Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

An Analysis of Environmental Constraints in the Context of Urbanization, Finance, Natural Resources, and Globalization

Muhammad Saqab

Muhammad Shoail

Ms Research Scholar Department of Management Science KKUK

Ms Research Scholar Department of Management Science KKUK

Abstract

This study examines the relationships between ecological footprint and urbanization, financial development, natural resources, human capital, and globalization between 1971 and 2018 using a panel of 8 nations. Furthermore, to enhance comprehension, the research is broadened to incorporate panels that symbolize distinct income brackets: upper middle income (27), lower middle income (30), high income (45), and low income (10). In empirical analysis, dynamic ordinary least squares (DOLS) methods are employed in conjunction with completely modified ordinary least squares (FMOLS). As evidenced by the results, an expanding economy decreases ecological footprint (EF), thereby improving environmental quality. Economic expansion, on the other hand, increases the ecological footprint in lower-middle-income countries. Globalization contributes to an expansion of ecological imprints. Human capital negatively impacts the environment by increasing the efficacy footprint across all panels. Except for those in the lowest income bracket, energy consumption increases EF across all income levels. Natural resources positively influence the ecological footprint across all income categories, except for those in the upper-middle-income and global categories. Urbanization causes an expansion of the ecological footprint, excluding high-income economies. Financial development is associated with an increase in ecological

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

footprint across all sectors, except for lower-middle-income economies. Additional support for our findings was provided by the robustness analysis.

Introduction

Climate change has detrimental effects on the terrestrial environment, food availability, land quality, and human life (IPCC, 2019). Carbon emissions into the atmosphere are considered to be the principal driver of climate change. These emissions are produced due to the utilization of conventional energy sources, or fossil fuels, which comprise 80% of energy production. In addition, environmental stress and ecological footprint (EF) are global consequences of resource overconsumption (Alola, 2019; Alola et al., 2019b; Bekun et al., 2019). Financial development (FD), urbanization (UP), globalization (GL), and economic growth (EG) are all intricately linked to environmental challenges. In recent literature, the importance of human capital (HC) and natural resources (NR) in determining environmental quality has also been highlighted. The subsequent details function as the impetus for the present investigation. To begin with, divergent research outcomes exist concerning the primary determinants of environmental alterations. Additionally, research into the novel pathways of environmental change is insufficient. In order to enhance comprehension of environmental influences, this study emphasizes data sourced from various regions worldwide and across diverse income brackets. Furthermore, this study emphasizes the importance of conducting a comprehensive assessment of environmental quality when examining environmental components, as opposed to previous research that focused on a specific aspect of environmental quality. EG is considered a critical environmental indicator of a country's prosperity due to its contributions to social welfare, poverty alleviation, and the implementation of efficient technologies that reduce EF (Zafar et al., 2019; Usman et al., 2020). Improvements in environmental quality can result from the integration of EG with innovations, sustainable technology, and modern manufacturing processes. EG can, however, degrade environmental quality by increasing pressure on EF (Yasmeen et al., 2020).

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

Ahmad et al. (2020); Danish et al. (2019b). The manner in which EC impacts environmental quality is determined by the sources from which it is transformed. The environmental quality is adversely affected by energy generated from fossil fuels; conversely, energy derived from renewable resources has a positive impact on environmental quality. Prior studies have established that EC can impact environmental quality in both positive and negative ways (Al-Mulali et al., 2015b; Charfeddine, 2017; Ibrahiem and Hanafy, 2020; Balsalobre-Lorente and Carlos, 2020; Nathaniel et al., 2019; Zafar et al., 2019). Planned urbanization has the potential to enhance environmental conditions through the utilization of public resources, such as public transportation. However, unregulated and disorganized urbanization poses a greater threat of land insecurity, air pollution, biodiversity loss, and refuse management complications (Uttara et al., 2012). Environmental degradation caused by urbanization decreased, according to Luni and Majeed (2020), Majeed and Mazhar (2019b), and Charfeddine and Mrabet (2017). However, the ecological footprint increased due to urbanization, according to the findings of Al-Mulali et al. (2015b), Charfeddine (2017), Ahmed et al. (2020a), and Ahmed et al. (2020b). In regards to the impact of urbanization on environmental degradation, the findings of Behera and Dash (2017) and Hossain (2011) produce contradictory conclusions. The contention surrounding the environmental significance of GL and FD has been intense. GL influences the environment via trade and foreign direct investment (FDI), which stimulate economic activity, facilitate technology transfer, and increase energy demand. A trade expansion of two hundred percent from 1970 to 2017 resulted in a surge in demand for products and services, predominantly from affluent countries. In order to satisfy this demand, developing countries were compelled to import more natural resources (WWF, 2020). The environment may be affected positively or negatively by GL. Contrary viewpoints exist among researchers regarding the environmental implications of GL. While certain individuals contend that increased energy demand, resource extraction, and infrastructure development contribute to a detrimental environmental impact, others contend that GL enhances environmental quality via

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

innovations, energy efficiency, and the transition from industrial to service-based economies (Figge et al., 2017; Rudolph and Figge, 2017; Sharif et al., 2019; Ahmed et al., 2019; Sabir and Gorus 2019; Godil et al., 2020). Those who maintain this perspective. The FD utilizes the accessibility of credit facilities within the economy as a metric for evaluating environmental quality. One way in which FD contributes to the improvement of environmental conditions is by promoting sustainable technology, encouraging research and development, and attracting environmentally beneficial initiatives (Uddin et al., 2017; Majeed and Mazhar, 2019b; Destek and Sarkodie, 2019). Nevertheless, foreign direct investment (FD) facilitates the accessibility of credit, which subsequently stimulates the acquisition of durable goods; it fosters industrial growth, which in turn promotes the utilization of obsolete technologies as a cost-saving measure (Charfeddine, 2017; Baloch et al., 2019; Rehman et al., 2019; Godil et al., 2020); and it contributes to adverse environmental consequences, including heightened air, water, and land degradation. Moreover, environmental degradation is exacerbated by the lack of concern that financial institutions exhibit regarding the potential repercussions of credit utilization, as stated by Tahir et al. (2021). The quantity and application of NR also have an impact on the environmental quality of a country. Human demand for natural resources exceeds Earth's biological capacity by a factor of fifty percent; therefore, two planets will be required to accommodate the planet's expanding resource demands and waste production (WWF, 2008). The global quantity of natural capital has experienced a decline of 40% since the 1990s (WWF, 2020). An excessive extraction of natural resources, which serve as the primary inputs in the manufacturing process, contributes to the acceleration of waste generation and natural resource depletion in tandem with economic growth (Danish et al., 2019a). Furthermore, deforestation, water insecurity, and a decline in biocapacity are all consequences of unsustainable natural resource utilization, as stated by Dong et al. (2017). These outcomes contribute to the escalation of ecological footprints and the environmental deficit, respectively (Destek and Sarkodie, 2019). On the contrary, the existence of natural resources in developed nations may attract foreign direct investment (FDI), which in turn

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

promotes the implementation of energy-efficient technology in manufacturing and contributes to environmental improvement (Shahabadi and Feyzi, 2016).

An Analysis of the Literature

According to Majeed and Mumtaz (2017) and Majeed and Mazhar (2019b), environmental degradation occurs due to human activities, which encompass factors such as depletion of natural resources, extinction of species, and weather fluctuations that sabotage environmental quality. Environmental degradation has emerged as a significant subject of scholarly investigation due to its pervasive impact on all facets of human existence.

2.1 Economic Growth and Ecological Footprint

An EG and environmental quality are not mutually exclusive. It is believed that EG significantly signifies a nation's progress and achievement, as well as an improvement in living conditions and poverty reduction; however, expansion also has adverse environmental consequences (Yasmeen et al., 2020). Destek and Sarkodie (2019) and Sabir and Gorus (2019) both established that EG and EF follow an inverted U-shaped relationship. Usman et al. (2020) and Zafar et al. (2019) state that EG decreases EF because individuals contribute more money toward environmental protection and desire a secure environment as their income rises. Economic progress is associated with an increase in EF, as rising incomes stimulate resource extraction, production, consumption, and waste generation from consumers and businesses (Danish et al., 2019b; Ahmad et al., 2020). These activities collectively place a burden on the environment. 2.2 Energy Consumption and Environmental Repercussions: A substantial amount of energy is required for the manufacturing process. The misuse of fossil fuels as an energy source causes environmental harm. The intergenerational equality

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

hypothesis posits that safeguarding the environment for future generations constitutes a moral and ethical obligation. Therefore, it is incumbent upon us to safeguard the natural environment and guarantee its continued accessibility for posterity. According to analyses by Al-Mulali et al. (2015b), Charfeddine (2017), Ibrahiem and Hanafy (2020), and BalsalobreLorente and Carlos (2020), EC (nonrenewable) increases EF. Usman et al. (2021), Zafar et al. (2019), and Nathaniel et al. (2019) have all found that the utilization of EC in conjunction with renewable energy sources decreases EF. Energy factor (EF) is observed to be reduced when renewable energy is utilized, whereas it increases when non-renewable energy is employed, as evidenced by the studies of Balsalobre-Lorente and Carlos (2020), Destek and Sinha (2020), and Alola et al. (2019a).

The Impact of Urbanization on the Environment

An increase in urbanization (UP) is being observed in both developed and developing nations, with a considerable number of affluent countries having progressed to the third stage of UP. Urbanization is the process by which the agricultural economy is transformed into a service-based, industrialized economy. Poumanyvong and Kaneko (2010) emphasized compact city theory, ecological modernization, and urban environmental transition as concepts that explain the relationship between urbanization and environmental quality. Urbanization serves as an emblematic figure of transformation and modernization, which at first causes environmental degradation, according to the ecological modernization theory. Nevertheless, as modernization expands, so does consciousness regarding environmental sustainability, and technological progress results in enhancements to environmental quality. The urban environmental transition theory examines concerns that are associated with different stages of development. Initially, environmental concerns are more severe; however, as prosperity increases, these issues are mitigated through the implementation of

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

modern technologies. The compact city theory explains the benefits associated with higher urban density, including urban public transit and scale economies (Poumanyvong and Kaneko, 2010). Conversely, rural-urban migration contributes to an escalation in air pollution, according to Kasman and Duman (2015). Consequently, scholarly perspectives diverge with regard to the impact of urbanization on environmental quality. Consistent with the notion that unplanned UP contributes to environmental degradation, the literature on the effects of UP on EF indicates that UP has positive effects on EF (Al-Mulali et al., 2015b; Charfeddine, 2017; Ahmed et al., 2020a; Ahmed et al., 2020b). Additional studies, including those by Hossain (2011), Behera and Dash (2017), and Charfeddine and Mrabet (2017), emphasize the negative correlation between UP and EF, suggesting that planned urbanization and economies of scale contribute to improved environmental quality. 2.4 Ecological Footprint and Globalization (Saud et al., 2020; Shahbaz et al., 2019) Globalization is an expansion of the interconnections between countries on the social, economic, and political levels. The environmental effects of GI can be both positive and negative. Environmental quality can be enhanced through the implementation of sustainable technologies, foreign direct investment, and trade innovations (Ahmed et al. 2019). However, with the increase in GI production and consumption, there is a corresponding demand for more energy and natural resources, which exacerbates environmental stress (Sharif et al., 2019). According to Usman et al. (2022), Ahmad et al. (2021), and Al-Mulali et al. (2015b), the decrease in EF caused by GI was validated. Studies by Figge et al. (2017), Rudolph and Figge (2017), Sharif et al. (2019), Ahmed et al. (2019), Sabir and Gorus (2019), Godil et al. (2020), and Kirikkaleli et al. (2021) collectively demonstrate that GI has a positive impact on EF. The impact of GI on EF yielded inconclusive findings, according to Saud et al. (2020). 2.5 As evidenced by the literature on financial development and ecological footprint, FD has a substantial impact on environmental quality. By employing environmentally advantageous technologies, such as renewable energy, a number of scholarly investigations (Zhang, 2011; Uddin et al., 2017; Majeed and Mazhar, 2019b; Sarkodie and Strezov, 2019) illustrate how FD negatively impacts

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

EF. On the contrary, Charfeddine (2017), Baloch et al. (2019), Rehman et al. (2019), Godil et al. (2020), and Usman et al. (2022) posit that FD augments EF through the expansion of credit facilities, thereby stimulating machinery utilization. Regarding the impact of FD on EF, Saud et al. (2020) discovered inconclusive results.

Footprint on the Environment and Natural Resources

Natural resources consist of coal, petroleum, minerals, and forests, and their worth is quantified in terms of a concept known as "natural resource rent." Depletion, global warming, and resource scarcity result from the excessive utilization of finite natural resources, which have been formed over millennia (Majeed et al., 2022). Contradictory findings exist in the literature regarding the connection between NR and EF. Zafar et al. (2019) establish that NR has an adverse impact on EF as a result of enhanced water and land quality and natural capacity. However, Hassan et al. (2019), Ahmed et al. (2020a), Ahmad et al. (2020), and Ahmed et al. (2020b), in addition to Usman et al. (2022), contend that NR's positive influence on EF can be attributed to inefficient utilization of natural resources, inadequate energy strategies, and dependence on conventional energy sources. Consequently, the manner in which natural resources are utilized and managed dictates their environmental impact. Sustainable usage not only promotes resource sustainability but also enhances environmental quality, whereas overuse hinders regeneration and harms ecosystems. 2.7 The Relationship Between Ecological Footprint and Human Capital Human capital denotes the enhancement of human productivity. HC increases energy efficiency, thereby reducing emissions (Kwon, 2009). HC is more likely to support environmentally favorable practices, such as product recycling, in comparison to individuals with lower levels of education, due to their possession of the requisite knowledge and education (Zen et al. 2014). HC decreases deforestation and promotes conservation by decreasing dependence

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

on the labor market and forest revenue (Godoy et al., 1998). Yao et al. (2019) and Zen et al. (2014) state that HC enhances environmental quality through the following mechanisms: reduction of fossil fuel consumption, promotion of green technology adoption, enhancement of energy efficiency, and encouragement of recycling initiatives. To reduce emissions, HC encourages innovation and the application of cutting-edge technology. Furthermore, the presence of HC reduces the cost of implementing contemporary pollution control technology (Iqbal et al., 2021). A negative correlation between HC and EF has been observed in the research of Zafar et al. (2019) and Ahmed et al. (2020a), indicating that HC has the capacity to impede environmental degradation. Saleem et al. (2019) posit that although HC generally exerts a negative influence on EF, it can manifest a positive impact on EF under specific model conditions and country-specific circumstances.

3. Information and Methodologies

3.1 Synopsis of Data:

This study utilized panel data from 118 countries between 1971 and 2018, of which 45 were classified as high-income, 33 as upper-middle-income, 30 as lower-middle-income, and 10 as low-income. As the study employed panel time series and panel analysis, the World Bank's (2020) income classification system (high income, upper middle-income, lower middle-income, and low income) was utilized to differentiate between nations. The EF data, which were obtained from the Global Footprint Network (2019), were utilized as the regressand. Information regarding human capital was gathered using Penn World Tables Version 9 (Feenstra et al., 2015), while data on globalization were extracted using the KOF globalization index. By combining and contrasting the data sets of Cohen and Leker (2014) and Barro and Lee (2013), the Penn World Table, which computes human capital, is produced. Furthermore, the World Bank (2020) furnished the information pertaining to natural

Bulletin of Management Review
ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

resource rent, financial development, urbanization, and economic expansion. The report additionally examines the interconnections among the Organization for Economic Co-operation and Development (OECD), the Group of Seven (G7), the Middle East and North Africa (MENA), Brazil, Russia, India, China, and South Africa (BRICS), and the twenty-five countries comprising the Belt and Road (B&R).

Table 1: Cointegration Analysis

Estimates	Statistics				
	GP	HIP	UMIP	LMIP	LIP
Pedroni cointegration test H_0: No cointegration					
Panel v-Statistic	3.47^{***}	1.92^{**}	1.85^{**}	0.836	2.94^{***}
Panel rho-Statistic	-7.85^{***}	-3.63^{***}	-4.40^{***}	-2.14^{**}	-6.67^{***}
Panel PP-Statistic	-10.10^{***}	-4.33^{***}	-6.26^{***}	-3.24^{***}	-7.39^{***}
Panel ADF-Statistic	-10.23^{***}	-4.55^{***}	-6.16^{***}	-3.26^{***}	-7.29^{***}
Group rho-Statistic	-1.46^{*}	-0.551	-0.411	-0.327	-2.14^{**}
Group PP-Statistic	-13.88^{***}	-6.10^{***}	-9.76^{***}	-5.58^{***}	-6.88^{***}
Group ADF-Statistic	-13.12^{***}	-6.79^{***}	-7.03^{***}	-6.85^{***}	-5.94^{***}
Kao cointegration test H_0: No cointegration					
ADF	-1.2143^{*}	2.0932^{**}	-4.2882^{***}	-1.7390^{**}	-2.5442^{***}
Probabilities * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$					

Cointegration is the term for a long-term correlation between variables. The cointegration findings from the Pedroni and Kao panel cointegration experiments are shown in Table 1. Given that the H0 of no cointegration is, both tests support the existence of cointegration among the variables. rejected in the majority of cases at a significance level of 1%. Thus, we deduce that EG, EC, NR, HC, EF, FD, GI, UP, and NR have long-term relationships.

In order to ascertain long-term relationships between variables, the fully modified ordinary least square (FMOLS) method is applied to panel time series estimates. Phillips and Hansen proposed the FMOLS strategy in 1990; it is an appropriate method for addressing the concerns of endogeneity and serial correlation in predictor values. In order to enhance the

ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

credibility of the results, Dynamic Ordinary Least Square (DOLS) is utilized. Panel techniques, including Pooled Ordinary Least Square (POLS), Random effects (RE), and Fixed effects (FE), are employed to assess the sensitivity of the outcome.

Conclusion

This study addressed a gap in the literature by analyzing the interrelationships among EF, EG, EC, UP, GL, FD, NR, and HC for the global panel and across multiple income groups from 1971 to 2018. Aside from the lower-middle-income cohort, EG contributes to environmental improvement through the induction of a decline in EF. EC exerts pressure on environmental quality and increases EF across all panels, except in low-income countries where it has no adverse environmental effects. As seen in previous panels, planned UP improves environmental quality for the high-income group by decreasing EF, whereas uncontrolled UP degrades the environment by increasing EF. EF is positively influenced by GL. Sharif et al. (2019) posit that an increase in GL production and consumption results in a concomitant escalation in energy and natural resource demands, as well as environmental distress due to the corresponding rise in EF. With the exception of lower-middle-income economies, where foreign direct investment (FD) promotes sustainable technologies and enhances research and development, thus contributing to environmental improvement, EF increases due to the fact that credit availability stimulates industrial expansion and production, thereby degrading the environment. NR increases EF due to inefficient utilization, thereby endangering environmental quality in panels with low, median, and high incomes. By increasing the natural capacity of land and water and decreasing EF, NR improves the environmental condition of high-income and global nations. As a result of its increased financial and technological dependence, HC damages the environment and increases EF.

References

ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

Ahmad, M., Jiang, P., Majeed, A., Umar, M., Khan, Z., & Muhammad, S. (2020). The dynamic impact of natural resources, technological innovations and economic growth on ecological footprint: An advanced panel data estimation. Resources Policy, 69, 101817.

Ahmed, Z., Asghar, M. M., Malik, M. N., & Nawaz, K. (2020a). Moving towards a sustainable environment: The dynamic linkage between natural resources, human capital, urbanization, economic growth, and ecological footprint in China. Resources Policy, 67, 101677

Ahmed, Z., Wang, Z., Mahmood, F., Hafeez, M., & Ali, N. (2019). Does globalization increase the ecological footprint? Empirical evidence from Malaysia. Environmental Science and Pollution Research, 26(18), 18565-18582.

Ahmed, Z., Zafar, M. W., & Ali, S. (2020b). Linking urbanization, human capital, and the ecological footprint in G7 countries: An empirical analysis. Sustainable Cities and Society, 55, 102064.

Ahmed, Z., Zhang, B., & Cary, M. (2021). Linking economic globalization, economic growth, financial development, and ecological footprint: Evidence from symmetric and asymmetric ARDL. Ecological Indicators, 121, 107060 (1-12).

Al-Mulali, U., Saboori, B., & Ozturk, I. (2015a). Investigating the environmental Kuznets curve hypothesis in Vietnam. Energy Policy, 76, 123-131.

Al-Mulali, U., Weng-Wai, C., Sheau-Ting, L., & Mohammed, A. H. (2015b). Investigating the environmental Kuznets curve (EKC) hypothesis by utilizing the ecological footprint as an indicator of environmental degradation. Ecological Indicators, 48, 315-323.

Alola, A. A. (2019). Carbon emissions and the trilemma of trade policy, migration policy and health care in the US. Carbon Management, 10(2), 209-218.

ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

Alola, A. A., Alola, U. V., & Saint Akadiri, S. (2019a). Renewable energy consumption in Coastline Mediterranean countries: Impact of environmental degradation and housing policy. Environmental Science and Pollution Research, 26(25), 25789-25801.

Alola, A. A., Bekun, F. V., & Sarkodie, S. A. (2019b). Dynamic impact of trade policy, economic growth, fertility rate, renewable and non-renewable energy consumption on ecological footprint in Europe. Science of the Total Environment, 685, 702-709.

Baloch, M. A., Zhang, J., Iqbal, K., & Iqbal, Z. (2019). The effect of financial development on ecological footprint in BRI countries: Evidence from panel data estimation. Environmental Science and Pollution Research, 26(6), 6199-6208.

Balsalobre-Lorente, D., & Leitão, N. C. (2020). The role of tourism, trade, renewable energy use and carbon dioxide emissions on economic growth: Evidence of tourism-led growth hypothesis in EU-28. Environmental Science and Pollution Research, 1-14.

Barro, R. J., & Lee, J. W. (2013). A new dataset of educational attainment in the world, 1950-2010. Journal of Development Economics, 104, 184-198

Yao, Y., Ivanovski, K., Inekwe, J., & Smyth, R. (2020). Human capital and CO2 emissions in the long run. Energy Economics, 91, 104907.

Zafar, M. W., Zaidi, S. A. H., Khan, N. R., Mirza, F. M., Hou, F., & Kirmani, S. A. A. (2019). The impact of natural resources, human capital, and foreign direct investment on the ecological footprint: The case of the United States. Resources Policy, 63, 101428.

Zallé, O. (2019). Natural resources and economic growth in Africa: The role of institutional quality and human capital. Resources Policy, 62, 616-624.

ISSN Online: 3006-2276
ISSN Print: 3006-2268
https://bulletinofmanagement.com/index.php/Journal/issue/archive

Zen, I. S., Noor, Z. Z., & Yusuf, R. O. (2014). The profiles of household solid waste recyclers and non-recyclers in Kuala Lumpur, Malaysia. Habitat International, 42, 83-89.

Zhang, Y. J. (2011). The impact of financial development on carbon emissions: An empirical analysis in China. Energy policy, 39(4), 2197-2203