

Short Communication

Modified Kuppuswamy socioeconomic scale 2023: stratification and updates

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ABSTRACT

Socioeconomic status (SES) is evaluated by considering a family's income, level of education, and occupation of head of household. SES serves as significant indicator of the family's overall health and their access to resources. Modified Kuppuswamy scale is among the most used tools to assess SES of urban residents, but it necessitates regular updates due to consistent inflation. In this study, present updated version of modified Kuppuswamy socioeconomic scale for the year 2023 in India. Additionally, we have further refined the income points for the scales that were previously underutilized. This refinement aims to ensure more accurate categorization of families based on their societal position.

Keywords: SES, Scale, Consumer price index, Inflation, Income

INTRODUCTION

Socioeconomic status (SES) stands as a crucial indicator to assess health status of a family. It represents position that a family holds within hierarchical social structure and provides comprehensive evaluation of person's work experience and their family's economic and social standing relative to others. SES significantly influences overall human functioning, including both physical and mental well-being. Extensive research has demonstrated that SES has a substantial impact on an individual's life expectancy.¹ Numerous studies in health-related fields necessitate evaluation of SES and consider it during data analysis process.

The modified Kuppuswamy scale, devised by Kuppuswamy in 1976, serves as a valuable instrument for evaluating the SES of urban families in India.² It has gained extensive popularity among social scientists and researchers engaged in both community-based and hospital-based studies. Administered through a series of questions regarding the family's income, education level, and the occupation of the family head, the Kuppuswamy scale effectively assesses the SES of subjects under study.

The Kuppuswamy scale needs regular updating to reflect changes in the Indian economy and society. The scale has been modified to include new categories of occupation and education level. Following inflation and the resulting depreciation of the rupee, income ranges given by Kuppuswamy back in 1976 lost their meaning. Monetary inflation influences the value of the rupee, which means that the rupee does not retain the same value each year in terms of the goods/services that can be purchased with the same amount. As a result, income criteria for socioeconomic classification of study populations must be updated on a regular basis.

KEY FACTORS

The original scale relies on three key factors: the family's total monthly income from all sources, the occupation of the family head, and their level of education. Based on the scale's score range of 3-29, the study population is categorized into upper, upper middle, lower middle, upper lower and lower socioeconomic classes. While the professional requirements of the scale may undergo revisions, the education criteria remain fixed due to the

2004 revision of the national classification of occupations by ministry of skill development and entrepreneurship.^{3,4}

In Table 1, revised occupational divisions and subdivisions are presented, along with Table 2, which displays the assigned scores for each division. The total family income scale is regularly updated in accordance with changes in consumer price index (CPI) for industrial workers, as projected by the central ministry of statistics and programme implementation on their website.⁵

To compute the modified Kuppuswamy scale, points are assigned to the family's total income, education level, and the occupation of the family head. The cumulative points are then used to determine the SES of the family.

CALCULATION OF THE SCALE

Scoring of education

Regardless of whoever the subject is, head of family is assigned education scoring. Credit for completed degrees is only given for the highest level earned, not for those that are currently pursuing or have not been completed.

Scoring of occupation

Only the head of family's occupation is given a score. Credit for the head of the family's previous position may be provided if that person has retired. We must advance the categories from unemployed to professional when assigning a score to a person. For instance, the occupation score for an engineer should be 1 (for "unemployed") if, for any reason, they have never held a position after getting their professional degree.

Scoring of income

The income categories are established according to the prevailing inflation rate, which is determined using the CPI for Industrial Workers. The CPI tracks the fluctuations in the prices of goods and services commonly

purchased by an average wage worker and is expressed as a percentage relative to the prices of these goods and services in a base period or year. It is also known as the cost-of-living index.

As per the labour bureau, government of India, current base year is 2012. In this article, 2012 is utilized as the base year for computing the financial status of families.⁶ To calculate the CPI, the inflation rate of 4.81 in June 2023 is taken into account.⁵ By multiplying the financial scale values from year 2012 with inflation rate of 4.81, Kuppuswamy SES scale for June 2023 is determined.

$$\text{Inflation Rate} = [(b-a/a) \times 100]$$

where, "b" is CPI of current year and "a" is CPI of last year.

Table 1: The scoring system used for the education and occupation of the head of the family.

Parameters	Score
Education	
Professional degree	7
Graduate	6
Intermediate/ diploma	5
High school	4
Middle school	3
Primary school	2
Illiterate	1
Occupation	
Legislators, senior officials, managers	10
Professional	9
Technicians/associate professionals	8
Clerk	7
Skilled worker, shop and market sales workers	6
Skilled agricultural and fishery workers	5
Craft and related trade workers	4
Plant and machine operators and assemblers	3
Elementary occupation	2
Unemployed	1

Table 2: Total monthly income of the family for various years and score given.

Family income per month in Rupees (1976)	Updated monthly family income in Rupees (2012)	Updated monthly family income in Rupees (June 2021)	Updated monthly family income in Rupees (June 2022)	Updated monthly family income in Rupees (June 2023)	Score
≥2,000	≥30,375	≥190,148	≥212,929	≥146,104	12
				109,580-146,103	11
	15,188-30,374	95,077-190,147	106,468-212,928	73,054-109,579	10
1,000-1,999				68,455-73,053	9
				63,854-68,454	8
				59,252-63,853	7
750-999	11,362-15,187	71,126-95,076	79,648-106,467	54,651-59,251	6
				45589-54650	5
500-749	7,594-11,361	47,538-71,125	53,234-79,647	36,527-45,588	4
300-499	4,556-7,593	28,521-47,537	31,938-53,233	21,914-36,526	3
101-299	1,521-4,555	9,521-28,520	10,662-31,937	7,316-21,913	2
≤100	≤1,520	≤9,520	≤10,661	≤7,315	1

Consequently, the revised Kuppaswamy SES scales for 2023 classify individuals into distinct categories, namely upper, upper middle, lower middle, upper lower, and lower, with scores ranging from below 3 to 29.

Table 3: Modified Kuppaswamy socio economic classes based on total score.⁷

Total score	Socio economic class
26-29	Upper (I)
16-25	Upper middle (II)
11-15	Lower middle (III)
5-10	Upper lower (IV)
<5	Lower (V)

DISCUSSION

The "updated modified Kuppaswamy SES" is widely recognized and widely used in India. However, it has become less effective due to the continuous economic growth and social changes the country has undergone. To address this, regular updates to the income criteria have become essential, given the consistent inflation in the value of the Rupee, as measured by the all India CPI. The revision of income categories is linked to the All India CPI, which measures price changes for retail goods and services that families typically consume. CPI figures are commonly employed as a macroeconomic indicator of inflation. The government of India's labour bureau publishes three CPIs: the CPI for industrial workers (CPI-IW) for 2001, the CPI for agricultural labourers (CPI-AL) for 1986-87, and the CPI for rural labourers (CPI-RL) for 1984-85.⁶

Among these, the CPI-IW has been the most frequently used and appropriate CPI for updating socioeconomic categories as it represents the expenditure patterns of a typical working-class family. Many authors have previously adjusted the scale based on the CPI-IW data for specific years.

We found that the scale has number of limitations. The identification of the family's head is complicated by variations among evaluators. While salaries can reflect a family's purchasing power, they are often subject to under- or over-reporting due to various reasons, making them unreliable and inconsistent. Calculating family income becomes exceedingly challenging when wages for daily wage workers fluctuate from month to month. Interestingly, the family's size does not influence their income assessment. This means that a nuclear family with one or two earners might receive a lower score compared to a larger joint family with more earning members and a higher income.

Moreover, the scale does not consider other indicators of human progress, such as sanitation, health, or the standard of living. It also overlooks regional variations in the cost of living across different parts of India. As a result, the

scale requires frequent updates based on CPI trends and the base year to maintain its relevance and accuracy.

To address these challenges and enhance the scale's relevance, we conducted an analysis of income figures from February 2016 to July 2023. The analysis revealed a significant disparity between the upper class and middle class (Figure 1). As a result, we proceeded to subdivide the income points that were previously not frequently utilized. This refinement allows for a more accurate classification of families based on their income levels.

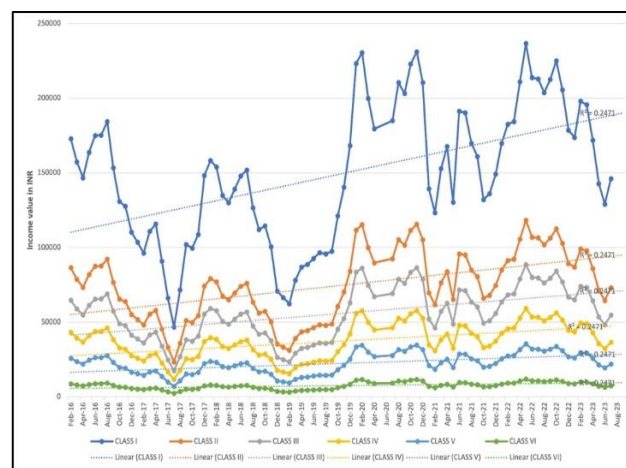


Figure 1: Trends of income values for various classes of Kuppaswamy scale, 2016-2023.

CONCLUSION

In conclusion, the modified Kuppaswamy scale provides a more practical and effective means to assess the socioeconomic class of Indian families.

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