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Assessing the Economic Impact of Climate Change on the Indian Middle Class

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Abstract

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Purpose: This study examines how climate change impacts the economic stability of Indian middle-class households by analyzing climate-driven fluctuations in their monthly budgets. It explores rising expenditures linked to climate-related needs, including heightened demand for comfort products and escalating healthcare costs.

Methods: Adopting a mixed-methods design, the research integrates a structured survey of 124 respondents (purposively sampled across income categories) from Siddhartha University Kapilvastu with qualitative insights from open-ended responses to assess financial stress and adaptive strategies.

Results: Findings reveal a surge in purchases of energy-intensive appliances (e.g., air conditioners, heaters) as households combat temperature extremes, alongside rising healthcare expenses from climate-induced ailments like respiratory illnesses. These adaptive expenditures strain budgets, often forcing reliance on loans and EMIs. The study underscores climate change's direct economic burden, highlighting significant budget pressures from climate-driven consumption and healthcare costs.

Conclusion: Climate change directly impacts the financial well-being of Indian middle-class households by increasing their expenditure on consumer durables, electricity bills, healthcare, etc. To maintain comfortable living conditions, households often purchase goods beyond their financial capacity, which results in reliance on personal loans and EMIs. The study concludes that the economic burden of climate change on middle-class households is substantial, highlighting the link between climate impacts the rising household expenditures.

Keywords: Climate change, economic impact, middle-class, budget, sustainability

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I. Introduction

Climate change, a global concern, has an aggravated impact on the environment and also has economic consequences. A study by Germany's Post Dam Institute for Climate Impact Research has concluded that the world is on the verge of massive economic losses, in terms of loss of income due to drastic changes in climatic conditions in the next 25 years, with an estimated decline of 19% of the present global income. It further states that climatic conditions not only act as an obstacle to the growth of developing countries but also pose challenges to the sustainable development of developed nations. Depending on the future sustainable growth of the developed and the developing countries, this decline could range from 11% to 29% respectively also depending on the climate scenarios in the respective countries. The impact cannot be pre-judged and cannot be demarcated between developed and developing nations.

India is envisioned to become a developed nation by 2047 and has the largest population comprising the average middle class. The middle class which has been categorized into Upper, Middle, and Lower subcategories are the backbone and the main drivers of the Indian economy. The Upper middle class enjoys the luxury of society while the middle class and lower middle-class face problems in their survival. The effects of climate change are beginning to manifest through rising household expenses, impacting this class, the most.

The Indian middle class, a demographic segment constituting a significant portion of the country's consumer base, is particularly vulnerable to climate-induced financial pressures. With extreme temperatures leading to increased dependence on air conditioning, water purification systems, and healthcare services, household expenditures are escalating at an unprecedented rate (The Economic Times, 2024). This rising financial burden is reshaping consumer spending behaviour, driving increased reliance on credit-based purchases, and straining disposable income. In this context, this study critically examines the economic ramifications of climate change on Indian middle-class households, emphasizing four key issues as (i) escalating energy expenditures due to rising demand for cooling and heating solutions. (ii) increased healthcare costs stemming from climate-related diseases such as respiratory illnesses, vector-borne infections, and heat-induced ailments (World Health Organization, 2023). (iii) greater financial stress due to climate-adaptive consumer goods (e.g., air conditioners, heaters, and water purifiers). (iv) rising dependence on loans and equated monthly instalments (EMIs) to sustain climate-adaptive lifestyle adjustments. This research adopts a microeconomic lens to investigate how climate-driven financial stressors shape the economic stability of middle-class households.

This study is restricted to middle-class households in India, given their substantial contribution to national economic activity. The research primarily focuses on direct financial stressors such as increased electricity bills, healthcare expenses, and climate-driven consumer purchases while excluding indirect economic implications like job displacement or macroeconomic instability.

II. Reviews

Climate Change and Household Economic Vulnerability

The economic impact of climate change is widely recognized in both global and regional contexts. Kumar et al. (2008) explored the financial consequences of climate change in Mumbai, highlighting increased property maintenance costs, reduced tourism revenue, and elevated healthcare expenses. Their findings align with global economic projections, indicating that climate change disproportionately affects middle-income households due to their limited financial flexibility.

At a broader level, the International Energy Agency (2023) forecasts that India's primary energy demand will double by 2030, exacerbating financial strain on middle-class consumers who are already facing rising electricity costs due to extreme weather conditions.

Rising Household Expenditures Due to Climate Change

Empirical studies have demonstrated a direct correlation between climate change and increased household expenditures. Veliz et al. (2017) investigated the effects of temperature fluctuations on electricity consumption in Massachusetts and found that a 2°C increase led to a 12% rise in annual household energy costs. A similar trend is observed in India, where extreme heat waves have resulted in record-breaking power consumption (The Economic Times, 2024).

Additionally, the demand for climate-adaptive consumer durables has surged. According to the Consumer Electronics and Appliances Manufacturers Association (CEAMA, 2024), air conditioner sales in India are projected to reach 14 million units in 2024, marking a substantial shift in household spending priorities. This growth underscores the economic necessity of climate adaptation, which was previously considered a discretionary expense.

Climate-Induced Healthcare Expenditures

The World Health Organization (2023) projects that between 2023 and 2050, climate change will contribute to 250,000 additional deaths annually due to malnutrition, vector-borne diseases, and extreme heat exposure. These health risks translate into rising medical expenditures, particularly for middle-class families who often lack robust insurance coverage.

Ahmed et al. (2011) further emphasized that erratic rainfall patterns, increased air pollution, and temperature fluctuations contribute to higher incidences of respiratory and waterborne diseases, necessitating greater household spending on medical care. This economic strain is particularly evident in urban areas, where climate-related illnesses are exacerbated by pollution and inadequate public healthcare infrastructure.

Financial Stress and Debt Accumulation for Climate Adaptation

The financial impact of climate adaptation extends beyond immediate household expenses, as middle-class families increasingly rely on credit-based financing to procure climate-resilient goods. Business Standard (2023) reported that India's peak power demand surged to 250 million GW in 2024, significantly raising household electricity bills and prompting many consumers to take loans to afford energy-efficient appliances.

The Ministry of Statistics and Program Implementation (2023) highlighted a significant increase in household expenditures on consumer durables such as air conditioners, generators, and water purifiers, reflecting an economic transition from discretionary spending to necessity-driven purchases. This increased reliance on loan-based purchases and EMIs underscores the long-term financial strain induced by climate adaptation costs.

III. Methodology

Using a mixed-methods approach, this study examined in depth how climate change would financially affect middle-class households' budgets. Primary and secondary sources were used in the data collection to provide readers with a comprehensive grasp of the topic.

Primary data was collected using a structured questionnaire administered to 124 respondents from the Siddharth University campus located in the Siddharthnagar district of Uttar Pradesh. The total population of middle-class families living in the complex is estimated to be more than 400 families. Purposive sampling was used to ensure proper representation of the middle-class segment, which was classified into lower-middle, middle, and upper-middle class based on annual income.

Secondary data was obtained from government reports, academic research papers, industry journals and market research studies, providing information about consumer spending patterns, demand for climate-friendly consumer durables and energy consumption trends among middle-class households. Sources include:

Government Report:

- Ministry of Statistics and Program Implementation (MOSPI) – Household Consumer Expenditure Survey
- Ministry of Environment, Forest and Climate Change – Climate Change Assessment Report of India
- Central Electricity Authority – Annual Energy Consumption Report

Industry magazines and market research studies:

- The Economic Times – Report on India's electricity consumption and energy demand
- Business Standard – Coverage of climate-related consumer spending trends
- Consumer Market Insights (CMI) – Study on Air Conditioner and Water Purifier Market Trends

Academic Research Papers and Journals:

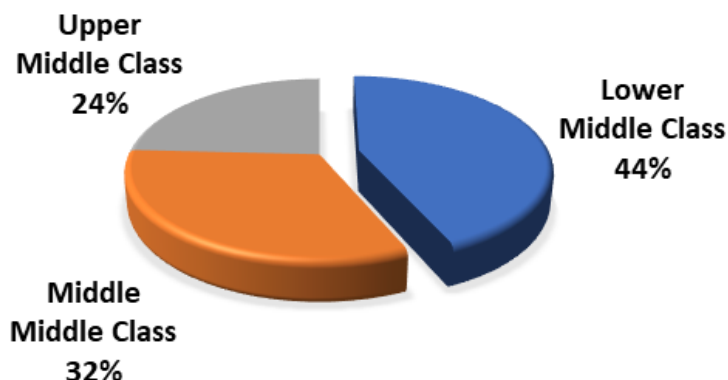
- Studies published in peer-reviewed journals focus on the economic impact of climate change on household expenditure in India

IV. Results and Discussion

The Data from 124 respondents was collected through a structured questionnaire divided into three sections. The data includes both aspects quantitative inputs and qualitative responses from the respondents. The data analysis indicates that climate change is an important factor that resulted in increased monthly expenses of middle-class households' and the quantitative data showed conformity with the qualitative inputs of respondents. The analysis reveals a nuanced portrait of how climate change impacts the economic landscape for Indian middle-class families. Among these respondents, 43.5% of respondents belong to the Lower Middle Class, 32.3% fall into the middle class and 24.2% of respondents were the Upper Middle Class all classifications are done based on their annual income. This distribution highlights the predominance of lower-income families, who are often at the forefront and bear economic strain as they navigate through the escalating costs associated with climate-related necessities. (Figure 1)

Figure 1

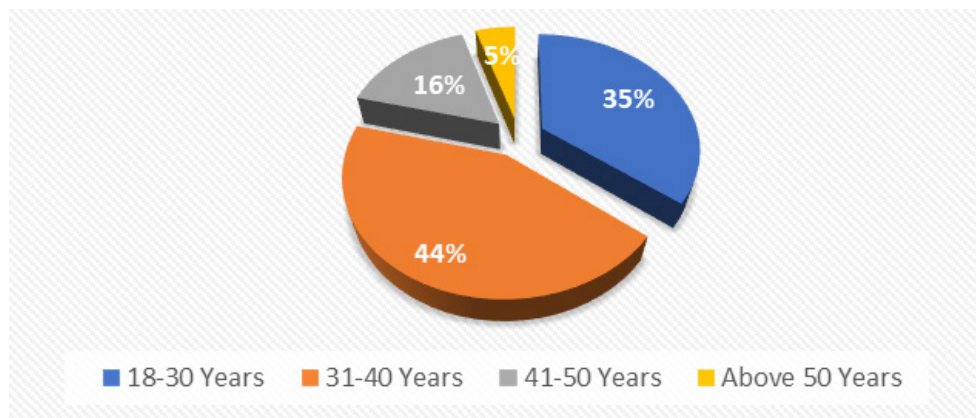
Class Categorization



Concerning the respondent age group, the majority of respondents are concentrated in the age group of 31-40 (43.5%) and the respondents in the age group of 18-30 (35.5%). This showed that the families affected most significantly by climate change are primarily comprised of individuals, heads of the family as earning members in their prime working years—those who are tasked with maintaining financial stability within the family amidst increasing pressures. (Figure 2)

Figure 2

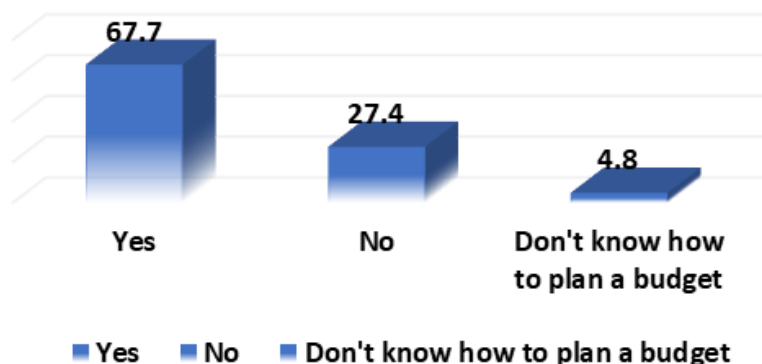
The Age Group of Respondents



When the respondents were asked whether they resort to budgeting to control their expenses, the data revealed that 67.7% of respondents actively engage in planning their budgets. This inclination indicates a proactive approach, of the majority of respondents toward financial agement, which is crucial as families grapple with rising living expenses. Around 27.4% of respondents do not plan their budgets, while the remaining 4.8% express uncertainty and ignorance about how to manage their finances. Lack of financial literacy can hinder effective budgeting, particularly for those in lower socio-economic classes, who may face more significant challenges in adapting to the financial burdens. (Figure 3)

Figure 3

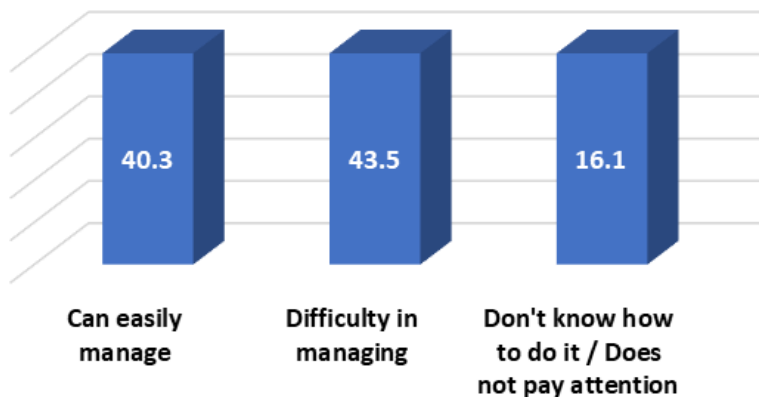
Percentage of Respondents who Plan their Budgets



When the respondents were asked about their ability to manage monthly budgets, 43.5% of the respondents admitted they experienced difficulty, while 40.3% felt they could manage with ease. 16.1% either do not pay attention to budgeting or they were unaware of how to go about it. This indicates a lack of financial management skills among all respondents emphasizing the need for targeted education to support them to build awareness about how to manage situations with rising expenses. This showed a complex interplay between climate change and the economic realities faced by the Indian middle class. As the demand for climate-related consumer goods continues to rise, the financial implications become increasingly pressing, particularly for those already on the margins. These findings not only highlight the immediate challenges but also call for a deeper exploration of the strategies, families might employ, to adapt and thrive in the dynamics of society. (Figure 4)

Figure 4

Percentage of Respondents who Find Difficulty or Can Easily Manage their Budgets

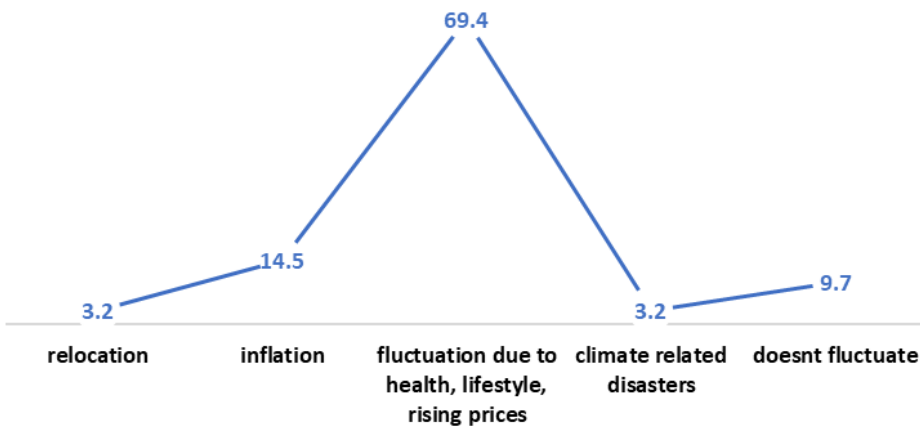


Regarding the factors influencing the monthly budgets of middle-class families, the data analysis reveals the causes of financial fluctuations. Among the 124 respondents, 69.4% identified fluctuations in their budgets primarily due to health, lifestyle changes and rising prices. This dominant response highlights the interconnectedness of climate change with daily living costs, reinforcing our earlier observations about the economic strain faced by these households. The considerable influence of lifestyle changes which are often triggered by changes in climate conditions further supported the points raised in the beginning regarding the increasing burden of expenses. Households are compelled to adopt and adapt to new health needs and lifestyle adjustments that arise from climate-related impacts, leading to unexpected financial pressures. This finding aligns with the assertion that climate change has shifted spending priorities, compelling families to allocate a greater portion of their income toward health and lifestyle-related expenses. In contrast, 14.5% of respondents pointed toward inflation as the main factor contributing to fluctuations in their budget. This underscores the role of macroeconomic factors in shaping the financial realities of families where rising prices impact purchasing power, further straining household budgets. Interestingly, only 3.2% of respondents cited relocation and climate-related disasters as reasons for fluctuation in their budget though almost all the respondents belong to different districts, despite having domicile in Uttar Pradesh and are relocated to Siddharth Nagar and most importantly managing two households, one inside campus and second one in their hometown. It suggests that the above-mentioned respondents were either not able to segregate the idea of managing two households at the same or they may have opined it as not the primary driver of financial stress for themselves. 9.7% of respondents in their response indicated that their budgets do not

fluctuate hinting toward achievement of a level of financial stability among certain segments of the middle class, though this group remains a minority. Overall, the insights derived from this graph analysis resonate with our overarching thesis regarding the economic impact of climate change on Indian middle-class families. The data analysis showed that while climate change is a significant factor, it often operates in tandem with inflation and lifestyle changes, collectively reshaping the budgeting tendencies among different households. While further exploring the economic impact of climate change on Indian middle-class families, it becomes essential to understand the composition of household income, particularly how many earning members contribute to the financial stability of these families. (Figure 5)

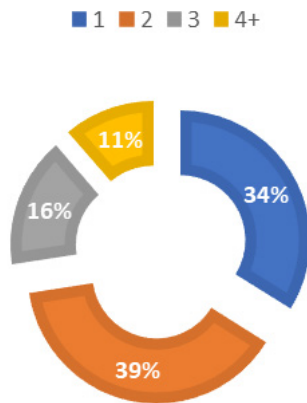
Figure 5

Reason for Fluctuation in Monthly Budgets



The data reveals that households with varying numbers of earners experience different financial dynamics. Specifically, 33.9% of respondents reported having one earning member, while 38.7% had two earners. 16.1%, had three earning members, and only 11.3% reported four or more earners in their family. This distribution reflects a significant reliance on multiple income sources to cope with the escalating financial pressures driven by climate-related factors and rising living costs. This underscores the connection between the number of earners in a household and the challenges faced in managing monthly budgets. As the previous analysis indicated, a staggering 69.4% of respondents identified fluctuations in their budgets due to health, lifestyle changes, and rising prices, all exacerbated by climate change. The financial burden is further intensified in households with fewer earning members, making it increasingly challenging to maintain a stable budget amidst these pressures.

The presence of multiple earners can mitigate some of these challenges, as households may be better positioned to absorb the increased costs associated with climate change-induced demands for consumer durables and healthcare expenditures. Consequently, understanding the household composition provides a more nuanced view of how climate change affects not only the economic stability of the Indian middle class but also their day-to-day financial management strategies. The data highlights that with the rising need for comfort and security in response to fluctuating climatic conditions, households with more earning members are better equipped to navigate these financial hurdles, emphasizing the importance of multiple sources or diversified sources of income in achieving economic resilience. (Figure 6)

Figure 6*Percentage of Different Earning Members in the Family*

As the study progresses into the realm of awareness and perceptions regarding environmental changes, it becomes evident that the majority of respondents demonstrate a substantial understanding of these issues. Specifically, an overwhelming 95.2% of participants (118 out of 124) reported being aware of environmental changes, while only 4.8% expressed uncertainty about their knowledge that environmental changes directly impact them. A high level of awareness underscores the importance of education and information dissemination regarding environmental issues, reflecting a growing consciousness among individuals about the impacts of climate change on their lives. Heightened awareness correlates strongly with the tangible effects respondents report experiencing the impact of climate change on their daily routines. (Figure 7)

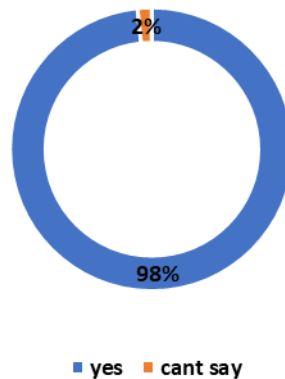
Figure 7*Percentage of Respondents who are Aware of Climate Change*

98.4% (122 individuals out of 124) responded that they feel the effects of environmental changes, leaving just 1.6% unable to articulate their experiences. This indicates a profound

recognition of how environmental factors influence everyday life, suggesting that climate change is no longer a distant concern but an immediate reality for the majority. (Figure 8)

Figure 8

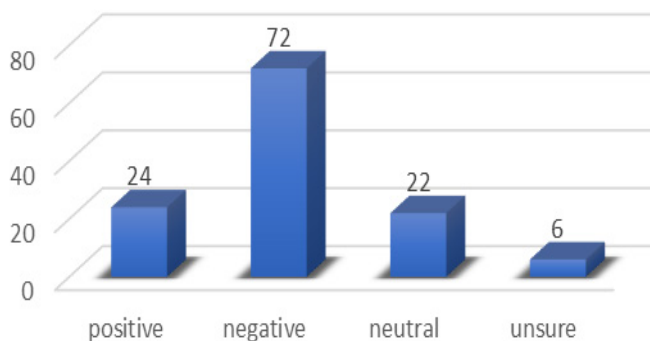
Percentage of Respondents who Feel the Effects of Climate Change



Delving deeper into perceptions, the data reveals a dichotomy in how individuals perceive the impact of these changes. While 19.4% (24 respondents) perceive the impact as positive, a significant 58.1% (72 individuals out of 124 respondents) view the impact as negative, indicating a pervasive sense of anxiety regarding the implications of climate change. Meanwhile, 17.7% (22 respondents) remained neutral, and 4.8% expressed that they were uncertain about any such impact. This distribution highlights a critical challenge for policymakers and educators: fostering a balanced understanding that acknowledges the complexities of climate impacts while empowering individuals to navigate their financial implications. (Figure 9)

Figure 9

Percentage of Respondents, how They Perceive the Impact of Climate Change

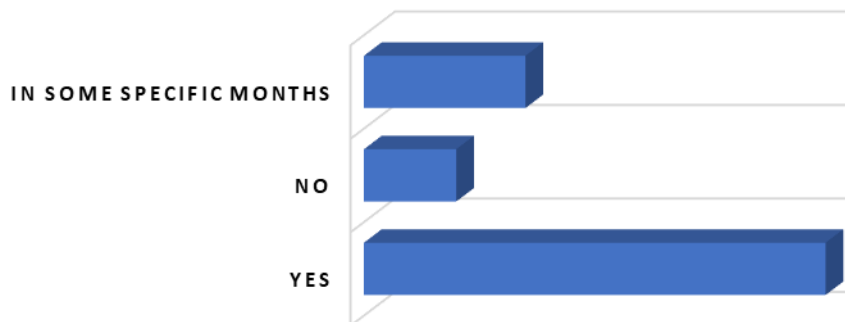


As earning members of their households, respondents feel considerable pressure on their monthly budgets due to environmental changes. 64.5% (80 individuals out of 124) respondents affirming this. In contrast, only 12.9% (16 respondents) reported not having any feeling of

pressure, while 22.6% (28 individuals) indicated that they experienced financial strain only in specific months. These findings highlight the economic burdens placed on households, suggesting that environmental changes directly influence budgeting and financial planning. (Figure 10)

Figure 10

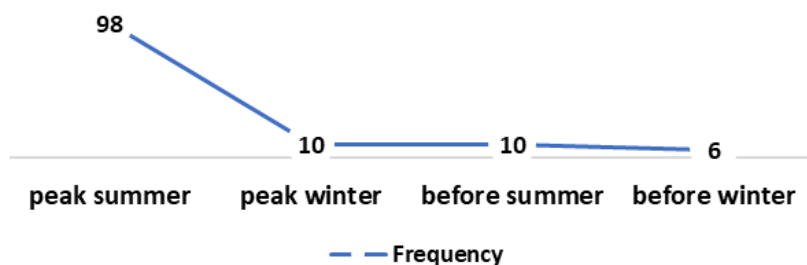
Number of Respondents who feel the Pressure of Climate Change on Their Monthly Budget



Respondents further identified specific periods when fluctuations in expenses occur due to climate changes. Notably, 79.0% (98 individuals) reported that these fluctuations peak during the summer months, while only 8.1% indicated similar experiences in both peak winter and before the advent of summer. A smaller fraction, 4.8%, noted fluctuations before the advent of winter. These responses not only indicate the seasonality of financial impacts but also point to the need for proactive budgeting strategies that consider these climatic influences. (Figure 11)

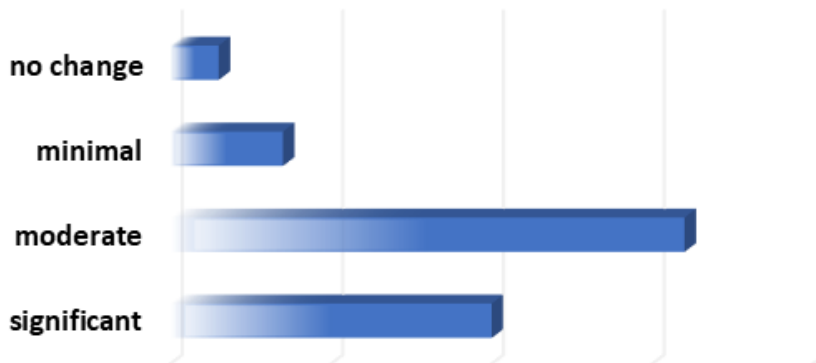
Figure 11

A Specific Period when the Budget is Highly Affected



Data collected on opinions regarding additional expenses incurred due to climate change, The survey results indicate that 51.6% of respondents perceive these expenses as moderate, while 32.3% view them as significant. Only 4.8% reported no change in their financial burdens. This perspective reflects a broader trend among families grappling with increased costs associated with adapting to climate change, underscoring the economic implications of environmental fluctuations. (Figure 12)

Figure 12

Changes in Expenses

When asked about the specific ways climate changes impact their lives, the data reveals that 40.3% of respondents identified multiple factors—health, energy consumption, overall living conditions, and financial stress—as significant influences. Notably, 30.6% of participants indicated that health concerns play a crucial role, further emphasizing the intertwined nature of environmental and personal well-being. As financial pressures mount, particularly during extreme weather conditions, evidently not as much surprise that 95.2% of respondents reported an increase in their electricity bills during heatwaves or cold spells. This rise in energy costs indicates the urgent need for families to adapt their consumption patterns in response to rising temperatures and changing climates. To counteract the effects of climate change, many families are making lifestyle changes. (Figure 13-14)

Figure 13

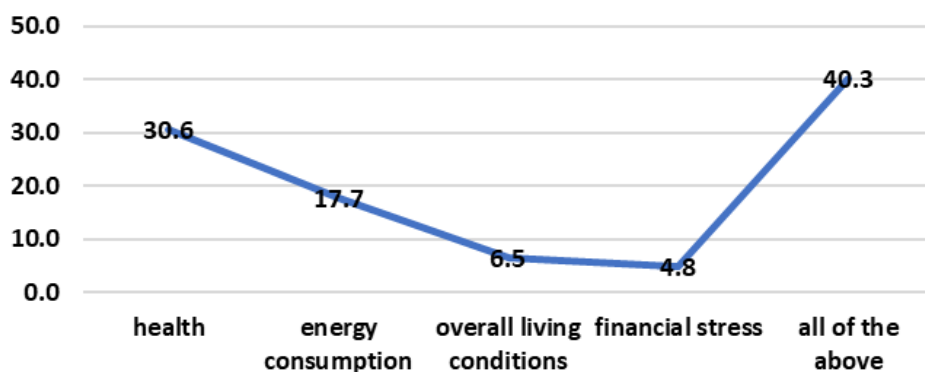
Most Financially Affected Areas Due to Climate Changes

Figure 14

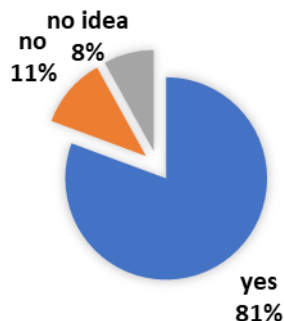
Percentage of Respondents who Find an Increase in Their Electricity Bills in Extreme Weather Conditions



A significant 66.1% of respondents confirmed that they have adopted new measures, such as purchasing air conditioners or heaters. These changes, while necessary for comfort and health, often lead to increased financial commitments, as indicated by 80.6% of respondents who reported that their expenses have risen as a result of these adjustments. Moreover, in the pursuit of procuring durable goods to support these lifestyle changes 91.9% of participants stated that such purchases have been necessary. This trend towards acquiring durable goods reflects an adaptation strategy in response to climate-related pressures, though it also adds another layer of financial strain, as 58.1% of respondents acknowledged an increase in their monthly budgets due to EMIs and interest from these purchases. (Figure 15)

Figure 15

Percentage Opinion of Respondents About Their Budget Has Increased Because of the Changes Made Due to Climate Change.

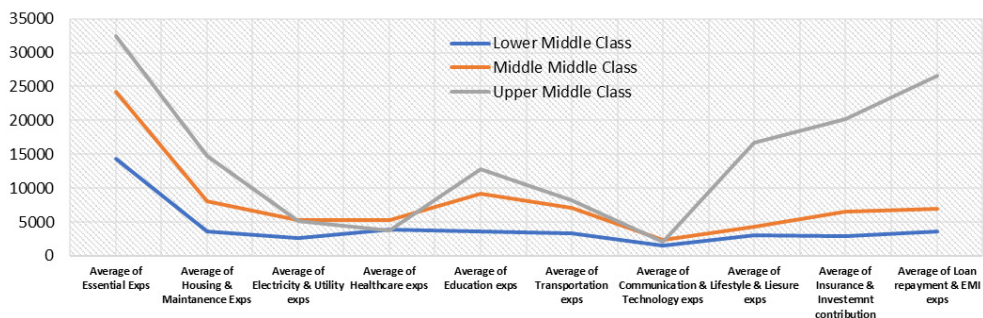


As illustrated in the graph derived from our data, low and middle-class families experience significant financial strain, limiting their ability to save and invest compared to their upper-middle-class counterparts. Essential expenses, such as housing, electricity, and healthcare, account for a substantial portion of the budget for lower and middle-middle-class families. For instance, the middle class allocates an average of INR 24,250 to essential expenses, while the lower middle class spends INR 14,296. The rising financial burden underscores the economic vulnerability of these groups, as they struggle to meet their basic needs while facing increasing costs due to climate-related events. Housing and maintenance costs reveal a stark contrast, with lower middle-class families spending averaging only INR 3,622 compared to spending around an average of INR14,700 for the upper middle class. This disparity reflects the limited access to climate-resilient housing for lower and middle-middle-class families,

rendering them more susceptible to the adverse effects of extreme weather conditions. Rising electricity and utility costs further exacerbate their financial challenges, as middle-class families spend an average of INR 5,290, while lower middle-class families manage only INR 2,681, potentially due to limited access to energy-efficient appliances. Healthcare and education expenses are particularly burdensome for these families, as evident from the data collected the average expenses of INR 5,275 by the middle class on healthcare while lower middle-class families allocate INR 3,855 indicating their struggle to access quality healthcare services. Financial pressure further limits their ability to secure essential services exposing them to health risks and reducing their children's overall wellbeing. The graph shows the disparity in savings and investment potential among income groups. The upper middle class invests an average of INR20,133 in insurance and investments, while lower and mid-middle-class families allocate significantly less, indicating their inability to save for the future. This financial insecurity perpetuates a cycle of vulnerability, leaving these families ill-equipped to navigate the challenges posed by climate change. The burden of loan repayments and EMIs incurred for adopting and adapting lifestyle changes further aggravates the economic pressure on middle-class families. Data collected and analyzed showed that the upper middle class spends INR 26,533 on loan repayments, the mid-middle class faces an average burden of INR 6,950, and lower-middle-class families manage INR 3,648 in terms of monthly spending on loan repayment as EMI. These obligations reduce their financial bandwidth, hampering their ability to invest for future growth or cope with unforeseen climate-related expenses. (Figure 16)

Figure 16

Monthly Expenses of Respondents in Various Areas, Class-Wise



Responses reveal that increased energy consumption is perceived as the most burdensome factor among all that contribute to increased burden on monthly budgets with 124 respondents indicating it as a significant concern. This finding highlights the strain placed on households due to rising energy costs, which are exacerbated by climate change and its impact on energy demands. Followed closely by increased health costs, which was selected as the second most critical driver that derails their budgets, out of 124 respondents 117 respondents, emphasizing the economic pressure stemming from climate-related health issues. This indicates that families are not only facing higher utility bills but are also incurring additional healthcare expenses due to climate-induced factors such as high pollution and heat waves. Additionally, the monthly interest and EMIs owing to the procurement of climate-related durable goods emerged as a notable burden for 97 respondents. This underscores the financial strain that families experience when purchasing climate-resilient appliances or vehicles, which often require financing. The debt incurred can further limit their disposable income, making it difficult to manage other essential expenses. In addition, the maintenance and repair costs of these climate-coping-related goods were reported by 113 respondents as a burden reflecting ongoing financial obligations that families must meet to sustain these

investments. This continuous expenditure adds to the economic burden, diverting funds from potential savings or investments. Interestingly, while investment in energy-efficient appliances was highlighted as an important consideration, it received the fewest responses at 36. This suggests that, despite awareness of the long-term benefits of such investments, many families may not have the financial capacity to make these purchases, limiting their ability to reduce energy consumption in the first place. (Figure 17-18)

Figure 17

Percentage Opinions of Respondents About the Increase in EMI and Interest in Purchases Because of Climate Change

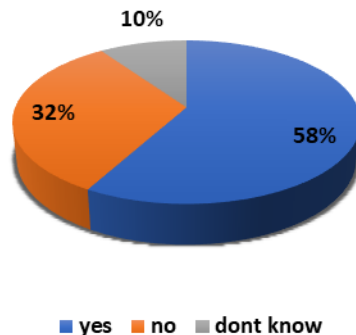
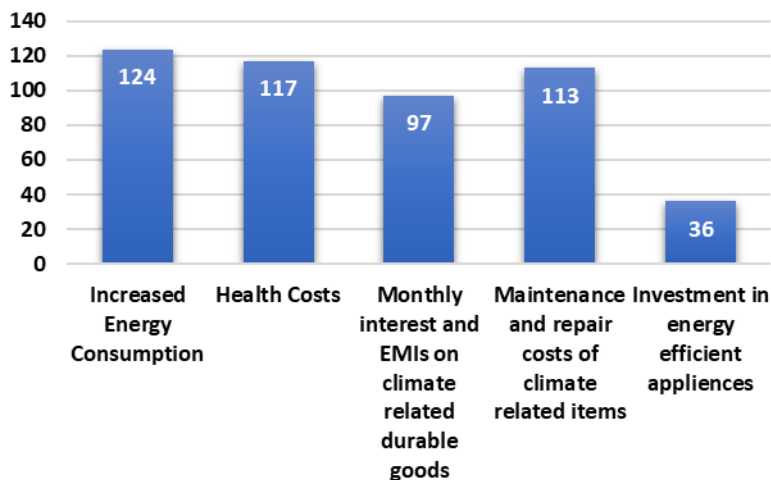


Figure 18

Most Financially Burdensome Areas Because of Climate Change



V. Conclusion and Implication

This study aimed to assess the economic impact of climate change on Indian middle-class families, with a core focus on how climate-related factors influence their financial stability and spending patterns. Through a comprehensive survey and analysis, it has become evident that climate change significantly burdens the economic well-being of middle-class

households, particularly the lower and mid-middle classes. Increased expenses related to energy consumption, healthcare, and financing climate-resilient goods have contributed the most to increasing the financial strain on the middle class that limits their ability to save, invest, and maintain a decent standard of living.

The findings underscore the pressing need for targeted interventions to alleviate the financial pressure on these families. The research highlights that climate change not only affects the environment but also has far-reaching implications on economic stability, especially for those in the middle-income bracket who are often more vulnerable to fluctuations in living costs. The disparities in expense burdens among different income groups further emphasize the need for tailored policy responses.

The study comprehensively demonstrates the profound economic impact of climate change on Indian middle-class households, revealing that environmental fluctuations directly affect their financial stability and spending patterns. Middle-class households, particularly those in the low- and middle-income groups, bear the brunt of these challenges. The findings highlight critical areas of concern, including increased energy consumption, healthcare costs, and expenditures related to climate-resilient durables, all of which increase the economic vulnerabilities of these households.

One of the most sobering findings is the rising cost of energy consumption. Rising temperatures and extreme weather conditions have led households to increase the use of air conditioners, heaters, and other energy-intensive appliances. These adaptations have led to increased utility bills, which many households have found difficult to manage within their existing budgets. Moreover, financial stress is further exacerbated during the peak summer months, when electricity consumption peaks due to long-lasting heat waves. This seasonal spending fluctuation underscores the urgent need for targeted strategies to reduce the financial pressure on households. Healthcare costs have also emerged as a significant concern, with climate change driving an increase in health-related expenditure. The survey revealed that waterborne diseases associated with pollution, heatwaves, and changing environmental conditions are forcing households to allocate a greater portion of their income to medical care. This is particularly burdensome for lower-middle-class households, who often struggle to access quality healthcare services. The increased financial outlay on healthcare underscores the interconnectedness of environmental and individual well-being and highlights a critical area for intervention.

This study underscores the economic challenges posed by the adoption of climate-resilient goods such as air conditioners, water purifiers, and heaters. While these appliances provide much-needed comfort and safety, they also entail significant one-time costs and ongoing financial commitments, such as equated monthly instalments (EMIs) and maintenance expenses. These costs are particularly challenging for low-income households, who often rely on credit to finance these purchases. The financial burden associated with these durable goods limits households' ability to save or invest, increasing their economic vulnerability. Despite these challenges, the study found that most respondents are aware of the impact of climate change on their lives. Over 95% of participants reported feeling the effects of environmental changes, while 58.1% perceived the impact to be negative. This widespread awareness emphasizes the need for educational campaigns and financial literacy programs to empower households to adapt more effectively. However, the findings also reveal disparities in how different income groups understand and manage these challenges, with low-income households disproportionately affected by rising costs and limited access to climate-resilient solutions. In response to these findings, several recommendations are proposed to reduce the financial strain on middle-class households. Policy interventions are critical to address the rising cost of energy consumption. Governments should consider implementing subsidies or tiered energy pricing models to make electricity more affordable, especially during peak seasons. Promoting energy efficiency programs can also help households reduce their consumption and achieve long-term savings. Additionally, the introduction of affordable healthcare infrastructure in climate-affected areas can significantly reduce the economic

burden of healthcare expenditure. Expanding insurance coverage and improving healthcare access for vulnerable groups will be key to addressing these challenges. Financial support for climate resilience is another important area for intervention. Providing low-interest loans or financial assistance for the purchase of energy-efficient appliances and climate-resilient goods can reduce the burden on households while promoting sustainable practices. These initiatives should be targeted at lower- and middle-class households, who are most affected by rising costs. Along with financial support, educational initiatives are also necessary to increase awareness about climate resilience. Campaigns focusing on the long-term benefits of energy-efficient appliances and effective budgeting practices can empower households to make informed decisions within their financial constraints. Infrastructure and technological advancements also play a key role in building resilience against climate change. Investing in affordable, climate-friendly housing can protect low-income households from extreme weather conditions and reduce their financial vulnerability. Renewable energy integration, such as rooftop solar panels and community-based energy projects, can reduce dependence on conventional energy sources and provide sustainable energy solutions. Finally, ongoing research and monitoring are essential to understand the emerging economic impact of climate change on middle-class families. Longitudinal studies that explore the interrelationship of climate change with socio-economic factors such as employment stability and educational opportunities can provide deeper insights into how families adapt to these challenges over time. Expanding the scope of research to include diverse geographic regions will also provide a more comprehensive understanding of the varied impacts of climate change across India.

In conclusion, the findings of this study emphasize the urgent need for a multi-pronged approach to mitigate the economic challenges posed by climate change. By implementing targeted policies, increasing financial literacy, and investing in sustainable infrastructure, stakeholders can help middle-class families build resilience and cope with the economic pressures of a changing climate. These measures will not only reduce the immediate financial burden but also lay the foundation for long-term economic stability and sustainability.

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