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Analyzing the impacts of International Capital Inflows and Fiscal–Monetary Policies on Climate Change in the Asia-Pacific Region*

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Abstract

Changes in weather patterns and extreme weather events pose a significant threat to economic growth and development. This study is an attempt to analyze the influences of foreign capital inflows, fiscal and monetary policy, energy use, and national income on climate change, measured by air temperature, in the ten countries from the Asia-Pacific region. Using panel data from 1990–2023, the most appropriate empirical methodologies, namely panel Autoregressive Distributed Lag (ARDL), dynamic ordinary least squares (D-OLS) and completely modified ordinary least squares (FM-OLS), and the panel Granger causality test, based on the nature of the data, are employed for empirical analysis. Empirical outcomes reveal that foreign capital inflows in the form of FDI have a climate mitigation impact, while foreign aid has a climate aggravating impact. Similarly, monetary policy through money supply has a climate mitigation impact, while fiscal policy through government spending has a climate aggravation impact. Both energy usage and national income have aggravating impacts on climate change in the region. These findings suggest that effective measures need to be taken by each national government to ensure climate change mitigation, which will ultimately impact the process of sustainable economic development.

Keywords: International capital inflows, Fiscal- Monetary Policy, Asia-Pacific region

JEL Classification: F3; O23; N1

Introduction

Climate change is a critical issue that has become a top priority in social discussions across the globe. Changes in weather patterns and extreme weather events pose a significant threat to economic growth and development. It is particularly critical for the developing world and poses a major challenge to macroeconomic stability. Catalano et al. (2020) also documented that CC and climate-associated natural disasters pose an increasing threat to both developing and developed economies. However, developing economies are particularly vulnerable to climate change due to their limited financial and institutional resources to respond to its adverse effects. The ability of developing economies to adjust to a changing climate with risky weather events such as storms, droughts, and floods is often more limited than that of wealthier countries. Regular changes in rainfall and temperature can significantly affect economic activities, specifically in sectors highly sensitive to climatic situations, such as fishing, agriculture, and tourism, with significant inferences for tax revenues and potential GDP growth rates.

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This poses a threat to long-term growth potential, resilience, and social welfare. Climate change indicators show that temperatures are emerging quicker in Asia than in any other region, making it the most vulnerable region to weather- associate natural calamities such as droughts, hurricanes, and wildfires (Dabla-Norris et al., 2021). In their study, Batten et al. (2016) highlighted that agriculture, the livestock sector, and fishing are specifically vulnerable to CC, making changes in the climate a critical threat to them. Intense weather events can lead to crop failures, resulting in loss of productivity and appropriateness of certain crops. Similarly, in the livestock sector, temperature changes and precipitation play a significant role in production and the quality of various types of grassland and forage, thereby influencing the production of milk and meat.

Krogstrup and Oman (2019) noted that fiscal policy stimuli have been most highlighted in the existing literature, with primary options turning around carbon pricing (implicit &explicit), expenditure and investment, and public agreements. Monetary policy instruments may also have a key role to play. The authors added that other policies, such as regulatory standards and technology policies, could also play a significant role in CC mitigation. Attard and Vella (2022) noted that fiscal policy is one of the instruments that can be utilized to curtail the destructive impacts of CC and facilitate adaptation to it. Well-prepared tax policies, budgetary expenses, and non-tax tools such as regulatory policies are some fiscal instruments that can be adopted in this regard. Similarly, Omar and Yousri (2024) mentioned that Central Banks can play role in preventing CC is now a rising topic of discussion among academicians and policy analysts.

WMO (2023) reported that Asia is warming twice as quickly as global averages because of its large landmass, noting that temperatures over land rise faster than those over the sea. The Asia-Pacific region is the highest calamity-prone region in the world, home to 75 per cent of individuals upset by catastrophes worldwide. The Asia-Pacific is greatly exposed to the effects of CC and natural hazards. The Asia-Pacific region was harshly affected by natural catastrophes, comprising cyclones, floods, heatwaves, landslides, and quakes during 2024. These events caused extensive destruction across numerous countries, resulting in substantial loss of life and widespread loss to agriculture, infrastructure, and likelihoods. The Asia-Pacific experienced heavy rainfall, storms, and utmost temperatures, heightened vulnerability, harmed local economies, and vulnerable strength and development gains (OCHA, 2024).

The motivation of this study is based on the critical issue of CC in the Asia-Pacific economies. It has a destructive impact on agriculture, livestock, humans, and thereby overall economic growth and development. The Asia-Pacific is critical to tackling CC. In their study, Dabla-Norris et al. (2021, p. vii) noted that “Climate change is one of the greatest challenges facing policymakers worldwide, and the stakes are particularly high for Asia and the Pacific.” The existing literature also reveals that this topic needs more empirical research. Krogstrup and Oman (2019) also emphasized that further research work is required on the best prudent policy mix for CC mitigation. The existing literature does not provide any applicable policy mix, making this a key area for upcoming research. As the study of Omar and Yousri (2024) documented that even though its significance, the effect of monetary policy on the CC has been under-studied. However, the existing literature shows a few studies that individually examined the effect of a set of regressors of the present study. Also, most of the studies used carbon emissions to measure CC. To the best of the researcher's knowledge, based on the review of the available literature, this is a pioneer study on the subject under study. Therefore, the present study is different compared with prior studies and makes an effort to reduce the research gap. The main features of this study are threefold: firstly, pioneer study on the foreign capital inflows, fiscal-monetary impacts on CC in the context of the Asia-Pacific region. Secondly, using a thorough empirical model to evaluate the interrelationships of target variables by implementing a robust empirical strategy ensures methodological rigor and enhances estimation efficiency, and reliability. This approach captures combined effects and curtails biases, providing concentrated insights for policy relevance., and finally- CC has been measured by the most appropriate proxy, Atmospheric air temperature (Mats et al., 2025). The broad objective of this study is to empirically analyze the influences of international capital inflows (FDI, & foreign aid), fiscal policy by government spending, monetary policy by money supply, energy use, and national income by gross domestic product on CC measured by air temperature in ten countries from the Asia-Pacific region. The empirical outcomes are likely to help the management authorities in framing effective policies to mitigate CC and promote productivity, economic growth, and development, and thereby well-being.

The remaining article is organized as follows: Section two deals with the relevant review of literature; section three presents the empirical model, data, and its sources, and empirical strategy. Section four deals with the results and discussion. Section five concludes the article.

Review of Literature

The existing literature reveals that there are few core studies on the topic under study. For example, Barua et al (2020) found that incoming FDI is sensitive to changes in temperature and that temperature has an inverse effect on world aggregate FDI flows in the a long-run in 80-countries (1995–2014) and found that temperature changes decline FDI in developing world but rise FDI in developed world in the long run. The empirical results of Azam and Ozturk (2020) show that incoming FDI has a positive effect on CO_2 for 17 countries from Asia (1980–2014). The causality result indicates bidirectional links between CO_2 and FDI. Azam and Raza (2022) found that FDI inflows has a considerably positive relation with CO_2 in Asia and Africa, a panel of 125 countries (1990–2018), but the connects between these two variables are insignificant in the European regions and Latin America, and the Caribbean. Sasana et al. (2023) found that energy usage has a significant positive impact on CC in middle-income economies (2010–2019). Kelly and Radler (2024) found that energy usage, fossil fuel energy use, and energy depletion have a significant and positive effect on CC in African countries (2004–2019), while renewable energy has a corrective effect. Furtuna and Atis (2024) that FDI and CO_2 meaning that CO_2 reduce to a certain level with growing FDI and after this level, growing FDI raises CO_2 (1996–2022). The results of Pham et al. (2025) study reveal that inward FDI significantly contributes to raised CO_2 both in total quantity and intensity in 90 countries (2000–2021).

The study of Muhafidin (2020) observed that interest rates, GDP, and currency rates affect carbon emission levels in Indonesia. Mahmood et al. (2022) found that fiscal-policy (Govt spending) has long-term positive impacts CO_2 in GCC economies (1990–2019), while monetary policy (money supply) adversely affects it. Song and Fang (2024) examined does CC has any impact on the efficiency of monetary policy in China (2004Q2–2021Q4). The results reveal that loose monetary policy is less effective, and the inverse effect of contractionary monetary policy is enhanced when CC is critical. Azam Khan et al. (2025) observed that CO_2 has a bidirectional link with monetary policy, fiscal policy, and technological innovation in 10 ASEAN economies (1980–2022). Nguyen and Duong (2025) study findings exhibit that a positive shock in fiscal policy (Govt. spending) results in reduced CO_2 in Vietnam (1990– 2022), whereas a negative shock in Govt. spending leads to growth CO_2 indicating that higher government spending normally harms the environment. Further, their study shows that positive changes in inward FDI result in expanded CO_2.

Data and Empirical Methodology

The theoretical foundation and empirical model

To achieve the objective of this study, a univariate multiple regression model is used, where the regressand is CC, proxied by atmospheric air temperature, which is a primary indicator of CC directly affecting water resources, ecosystems, and human livelihood (Mats et al., 2025; Song & Fang, 2024, Azam Khan, 2022). A similar regression model was also worked by Acaroğlu et al. (2023), Su & Ullah (2024), and Song & Fang (2024). The empirical model of the study in its initial algebraic form is expressed as follows:

$$\mathrm{CC}_{\mathrm{it}} = \vartheta_0 + \vartheta_1 \mathrm{FDI}_{\mathrm{it}} + \vartheta_2 \mathrm{FA}_{\mathrm{it}} + \vartheta_3 FP_{\mathrm{it}} + \vartheta_4 MP_{\mathrm{it}} + +\vartheta_5 \mathrm{EU}_{\mathrm{it}} + +\vartheta_6 \mathrm{NI}_{\mathrm{it}} + \mathrm{u}_{\mathrm{it}} \qquad (1)$$

Where, CC, FDI, FA, FP, MP, EU, and NI denote climate change (Average Mean Surface Air Temperature (Annual Mean °C), inward foreign direct investment (% of GDP), foreign aid (Net ODA received per capita (current US$), fiscal policy (General government final consumption expenditure (% of GDP), monetary policy (Broad money growth (annual %), energy use (Energy use (kg of oil equivalent per-capita), and national income (GDP per capita (constant 2015 US$) respectively. Θ_0 denotes the constant term that varies across nations but not over time. The notations ϑ_1, ϑ_2, ϑ_3, ϑ_4, ϑ_5, and ϑ_6, are the respective slope parameters and the subscript it represents the i^{th} country and t^{th} time respectively (where $i = 1,2 \ldots 10$ and $t = 1,2 \ldots 34$). Lastly, u_{it} is the stochastic term. The term μ_{it} is assumed sovereign, with a mean of 0 (zero) and constant variance (σ_ε^2) for all countries and across the sample periods. The non-growth rate level data have been transformed into log forms to avoid any non-linearity issue in the data. Data has been obtained from the World Development Indicators (2025), the World Bank, and the Climate Change Knowledge Portal. Descriptive statistics on the ten "Bangladesh, China, India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand, Vietnam" selected countries from the Asia-Pacific region, and the correlation matrix analysis are given in Table 1, which are self-explanatory.

The following hypotheses are to be tested:

H1: It is hypothesized that inflows of FDI have a negative relationship with CC, while foreign aid has a positive relationship.

H2: It is hypothesized that monetary policy inflows have a negative relationship with CC, while fiscal policy has a positive relationship.

H3: It is hypothesized that both energy consumption and national income have a positive relationship with CC.

Table 1: Basic statistics and correlation matrix analysis

Variables. /Statistics	FDI_{it}	FA_{it}	MP_{it}	FP_{it}	EU_{it}	NI_{it}	CC_{it}
Mean	23.735	2.194	8.698	77.407	10.967	862.313	3047.431
Median	25.855	1.692	6.516	58.233	10.713	529.052	2024.287
Maximum	27.690	11.939	51.431	222.011	18.235	2879.924	12484.160
Minimum	6.840	-2.757	-21.899	19.566	4.053	110.467	473.445
Std. Dev.	5.593	1.940	10.275	43.586	3.389	722.980	2548.211
Skewness	-2.321	1.460	1.319	1.003	0.077	1.401	1.594
Kurtosis	6.943	6.305	5.471	3.280	2.425	3.779	5.075
Jarque-Bera	525.555	275.602	185.070	58.125	5.029	119.761	204.928
Probability	0.000	0.000	0.000	0.000	0.081	0.000	0.000
Correlation matrix							
Variables	FDI_{it}	FA_{it}	MP_{it}	FP_{it}	EU_{it}	NI_{it}	CC_{it}
FDI_{it}	1.000						
FA_{it}	-0.127	1.000					
PM_{it}	0.246	0.013	1.000				
FP_{it}	-0.497	0.345	-0.351	1.000			
EU_{it}	-0.397	0.224	-0.269	0.587	1.000		
NI_{it}	-0.229	0.287	-0.406	0.821	0.535	1.000	
CC_{it}	-0.155	0.200	-0.322	0.759	0.487	0.944	1.000

Source: Author compilation

Empirical Strategy

It is mandatory to check cross-sectional dependency (CSD) and the unit root properties of data before proceeding with empirical examination. Therefore, CSD tests (Breusch-Pagan LM, Pesaran scaled LM, bias-corrected scaled LM, and Pesaran CD test) are employed. The widely used panel unit root tests, including LLC ($Levin, Lin, \& Chu$) first−generation and CIPS (Cross-sectionally Implied IPS) second−generation panel unit-root tests, are also applied.

The ARDL approach (Pesaran et al., 1999) is employed, which offers some advantages over other techniques for obtaining both long- and short-run estimates, making it more appropriate in many cases. It can adjust variables with hybrid orders of integration, allowing both $I(0)$ and $I(1)$ series in the same specification. The ARDL model is also consistent in small samples, while the GMM approach performs best with large samples to decrease bias (Arellano & Bond 1991), and FM-OLS is designed mainly for long-run relationships (Phillips and Hansen 1990). Assuming that the variables are cointegrated, this study, for robustness, reconfirms the empirical estimates and estimates the long-run linkage applying the panel $D - OLS$ approach (Stock, & Watson, 1993) and $FM - OLS$ (Phillips, & Hansen, 1990). The Granger causality approach (Dumitrescu & Hurlin, 2012) is also employed to identify the direction of causality. The ARDL mode of the study is expressed algebraically as follows:

$$\Delta CC_{it} = \alpha_i + \sum_{j=1}^{p} \varphi_{ij}\Delta CC_{i,t-j} + \sum_{j=0}^{q} \beta_{ij}\Delta X_{i,t-j} + \theta_i ECM_{i,t-1} + \epsilon_{it} \quad (2)$$

In Equation (2) $\Delta CC_{,it}$ represents the change in climate for the entity i at time t, and α_i represent intercept. CC. $\sum_{j=1}^{p} \varphi_{ij}\Delta CC_{i,t-j}$ are the lagged values of the regressand (climate change), indicative of the short-term dynamics of CC. The term lag exhibits how earlier period CC effect current CC. $\sum_{j=0}^{q} \beta_{ij}\Delta X_{i,t-j}$ represent the short-term dynamics of the regressors (FDI, FA, MP, FP, EU, NI). $X_{I,t}$ are vectors, and the $\theta_i ECM_{i,t-1}$ denote the ECM (Error Correction Term) at lag t_{-1} and show the long-term equilibrium association between regressors and regressand (see Pal et al., 2025).

The long-run linkages between CC and the regressors are captured by the equation (3):

$$CC_{it} = \mu_i + \sum_{k=1}^{n} \gamma_k X_{i,t} + \varsigma_{it} \quad (3)$$

In Equation (3) μ_i denotes the entity-specific intercept similar to Equation (2), allowing for an altered constant term for each entity. $\sum_{k=1}^{n} \gamma_k X_{i,t}$ represent the long-run link between CC and regressors, γ_k symbolizes the long-run coefficients. These coefficients indicate the influences of each variable (for instance, how much CC changes when FDI, FA, MP, FP, EU, and NI strengthen in the long run). ς_{it} is the long-run error-term. The model can be expressed as follows:

$$\begin{aligned}\Delta CC_{it} =& \alpha_i + \sum_{j=1}^{p} \varphi_{ij}\Delta CC_{i,t-j} + \sum_{j=0}^{q} \beta_{ij}\Delta X_{i,t-j} \\ &-\lambda\left(CC_{i,t-1} - \sum_{k=1}^{n} \gamma_k X_{i,t-k}\right) + \epsilon_{it}\end{aligned} \quad (4)$$

In Equation (4) λ denotes the coefficient on the ECM specifying the speed of correction towards the long-run equilibrium. A minus sign for λ implies that when there is a divergence from the long-run association, the model will "correct" this divergence, shifting the system back to equilibrium. $CC_{i,t-1} - \sum_{k=1}^{n} \gamma_k X_{i,t-k}$ represents the divergence from the long-run equilibrium (the error term). If the CC deviates from their long-run value (based on the long-run coefficients), this term captures the divergence. Similarly, α_i represent the entity-specific intercepts, and $\sum_{j=1}^{p} \varphi_{ij}\Delta CC_{i,t-j}$ capture the short-term dynamics of CC. $\sum_{j=0}^{q} \beta_{ij}\Delta X_{i,t-j}$ is the short-term dynamics of the regressors, and ϵ_{it} is the error term.

Results and Discussion

The cross-sectional dependence (CSD) test was used as a diagnostic check, and the results are shown in Table 2, indicating a substantial rejection of the null hypothesis of CSD. The p-values found are significant at the 1% level, verifying the presence of CSD in the series. The study employed 1st−generation and 2^{nd}−generation panel unit root tests (LLC) and (CIPS) tests, with results shown in Table 3, revealing mixed orders of integration (i.e., $I(0)$, $I(1)$). To achieve the central objective of the study, the Panel ARDL model was implemented.

The empirical estimations of the Panel ARDL model are reported in Table 4, showing that all estimated coefficients are significant in the long run. The impact of foreign capital inflows in the form of FDI on climate change (CC) is negative and significant at the 1% level. The estimated coefficient for FDI is -0.0012, indicating that a one percent change in FDI inflows will result in a 0.12% change in CC through temperature, thereby aiding in CC mitigation. Similarly, the estimated coefficient of foreign capital inflows in the form of foreign aid is 0.0025 and significant at the 1% level. The positive coefficient value suggests that a one percent change in foreign aid will lead to a 0.25% change in CC, indicating an adverse impact on the regressand (CC) and exacerbating it. The impact of monetary policy, proxied by money supply, is significant at the 1% level and negative on CC. The estimated coefficient value is 0.0001, meaning that a one percent change in monetary policy through money supply will result in a 0.01% change in CC through temperature. The empirical results suggest that monetary policy aids in CC mitigation in the Asia-Pacific region during the study period. Likewise, the estimated coefficient of fiscal policy, proxied by government spending, is 0.0006 and significant at the 5% level. This indicates that a one percent change in fiscal policy through government spending will lead to a 0.06% change in CC through temperature. The impact of fiscal policy aggravates CC rather than mitigating it.

The impact of energy use on CC is significant and positive. The estimated coefficient found is 0.0220 and is significant at the 1% level of significance. The estimated coefficient reveals that a one percent change in energy use variable will bring about a 2.2% change in temperature (CC). This result implies that energy use plays a role in exacerbating CC through temperature changes. The impact of national income (GDP) on CC is also significant and positive. The estimated coefficient found is 0.0209 and is significant at the 1% level of significance. The estimated coefficient reveals that a one percent change in national income results in a 2.09% change in temperature (CC). The empirical result indicates that national income exacerbates, rather than mitigates, CC through temperature changes in the long run. Table 5 also shows the short-run estimation, which indicates that the Error Correction Model (ECM) coefficient is significant and negative, displaying the expected signs for a good model. The ECM is calculated as -0.8612, suggesting that the model adjusts to long-run equilibrium by around 86% yearly. The negative and significant results of the ECM support theoretical outlook and indicate confluence towards the long-run equilibrium. The FM-OLS and D-OLS results presented in Table 5 reaffirm the empirical estimations reported earlier, suggesting that the empirical estimates are suitable for policy implications. The panel Granger causality analysis (Dumitrescu & Hurlin, 2012) results in Table 6 exposing a bidirectional causality between FDI, foreign aid, monetary policy, fiscal policy, energy use, national income, and CC.

Overall the empirical results of this study are accord with the Azam and Raza (2022), Ehsanullah (2024) (for FDI), Lee et al (2020) (Foreign aid), Mahmood et al. (2022) and (Monetary policy by money supply), Muhafidin (2020) Mahmood et al. (2022), Nguyen and Duong (2025) (for fiscal policy by government expenditures), Sasana et al (2023), Kelly & Radler (2024) (energy use), and Muhafidin (2020) (national income by GDP).

Table 2: CSD analysis

Test	Statistic	P. values
$Breusch - Pagan\ LM$	295.358*	0.000
$Pesaran\ scaled\ LM$	26.390*	0.000
$Bias - corrected\ scaled\ LM$	26.239*	0.000
$Pesaran\ CD$	4.009*	0.000

* *Show 1% level of significance*

Table 3: Panel Unit root test analysis

Tests/variables	LLC		CIPS	
Level	I(0)	I(1)	I(0)	I(1)
CC_{it}	-5.281*	-17.364*	-3.652*	-4.973*
FDI_{it}	-2.884*	-9.830*	-3.016*	-4.003*
FA_{it}	0.928	-6.033*	-3.258*	-5.224
MP_{it}	-2.059**	-7.872*	-3.195*	-6.932*
FP_{it}	-2.481*	-6.866*	-3.284*	-4.032*
EU_{it}	-0.183	-4.330*	-1.785	-6.951*
NI_{it}	-1.568	-5.032*	-1.992	-7.720**

*Note: *,** and *** denote 1%, 5% and 10% significance levels respectively.*
CIPS critical values for 1%, 5% and 10% are -2.57, -2.33 and -2.21.

Table 4: Panel ARDL analysis

Variable	Coefficient	Std. Error	t-values	P-values
Long Run Equation				
FDI_{it}	-0.0012*	0.00043	-2.6904	0.00770
FA_{it}	0.0025*	0.00048	5.3389	0.00000
MP_{it}	-0.0001*	0.00004	-3.5800	0.00040
FP_{it}	0.0006**	0.00028	2.0765	0.03900
EU_{it}	0.0220*	0.00623	3.5398	0.00050
NI_{it}	0.0209*	0.00415	5.0493	0.00000

Short Run Equation				
ECM (-1)	-0.8612*	0.08624	-9.9869	0.00000
D(FDI_{it})	-0.0052***	0.00288	-1.8159	0.07080
D(FA_{it})	0.0163*	0.00151	10.8349	0.00000
D(MP_{it})	-0.0020*	0.00020	-10.0502	0.00000
D(FP_{it})	0.0045	0.00444	1.0326	0.30300
D(EU_{it})	0.1009**	0.04500	2.2433	0.02546
D(NI_{it})	0.0057	0.04027	0.1417	0.88740
Intercept	2.6357	0.27926	9.43831	0.00000

*Note: *,** and *** signifies the 1%, 5% and 10% significance levels respectively*

Table 5: Robustness analysis

Methods/ variables	FMOLS				DOLS			
Variable	Coefficient	Std. Error	t-values	P-values	Coefficient	Std. Error	t-values	P-values
FDI_{it}	-0.0077*	0.0010	-7.4013	0.0000	-0.0094*	0.0017	-5.5053	0.0000
FA_{it}	0.0081*	0.0017	4.8091	0.0000	0.0076**	0.0031	2.4555	0.0399
MP_{it}	-0.0003*	0.0001	-2.6159	0.0094	-0.0003**	0.0002	-2.0892	0.0487
FP_{it}	0.0052*	0.0006	8.1918	0.0000	0.0064*	0.0011	5.6824	0.0000
EU_{it}	0.0474*	0.0144	3.2936	0.0011	0.0381***	0.0205	1.8563	0.0683
NI_{it}	0.0411	0.0093	4.4141	0.0000	0.0331*	0.0117	2.8255	0.0064
R	0.99				0.99			

*Note: *,** and *** signifies the 1%, 5% and 10% significance levels respectively*

Table 6: Panel causality results

Null Hypothesis	W-Stat.	Zbar-Stat.	P.values
FDI →CC	4.8683	3.6596*	0.0003
CC →FDI	2.9285	1.0385	0.2991
FA →CC	4.3760	2.7973*	0.0052
CC →FA	2.5803	0.4828	0.6292
MP →CC	5.5284	4.5515*	0.0000
CC →MP	1.9826	-0.2398	0.8105
FP →CC	2.8150	0.8851	0.3761
CC →FP	2.0959	-0.0867	0.9309
EU →CC	8.5230	8.5978*	0.0000
CC →EU	1.7812	-0.5118	0.6088
NI →CC	10.2528	10.9352*	0.0000
CC →NI	1.8750	-0.3851	0.7002

*Note: *,** and *** signifies the 1%, 5% and 10% significance level*

Conclusion

This study aims to empirically examine the role of foreign capital inflows, fiscal and monetary policies in climate change (CC), proxied by air temperature, for ten selected countries from the Asia-Pacific region (1990-2023). The study found that FDI, foreign capital inflows, and monetary policy, proxied by the money supply, have a positive impact on CC mitigation, while foreign aid, foreign capital inflows, fiscal policy, energy consumption, and national GDP have a negative impact on CC in the Asia-Pacific region during the study period. It has been observed that countries worldwide have made inadequate and unequal progress in integrating climate-related concerns into their macroeconomic policy outlines. These findings suggest that policymakers need to develop effective policies to ensure CC mitigation, which is a pressing global issue. Additionally, there are insufficient incentives currently in place to promote investment in green private-productive capacity, infrastructure, research and development, and decarbonization. Foreign direct investment inflows should be increased, and these funds should be directed towards sectors that produce less pollution and contribute to achieving the desired temperature levels. Furthermore, there is a need for coordination of various policies, including fiscal and monetary policies, to efficiently and ecologically achieve CC mitigation. Implementing carbon taxes, direct policies, or green industrial policies can assist the changeover of a low-carbon, carbon-neutral economy more effectively than relying solely on monetary policy.

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