomposition is to estimate the contribution of different socioeconomic variables to the overall inequality observed. The table includes the concentration index for each factor, the elasticity of OOP expenditure in relation to each factor, and the absolute and proportional contributions of each factor to the overall inequalities.

DISCUSSION

Prior studies show mixed results on the policy relevant question of where OOPE is concentrated across income or wealth spectrum. The results of our study are consistent with results from a study carried out in European health system context (Palladino, Lee, Hone, Filippidis, & Millett, 2016). Another study in the context of United States conferred a similar result wherein the highest 10 percent of individuals in terms of wealth accounted for 42 percent of the overall expenditure (Fahle, Mc Garry, & Skinner, 2016). However, recent studies in the context of Kenya (Njagi et al., 2020)and Saudi Arabia (Al-Hanawi & Njagi, 2022)depict a different picture wherein OOPE is concentrated among poor. As per a relatively recent global stock take by Wag staff et al, OOPE when analyzed in relation to income, it exhibits a regressive pattern,

disproportionately affecting individuals with lower incomes while on the other hand and when assessed relative to consumption, it is found that they exhibit a progressive pattern, with wealthier individuals shouldering a greater proportion of OOPE (Wag staff, Eozenou, & Smitz, 2019). Although our study paints an optimistic picture from the standpoint of equity, where OOP for c section delivery is concentrated among the socio economically better off, it is to be noted here that, disadvantaged groups face a greater acceleration in the financial burden associated with out-of-pocket spending compared to their more privileged counterparts (Karan, Selvaraj, & Mahal, 2014). In another study, on inpatient care in private hospitals in Kerala, a south Indian State, OOPE was found to be concentrated among individuals with lower socioeconomic status (Dilip, 2010). Our study focused on OOPE incurred for c-section delivery exclusively. Individuals from higher socioeconomic backgrounds are more inclined to choose elective Caesarean section (C-section) deliveries and opt for private healthcare facilities for childbirth (Singh, Vishwakarma, & Sharma, 2020). This fact can probably account for the disparity between our study findings and previous research regarding the concentration of out-of-pocket expenditures (OOPE).

The findings from decomposition analysis reveal that the type of healthcare provider makes the most significant contribution to overall inequality in out-of-pocket expenditures (OOPE). The contribution of the type of provider to inequality is 0.0927, representing a substantial 60.67% of the total contribution. The contribution of education to total inequality is 0.0198, representing 12.98% of the total contribution. Likewise place of residence (rural or urban) contributes significantly to inequality in OOP incurred for C- section deliveries.

The regression results, ratified by PSM analysis indicate that the allocation of public funds for caesarean section deliveries in the southern states of India falls short in terms of providing adequate financial security to households involved. Previous researches conducted in India have shown mixed results as far as effectiveness of insurance in bringing financial risk protection is concerned.

Within the framework of new institutional economics, institutions and policies set the rules of the game. It is worthy to note that public policies have a bearing on OOPE. For example, introduction of certain policies in the Indian context increased OOPE (Ghosh, 2010). Further, in the context of c-section delivery, there was a marked decrease in the OOPE incurred after introduction of fee exemption policy for delivery policy in Ghana (Asante, Chikwama, Daniels, & Armar-Klemesu, 2010). In the light of the results obtained, type of provider (public or private) turned out to be the only significant predictor of OOPE. Similarly, the type of provider contributed majorly (nearly 60 percent) to the observed economic rank related inequality in the magnitude of OOPE incurred. Essentially, it means public instruments and policies that deal with engagement with private sector (Regulatory policies) needs to be revisited. Evidence suggests that the supply-side, namely medical institutions, plays a significant role in the ex-post moral hazard behaviour associated with health insurance (Jung & Park, 2021). Insurance fraud poses a significant and grave challenge for consumers, regulators, and insurance companies alike (Hoyt, Mustard, & Powell, 2004). The existing literature suggests that provider moral hazard does not contribute to overtreatment in terms of volume but rather amplifies overtreatment in terms of cost (Lagarde & Blaauw, 2022). Essentially, this undesirable phenomenon leads to break down of public finance and its efficiency. Overuse, which refers to the utilization of health services that provide no benefit or where the potential harms outweigh the benefits, is believed to contribute to the exorbitant costs of care, with wasteful spending amounting to approximately

$226 billion in 2011 (Keyhani et al., 2013).Ground reports suggests rampant incidences of double billing both from the insurance card and patient's pocket. Such practices are direct threat to financial risk protection. In the context of caesarean section delivery, supplier induced demand is quite obvious. Recent estimates from the National Family Health Survey 5 reveal that 47.4% of babies born in private healthcare facilities in India undergo caesarean section, significantly surpassing the 14.3% rate observed in government facilities. According to a recent investigation utilizing the District-level Household Survey data, the occurrence of c-section deliveries in India is approximately threefold higher in privately-owned healthcare facilities compared to those in the public sector.(P. Singh et al., 2018). Bogg et al. (2016) describe SID as an example of unintended externalities in economic interactions, resulting from the imbalanced principal-agent relationship between patients and physicians (Bogg et al., 2016). Ultimately it is antithetical to the cause of financial risk protection and equity even as provision of unnecessary care gives rise to multiple inefficiencies, leading to significant waste within healthcare systems that already face resource constraints (Lagarde & Blaauw, 2022).

Limitations

This study has certain limitations. It is a cross-sectional study, which means it provides a snapshot of data at a specific point in time. Further the definitive impact of the PMJAY (Pradhan Mantri Jan Arogya Yojana) on Out-of-Pocket Expenditures (OOPE) could not be determined. The study only covers the initial years of PMJAY, and it may take more time for the scheme to establish itself as a successful initiative, especially in a developing country context. Nevertheless, the study serves as a general indication of the shortcomings of the public financing system in achieving its intended goals.

CONCLUSION

The study reveals that public financing mechanisms in place are ineffective in providing financial risk protection for caesarean section (c-section) deliveries in southern Indian states. The Results of OLS analysis and decomposition analysis imply that type of provider is a significant predictor of OOPE and inequality therein. These findings have important implications for public policies, particularly in the regulation of care providers. Based on these findings, we recommend implementing more comprehensive interventions in the healthcare sector that go beyond the current focus on revenue collection, risk pooling, and strategic purchasing by the central and state governments. Specifically, there is a need to enhance engagement with the private sector to ensure that households are not financially burdened or at risk of financial ruin in the event of a hospitalization episode for c-section delivery.

Statements and Declarations

Funding statement: No funding was received to assist with the preparation of this manuscript.

Conflict of interest disclosure: On behalf of all authors, the corresponding author states that there is no conflict of interest.

REFERENCES

1) Ahmed, S., Szabo, S., & Nilsen, K. (2018). Catastrophic healthcare expenditure and impoverishment in tropical deltas: Evidence from the Mekong Delta region. *International Journal for Equity in Health*, *17*(1). https://doi.org/10.1186/s12939-018-0757-5

2) Al-Hanawi MK. Decomposition of inequalities in out-of-pocket health expenditure burden in Saudi Arabia. *Soc Sci Med*. 2021;286.doi:10.1016/j.socscimed.2021.114322

3) Al-Hanawi, M. K., & Njagi, P. (2022). Assessing the inequality in out-of-pocket health expenditure among the chronically and non-chronically ill in Saudi Arabia: a Blinder-Oaxaca decomposition analysis. *International Journal for Equity in Health*, *21*(1). https://doi.org/10.1186/s12939-022-01810-5.

4) Betrán, A.P., Ye, J., Moller, A.-B., Zhang, J., Gülmezoglu, A.M., Torloni, M.R., 2016. The increasing trend in caesarean section rates: global, regional and national estimates: 1990-2014. PLoS One 11 (2) e0148343

5) Bogg, L., Diwan, V., Vora, K. S., & DeCosta, A. (2016). Impact of Alternative Maternal Demand-Side Financial Support Programs in India on the Caesarean Section Rates: Indications of Supplier-Induced Demand. *Maternal and Child Health Journal*, *20*(1), 11–15. https://doi.org/10.1007/s10995-015-1810-2

6) Bredenkamp, C., & Buisman, L. R. (2016). Financial protection from health spending in the Philippines: Policies and progress. *Health Policy and Planning*, *31*(7), 919–927. https://doi.org/10.1093/heapol/czw011

7) Dilip, T. (2010). Utilization of inpatient care from private hospitals: trends emerging from Kerala, India... Health policy and planning.

8) Edeh HC. Exploring dynamics in catastrophic health care expenditure in Nigeria. *Health Econ Rev*. 2022; 12(1). doi:10.1186/s13561-022-00366-y

9) Fahle, S., Mc Garry, K., & Skinner, J. (2016). Out-of-Pocket Medical Expenditures in the United States: Evidence from the Health and Retirement Study.. Fiscal studies.

10) Garg, S., Tripathi, N., &Bebarta, K. K. (2023). Does government health insurance protect households from out of pocket expenditure and distress financing for caesarean and non-caesarean institutional deliveries in India? Findings from the national family health survey (2019-21). *BMC Research Notes*, *16*(1), 85. https://doi.org/10.1186/s13104-023-06335-w

11) Ghosh, S. (2010). Catastrophic Payments and Impoverishment Due to Out-of-Pocket Health Spending: The Effects of Recent Health Sector Reforms in India. Geographic Health Economics eJournal.

12) Hoyt, R., Mustard, D., & Powell, L. (2004). The Effectiveness of Insurance Fraud Statutes: Evidence from Automobile Insurance. Banking & Insurance eJournal.

13) Issac, A., Chatterjee, S., Srivastava, A., & Bhattacharyya, S. (2016). Out of pocket expenditure to deliver at public health facilities in India: A cross sectional analysis. *Reproductive Health*, *13*(1). https://doi.org/10.1186/s12978-016-0221-1

14) Jung, C., & Park, S. (2021). Fee-For-Service Health Insurance and Moral Hazard of Hospitals. Asia-Pacific Journal of Risk and Insurance.

15) Karan, A., Selvaraj, S., & Mahal, A. (2014). Moving to Universal Coverage? Trends in the Burden of Out-Of-Pocket Payments for Health Care across Social Groups in India, 1999–2000 to 2011–12. PLoS ONE.

16) Lagarde, M., & Blaauw, D. (2022). Overtreatment and benevolent provider moral hazard: Evidence from South African doctors. *Journal of Development Economics*, *158*, 102917. https://doi.org/10.1016/j.jdeveco.2022.102917

17) Lim, K. M. (2016). Public provision of health insurance and welfare. *B.E. Journal of Macroeconomics*, *16*(2), 439–483. https://doi.org/10.1515/bejm-2015-0094

18) Mohanty, S. K., & Srivastava, A. (2013). Out-of-pocket expenditure on institutional delivery in India. *Health Policy and Planning*, *28*(3), 247–262. https://doi.org/10.1093/heapol/czs057

19) Nandi, S., & Schneider, H. (2020b). When state-funded health insurance schemes fail to provide financial protection: An in-depth exploration of the experiences of patients from urban slums of Chhattisgarh, India. *Global Public Health*, *15*(2), 220–235. https://doi.org/10.1080/17441692.2019.1651369

20) Njagi, P., Arsenijevic, J., & Groot, W. (2020). Decomposition of changes in socioeconomic inequalities in catastrophic health expenditure in Kenya. *PLoS ONE*, *15*(12 December). https://doi.org/10.1371/journal.pone.0244428

21) *Palladino, R., Lee, J.T., Hone, T.V., Filippidis, F.T., & Millett, C.J. (2016). The Great Recession and Increased Cost Sharing In European Health Systems. Health affairs, 35 7, 1204-13.*

22) Ranjan A, Thiagarajan S, Garg S,Danda D. Progress towards universal health coverage in thecontext of rheumatic diseases in India. Int J Rheum Dis.2019; 00:1–10. https://doi.org/10.1111/1756-185X.13488

23) Singh, S., Vishwakarma, D., & Sharma, S. (2020). Prevalence and determinants of voluntary caesarean deliveries and socioeconomic inequalities in India: Evidence from National Family Health Survey (2015-16). Clinical Epidemiology and Global Health.

24) Wag staff, A., Eozenou, P., & Smitz, M. (2019). Out-of-Pocket Expenditures on Health: A Global Stock take. Microeconomics: Inter temporal Consumer Choice & Savings e Journal.

Editorial Board

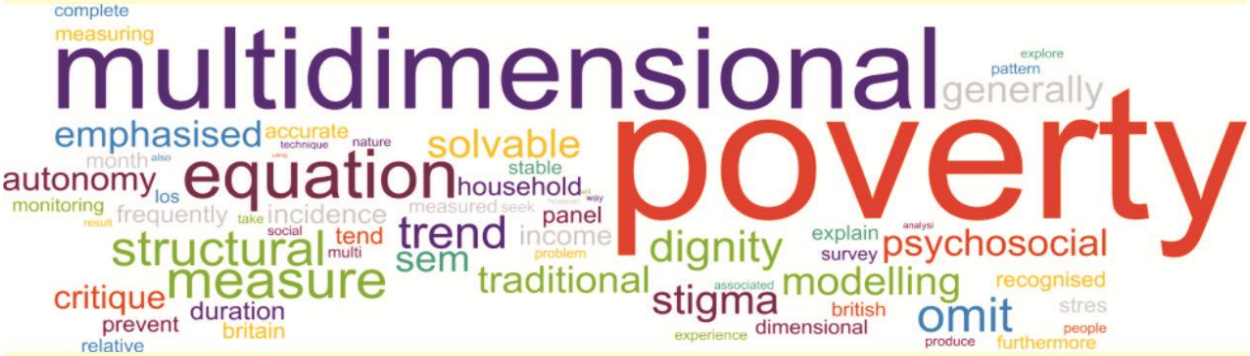
Review Process

Each research paper/article submitted to the journal is subject to the following reviewing process:

1. Each research paper/article will be initially evaluated by the editor to check the quality of the research article for the journal. The editor may make use of ithenticate/Viper software to examine the originality of research articles received.
2. The articles passed through screening at this level will be forwarded to two referees for blind peer review.
3. At this stage, two referees will carefully review the research article, each of whom will make a recommendation to publish the article in its present form/modify/reject.
4. The review process may take one/two months.
5. In case of acceptance of the article, journal reserves the right of making amendments in the final draft of the research paper to suit the journal's standard and requirement.

Categories

- Business Management
- Social Science and Humanities
- Education
- Information Technology
- Scientific Fields



Published by

Trans Asian Research Journals
SCO 34, Ist Floor, HUDA Market,
Near Red Cross, Jagadhri - 135 003 (Haryana) INDIA
Website : www.tarj.in

Our other publications :
Trans Asian Journal of Marketing & Management Research (TAJMMR)
ISSN (online) : 2279-0667