POLITICA

Editorial Note

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No animal studies are presented in this manuscript. No human studies are presented in this manuscript. No potentially identifiable human images or data is presented in this study.

We are thrilled to present the inaugural issue of Journal 'Politica', a peer-reviewed journal published by Sherwan Journals under the leadership of Dr Khalid Zaman. Our journal aims to facilitate scholarly discussions on various political and social issues. The first issue features five original research articles, each offering unique insights into contemporary politics and society.

In the first article, Zaman (2023a) discusses the future of financial support for developing countries and highlights the role of regional and Islamic monetary funds. The second article by Khan (2023) explores the shifting gender roles in society and the workplace and its implications for environmental sustainability. Zaman (2023b) contributes a third article in which he analyzes an imaginary country's political landscape and the paradox of democracy and military control. In the fourth article, Zaman (2023c) draws lessons from Pakistan's economic crisis and navigates the perils of a banana republic. Lastly, Asghar (2023) examines how foodservice operators influence university students' satisfaction and dining frequency in the context of cafe politics.

The articles in this issue present diverse topics, providing readers with critical insights into contemporary political and social issues. The contributions reflect the depth and breadth of scholarly work conducted in various parts of the world. The authors provide rigorous and comprehensive analyses, which enrich our understanding of the complex challenges facing societies worldwide.

This inaugural issue is a significant step forward in our mission to provide a platform for informed discussions and debates. We are grateful to our authors for their excellent contributions and our editorial team for their hard work in bringing this issue to fruition. We hope that our readers find these articles thought-provoking and informative and that the issue stimulates further scholarship and discussion on these critical topics.

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The Future of Financial Support for Developing Countries: Regional and Islamic Monetary Funds

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ABSTRACT

The study analyses the strengths, weaknesses, opportunities, and threats (SWOT) of establishing regional and Islamic monetary funds as alternatives to the International Monetary Fund (IMF). The study considers this proposal's merits, flaws, prospects, and dangers and sheds light on the project's viability. Potential autonomy is strength of regional and Islamic monetary funds. Without outside interference, these funds may be better able to respond to their respective areas' specific requirements and cultural norms by implementing innovative financial strategies. Further, nations needing these resources would have more say over their economic and fiscal strategies, protecting them from potential IMF interference. On the other hand, the analysis reveals several severe flaws in this proposal. The capacity to give extensive aid and technical support may be constrained because regional and Islamic monetary funds lack the IMF's resources and competence. The IMF can help nations worldwide, whereas these funds probably cannot. The research finds that despite these difficulties, establishing regional and Islamic monetary funds presents great prospects for collaboration and integration among nations. This can strengthen cooperation in the face of shared economic problems and foster peace in the area. The research also shows where this project can be vulnerable to failure. Regional and Islamic monetary facilities risk losing their legitimacy and independence if they succumb to political interference, financial difficulties, or opposition from established organizations like the International Monetary Fund. Finally, the SWOT analysis gives an in-depth look at the opportunities and threats associated with creating regional and Islamic monetary funds as IMF substitutes. While certain advantages to using a hedge fund, such as autonomy, adaptability, and management, some severe constraints and risks should be considered. The results of this research give essential information on the viability of this plan, which policymakers and interested parties can use to make informed decisions.

Keywords: International monetary fund; Regional monetary fund; Islamic monetary fund; SWOT analysis.

1. INTRODUCTION

The IMF is a worldwide institution that has been around since 1944 to foster global monetary harmony and commerce. Its primary goals are to aid members experiencing economic hardship, foster international cooperation, and encourage sustainable global economic expansion. The General Resources Account is a pool of money funded by the IMF's member nations that are used to lend money to countries experiencing economic hardship. In return for these loans, however, the IMF mandates that its borrowing members implement economic and financial measures to help restore stability and prosperity (O'Hara, 2003).

The United States, Japan, Germany, France, and the United Kingdom are the five greatest donors among the IMF's 189 member nations. Each member nation has a voice on the IMF's board of governors and an economically weighted quota determining how much influence it has at the organization's Washington, D.C. headquarters. For almost seventy-five years, the IMF has helped nations in economic distress by lending money and offering advice on economic strategy (Rapkin et al. 1997). The IMF plays a vital role in the global economy but has also been the target of criticism. Some have accused the IMF of perpetuating a global economic system that favours developed countries at the expense of developing countries and of imposing harsh economic conditions on borrowing countries (Payer, 1975; Bauer, 1981; Birdsall, 1998; Bird & Rowlands, 2006).

1.1. IMF's Dual Role: Supporting Developing and Developed Countries

The IMF plays a vital role in both the developing and developed world to promote international economic cooperation and stability and to give financial assistance to nations experiencing economic problems (Feldstein, 1998). The IMF helps nations in economic distress by lending them money and advising them on implementing policies that would bring about growth and stability (Stiglitz, 2003). In order to assist nations with their short-term balance of payments problems, the IMF lends them money; in return, the countries that borrow from the fund must implement economic and financial policies that will help them develop and become more stable (Conway, 2006). Over time, the IMF has participated in several economic stabilization initiatives in developing nations. These countries have faced various economic crises, including currency devaluations, high inflation, and massive fiscal deficits. To help its member nations in the developed world preserve economic stability and foster sustainable development, the IMF offers advice on economic policy and offers technical support. To keep global economic development stable and sustainable, the IMF acts as a forum for developed nations to work together (Wouters & Odermatt, 2014).

1.2. Regional Monetary Fund/Islamic Monetary Fund: An Alternate Solution for Survival

There is a need for alternatives to the IMF that are more adaptable to the socioeconomic realities of emerging countries (Niyonkuru, 2016). In order to better assist emerging nations with their financial requirements, a regional monetary fund (RMF) might be created. Considering Muslim-majority nations' cultural, economic, and religious characteristics, an Islamic monetary fund (ISMF) might be established. Both the RMF and the ISMF have the potential to promote financial stability and reduce reliance on a single global body like the IMF by taking a more regional and culturally sensitive approach to development and economic progress.

The following are potential first steps toward establishing an RMF as an alternative to the IMF. First, it is necessary to do a thorough feasibility analysis to determine whether or not it is possible to start an RMF in a particular area successfully. This evaluates the region's economic and financial requirements and the opportunities and threats associated with establishing an RMF. After the feasibility assessment, regional nations should band together to fund and assist the RMF as a consortium. Countries with robust economies, ample financial resources, and specialist knowledge of financial and monetary problems might all be part of this consortium. Building the RMF's framework is the next logical step. This framework's goals, processes, and organizational structure must be clearly defined. Financial resources, loan approval, and technical help for member nations should all be spelt out. Secure financing should be sought from member nations and other sources, including international organizations and private investors, to guarantee the financial stability and sustainability of the RMF. Once the money has been raised, the RMF may develop its governance structure, which includes a board of directors, an executive team, and a secretariat. This governance structure guarantees the RMF's effectiveness and efficiency, autonomy, and transparency. Once the RMF is set up, it may be officially unveiled and implemented. Financial and technical assistance, the promotion of economic stability and development, and the resolution of shared economic difficulties are all areas in which the RMF should collaborate closely with its member nations.

Similarly to the IMF, an RMF may be created by a group of nations within a particular area to support member countries in need. The RMF should be fashioned to foster monetary and fiscal cooperation among member nations and give those nations a way to get quick cash for their budget gaps. Equally as important as the RMF is an Islamic Monetary Fund (ISMF), which is expected to follow Islamic financial principles such as the abolition of interest-based transactions and encourage socially responsible investment. The Islamic Stabilization and Development Fund will aid its member nations financially and foster business partnerships between nations with Muslim majorities. The IMF has been criticized for its allegedly authoritarian approach to lending to developing nations. Austerity measures, such as cuts in government expenditure, may be mandated by the IMF as a condition for receiving aid. These policies might have unintended consequences for the populace, such as increased unemployment and fewer resources for social welfare programmes. According to critics, the operation of a country's central bank may become less open and accountable if IMF principles are implemented. The IMF may demand that governments implement strict monetary policies, such as a devaluation of the currency or an increase in interest rates, which may exacerbate the country's economic woes. To sum up, the IMF may help developing nations financially, but its programmes do not come without costs and consequences. It is critical for nations to have autonomy over their monetary systems and for the IMF to execute open, responsible, and sustainable policies. Financial stability, access to capital for member nations, and regional economic growth are all things that the RMF and ISMF can assist with. They also facilitate regional financial and economic coordination. The success of RMF and ISMF, however, depends on several elements, including the dedication of member nations, the effectiveness of leadership, and the availability of funds.

2. SCOPE OF THE EVALUATION

The study's goal is to evaluate the SWOT analysis of an RMF and ISMF as an alternative to the IMF. The research hopes to assess the merits of this plan by looking at its flaws, potential benefits, and hazards. The study aims to help policymakers and other interested parties decide whether or not to start an RMF and ISMF by assessing the pros and cons of doing so. The study's ultimate goal is to

thoroughly evaluate the RMF's and ISMF's possible effect on the area and identify the actions needed to launch and sustain successful monetary funds.

2.1. Understanding the Problem

The study's research questions are:

I.   What are the potential pitfalls and constraints of creating regional and Islamic monetary funds as substitutes for the IMF?

II.   How do regional, and Islamic monetary funds affect economic development and stability in their respective areas?

III.   Why would it be a good idea to create regional and Islamic monetary funds to diversify the world monetary system?

IV.   Does creating regional and Islamic monetary funds reduce reliance on the IMF and other global apex institutions? And

V.   What elements matter most about the viability and effectiveness of regional and Islamic monetary funds?

This study's research questions examine the pros and cons of creating RMF and ISMF as alternatives to the IMF. The first inquiry is meant to evaluate the constraints and challenges that would have to be surmounted to set up an RMF/ISMF. The second inquiry is concerned with how an RMF/ISMF might affect the prosperity of the surrounding area. The third inquiry looks at why it is beneficial to broaden the international monetary system by developing various additional financing and support mechanisms. To answer the fourth point, we must consider how the creation of an RMF/ISMF would reduce the dangers associated with relying on a single dominating organization like the IMF. Finally, we look at what makes an RMF/ISMF work and how it may last. These inquiries aim to thoroughly evaluate the RMF's/ISMF's potential regional impact and pinpoint the actions required to establish and sustain an adequate monetary fund.

2.2. The Study's Intentions

This study aims to accomplish the following based on the questions posed in the research proposal:

I.   To recognize the difficulties and constraints of establishing regional and Islamic monetary funds and to examine them in depth.

II.   To evaluate how the creation of regional and Islamic monetary funds has affected regional economic development and stability.

III.   To assess how adding regional and Islamic monetary funds to the global monetary system may help.

IV.   To assess how the creation of alternative monetary funds, such as regional and Islamic monetary funds, has reduced reliance on the IMF and other global apex institutions, and

V.   To investigate what factors influence the long-term viability of regional and Islamic monetary funds.

Investigating the possibility of establishing regional and Islamic monetary funds as alternatives to the IMF is crucial. In doing so, it hopes to identify and examine any obstacles that may crop up in introducing such funds. This research is essential to evaluate how the creation of these funds affects regional economic stability and development. A significant part of the research assesses the advantages of introducing regional and Islamic monetary funds into the global monetary system. To ensure the long-term viability of regional and Islamic monetary facilities, the research will also assess the impact of these investments on countries' reliance on a single dominating organization, like the IMF. This research is vital because it will help policymakers and other interested parties by shedding light on the elements that affect the performance and longevity of these programmes.

2.3. Key Deliverables

This research contributes more than just an evaluation of the feasibility of creating RMFs/ISMFs as IMF substitutes. Findings from this research will provide light on whether or not it is possible to establish an RMF/ISMF by giving a thorough knowledge of the obstacles and constraints that need to be overcome. This research will add to the continuing discussion about the role of international institutions in supporting economic development by evaluating the effect of an RMF/ISMF on regional economic stability and growth. Furthermore, the research will deepen our understanding of the advantages of establishing new avenues of financing and support for the international monetary system. This is a critical problem since the IMF plays a vital role in the global financial system and is subject to disruptions and failures. The research will examine how well RMFs/ISMFs might help reduce these dangers and strengthen regional security. The research will investigate the potential advantages of RMFs/ISMFs and give an in-depth analysis of the elements essential to their long-term viability. The research will achieve this by providing evidence-based suggestions to policymakers and stakeholders on safeguarding RMFs/ISMFs for the long run. Forming a successful and lasting RMF/ISMF would have far-reaching ramifications for the regions and the international community; thus, this is a crucial concern. The research substantially adds to our knowledge of RMFs'/ISMFs' potential as IMF substitutes. The research will help policymakers and stakeholders achieve more sustainable and equitable economic growth by thoroughly analyzing the initiative's strengths, weaknesses, opportunities, and risks.

3. CHALLENGES AND OPPORTUNITIES IN LAUNCHING AN 'RMF/ISMF' FOR DEVELOPING COUNTRIES

3.1. Potential Challenges

There is a wide variety of obstacles and constraints that developing nations may have to overcome to establish an RMF/ISMF. A major obstacle is a need for firm political backing and dedication from participating nations. Governmental and stakeholder opposition might be a significant obstacle to the project's success. Both the RMF and the ISMF will need substantial funds for their launch and operation, which might be a problem for developing nations that either need more money or have trouble getting their hands on it. It might be challenging to put the clear organizational structure and governance model needed to establish an RMF/ISMF. Achieving the goals of the RMF/ISMF requires close coordination and collaboration among member nations, which is difficult given the divergent nature of their economic and political interests. Technical competence in finance, economics, and risk management is often in low supply in developing nations, making it difficult to establish an RMF/ISMF. The need for a functional monetary system may conflict with Muslim-majority nations' cultural and religious norms. Funding and support from member nations may be difficult because of competition from organizations like the IMF, World Bank, and regional development banks. The nations involved and the relevant specialists will need to work together closely to find solutions to these problems.

3.2. Potential Opportunities

Several methods may help developing nations overcome the difficulties of establishing an RMF/ISMF:

I.   Developing nations must strive toward agreement among participating nations to establish a shared vision and objectives for the RMF/ISMF. To do this, engaging in productive conversation and seeing beyond any economic or political disagreements will be necessary. This method has the potential to provide a more comprehensive and culturally sensitive answer to the economic and financial problems being experienced by these nations. Consensus-building and settling political and economic disagreements are challenging tasks, and it calls for decisive leadership, transparent and open lines of communication, and the ability to establish common ground (Abukhater & Abukhater, 2019). In addition, for these alternative funds to be prosperous and stable, their creation must be founded on clear and well-thought-out governance frameworks.

II.   Developing nations may go to development banks, donor organizations, and private sector investors for financial assistance. In addition, they may use public-private partnerships to get access to even more resources. The IMF has been criticized for enforcing austerity measures and structural changes in return for financial aid, yet these funds provide an option (Forster et al. 2022). The European Stability Mechanism (ESM) and the Asian Monetary Fund (AMF) are two regional monetary organizations that provide aid to member nations in times of economic hardship. In turn, this strengthens the economies of these nations and lessens their reliance on the IMF (Hyun & Paradise, 2020; Suk & Paradise, 2019; Rovekamp, 2020). However, Islamic money funds offer funding by Shariah principles like profit and loss sharing and forbid interest-based transactions. This opens up a new avenue of financial support for Muslim-majority nations.

III.   Investing in education and training programmes and forming partnerships with international organizations and professionals in the area may help developing nations achieve the technical knowledge required to establish and manage an RMF/ISMF. As a result, this may provide locals with the tools they need to manage financial systems and advance sustainable development efforts.

IV.   For an RMF/ISMF to be successful, solid governance must be established. Creating streamlined decision-making procedures, open lines of responsibility, and accountability is essential for developing nations (Dick-Sagoe, 2022). Good governance and capable administration are crucial for an RMF/ISMF to be successful. The potential of these groups may be expanded by reducing their reliance on conventional financing sources and increasing their use of alternative fundraising strategies, such as bonds and other financial instruments. Increased collaboration with other international institutions, such as the World Bank and the IMF, may help RMFs and ISMFs expand their influence and reach. For RMFs and ISMFs to succeed, capacity building is also crucial. As a means to this end, it is essential to emphasize efforts that enhance member nations' ability to execute sound methods of managing money and establish effective governance and regulation systems.

V.   Transparency, productivity, and access may all see significant boosts from using modern technologies (Astill et al. 2019). RMFs and ISMFs may take steps toward modernizing their operations and reaching a larger audience by investigating the use of technology. Promoting financial inclusion is an important goal for both RMFs and ISMFs. RMFs and ISMFs may play a significant role in fostering economic development and stability by implementing measures to expand access to financial services in developing nations via programmes like microfinance, digital finance, and other financial services.

VI.   Developing nations with a Muslim majority should seek to match the principles and practices of the ISMF with their cultural and religious values, keeping in mind their people's specific requirements and viewpoints. This may improve the ISMF's ability to meet the needs and include the viewpoints of various groups, leading to greater success for its programmes and activities. The ISMF may gain the respect and confidence of its constituents and the attention of new audiences by adopting a strategy that considers their cultural norms and values. It is also crucial that these nations have a voice in the ISMF's strategic planning and decision-making procedures. This ensures that the ISMF is always responsive to the changing demands of Muslim-majority countries and that its initiatives are tailored to address the unique difficulties those nations face.

VII.   The ISMF may become a more effective instrument for supporting financial stability and economic prosperity in the area if its principles and practices align with the growing Muslim-majority nations' cultural and religious values. In order to get RMF and ISMF up and running, developing nations may work with pre-existing organizations like the IMF, World Bank, and regional development banks to pool knowledge and resources. The RMF and ISMF may learn from these organizations' prior

work with developing nations and tap into their connections to expand their influence and reach. In addition, the RMF and ISMF may better coordinate their efforts to solve regional economic difficulties and can pool their resources to achieve larger outcomes if they work together with these organizations.

VIII.   The RMF and ISMF may benefit from increased credibility and legitimacy and access to money and investment if they work together with other existing organizations. By adopting these methods, developing nations will be better able to avoid the pitfalls that have plagued other attempts to establish RMF and ISMF and instead focus on building economically viable and culturally acceptable solutions.

RMFs and ISMFs might threaten the IMF hegemony in the international monetary system. Launching new regional or religiously oriented funds may be seen as a challenge to the IMF's position because of the IMF's long history of providing financial aid and policy guidance to its member nations. The IMF may see the introduction of RMFs and ISMFs as a threat to its hegemonic position in the international monetary system. The IMF can do more to promote economic development and financial stability in various regions of the globe if it collaborates with regional or religiously oriented funds.

3.3. Addressing Global Financial Imbalances and Promoting Financial Stability

The IMF is an intergovernmental organization whose members get financial aid, policy guidance, and enhanced institutional capabilities. For decades, it has been a prominent actor in international finance and has had considerable influence on the economic policies of its member countries (Georgieva & Weeks-Brown, 2023). There is a potential danger to its power and relevance, though, from the introduction of RMFs/ISMFs. The Asian Monetary Fund and the African Monetary Fund are only two examples of regional monetary institutions tailored to their respective areas' distinct monetary requirements (Fritz & Mühlich, 2019; Coulibaly et al. 2019). Countries in the area may become less reliant on the IMF if they have access to these funds as an alternative source of finance. If several nations in an area join a regional monetary fund, the IMF's influence over their economy may weaken. The establishment of an ISMF has the potential to undermine the IMF as well. When it comes to financing, nations that adhere to Islamic financial principles may find it helpful to have access to an Islamic monetary fund. As it loses its status as a prominent actor in the international financial scene, the IMF risks being mired in financial obligations as its influence dwindles. The IMF's capacity to resolve global financial imbalances and maintain financial stability would be hampered if member nations of these alternative funds were less subject to IMF oversight of their economic policies.

4. A SWOT ANALYSIS OF 'RMF/ISMF' AS ALTERNATIVES TO 'IMF'

Using a SWOT analysis, we can evaluate the merits, drawbacks, prospects, and risks of creating regional and Islamic monetary funds as IMF substitutes. The independence of new regional and Islamic monetary funds significantly benefits their establishment. These funds are less susceptible to outside interference and more able to respond to local conditions and cultural norms. These accounts are also more adaptable than others, allowing policymakers to respond to their areas' specific economic challenges. The IMF's policies may have unintended consequences, but governments may protect themselves from them by turning to regional or Islamic monetary institutions. In addition, there may be more openness and accountability in running these funds, with an eye toward promoting thrifty spending. There are limitations to think about. The funds do not have as much money as the IMF has, which would reduce their potential to help nations out on a grand scale. Moreover, these funds may not be able to give nations the same technical help as the IMF due to a lack of specialized experience. Moreover, although these regional funds may help a select few nations, the IMF can help countries all over the world.

Launching regional and Islamic monetary funds increases collaboration between nations, enabling them to work together to solve similar economic difficulties and promote regional stability. The freer movement of commodities, services, and money might be another benefit of these monies for regional integration. However, other possible dangers should be taken into account. There is a risk of political interference, which might compromise the funds' objectivity and legitimacy. Finding enough money to put into these accounts, particularly in the present economic climate, might be difficult. It is also possible that established organizations like the International Monetary Fund would push back, seeing these new funds as competition.

Independence, flexibility, control, and openness are only a few advantages that might result from establishing regional and Islamic monetary institutions as alternatives to the IMF. There are, however, constraints on these funds regarding personnel, knowledge, and scope, as well as possible dangers like political meddling and budget difficulties.

5. CREATING A UNIFORM CURRENCY FOR 'RMF/ISMF'

An alternative to the IMF is the possibility of a unified currency created by RMF and ISMF among its member nations. Trading goods and allocating financial resources across member nations would be simplified by a unified currency, as would the need for constant currency conversions. As a result, the RMF and ISMF would be less reliant on the IMF and more able to manage their economic policies and financial systems. However, developing a single currency is difficult and calls for extensive consultation and consensus among all member states. The stability and credibility of the currency also necessitate a solid and stable monetary and fiscal policy framework and a strong and resilient financial sector (Aguilar et al. 2023).

It is probable that RMFs and ISMFs, established to lessen the world's reliance on the IMF, may start using other currencies in their day-to-day dealings and funding distributions. The choice of currency is likely to be influenced by several criteria, including the currency's stability, usability, and level of acceptance among the member nations. The Chinese Yuan has been proposed as the preferred currency of the Asian Monetary Fund. This would coincide with China's efforts to increase the usage of the Yuan in international transactions and represent the country's rising economic power in the area. The Saudi Riyal might be used as the ISMF's

base currency, symbolizing Saudi Arabia's status as the spiritual and geographical centre of Islam. The Saudi Riyal is an appropriate currency for the ISMF since it is extensively utilized in the Gulf Cooperation Council (GCC) nations and has a reputation for stability. RMF and ISMF member nations must carefully analyze and negotiate the pros and downsides of several currencies before settling on one.

6. MAJOR TAKEAWAYS

This research aimed to evaluate the SWOT of establishing RMFs and ISMFs as alternatives to the IIMF. The viability of this plan was examined by considering its relative strengths, weaknesses, opportunities, and dangers. A thorough examination of the pros and cons of establishing regional and Islamic monetary funds as IMF substitutes leads the research to this conclusion. On the one hand, these funds are better able to meet the specific requirements of certain areas since they are autonomous, adaptable, and have more say in monetary and fiscal policy. By addressing regional economic difficulties and bolstering regional stability, they have the potential to encourage greater international collaboration and integration. However, the study also highlights potential problems for these resources. Their lack of resources and competence may constrain the capacity of these institutions to offer extensive aid and technical support compared to the IMF. The legitimacy and reliability of these funds may be jeopardized if they were subject to political interference, financial difficulties, or opposition from preexisting organizations like the International Monetary Fund. These funds need sufficient resources and specialist knowledge to succeed in facing these hurdles. Further, measures are required to guarantee the legitimacy and independence of these funds while minimizing political interference. Finally, the study stresses the need for constant evaluation and adjustment to maintain the long-term viability of these funds. The study's goal is to help policymakers and stakeholders decide whether or not to undertake this effort by providing a detailed evaluation of the likely effect of RMF and ISMF on the area. The study's overarching purpose is to establish what measures should be taken to establish and sustain functional RMF and ISMF infrastructures.

7. GUIDING PRINCIPLES FOR IMPLEMENTING 'RMF/ISMF'

Given the findings of this research, the following policy suggestions should be considered by relevant decision-makers and stakeholders.

I. Launch regional and Islamic monetary funds to encourage collaboration and integration among nations to solve shared economic difficulties and enhance regional stability. The study aims to strengthen regional unity by resolving economic issues affecting all member states. To do this, the nations contributing to the monetary fund would work together to establish a shared vision and set of objectives for it and coordinate their economic and financial policies. Countries may promote regional stability and address shared economic issues by combining forces and exchanging information. Participating nations may lessen their reliance on global institutions like the International Monetary Fund when they establish a regional or Islamic monetary fund and have access to financing tailored to their unique requirements and values. As a result of this high degree of independence and autonomy, the regional economy may become more robust and less prone to shocks, which may contribute to peace and security in the area. The participating nations may strengthen their bonds and increase confidence by working together to overcome economic difficulties; this, in turn, can pave the way for more collaboration and integration in other spheres. Establishing regional and Islamic monetary funds allows nations to work together to combat economic issues and strengthen security in the area.

II. Make sure these funds have enough money and the right skills to help many people and provide lots of different kinds of help. All member nations experiencing financial challenges will benefit from the funds' extensive assistance and technical support. High inflation, high debt levels, and poor economic growth are common causes of monetary instability, although these problems may be mitigated with enough financing and technical assistance. It is crucial to ensure that the regional and Islamic monetary funds' financing and technical assistance are secure enough for the long haul. The funds will then be in a better position to aid member nations during times of economic crisis while also encouraging economic development and stability. The funds' capacity to offer member nations the financial and technical support necessary to execute efficient economic policies and reforms, therefore ensuring long-term financial stability and development, depends on the availability of sufficient resources and specialized knowledge.

III. Limiting political interference and monetary obstacles is crucial to maintaining the legitimacy and independence of regional and Islamic monetary funds. One way to do this is to restrict political interference in allocating this money. To achieve this goal, we must establish governance mechanisms that are both clear and open, and we must also ensure that these funds have the resources to carry out their missions. Too much reliance on a single source of money, for example, is one financial problem that has to be fixed. Regional and Islamic monetary funds are essential in addressing regional economic difficulties and promoting regional stability. However, their member nations can only trust them if they preserve their independence and credibility.

IV. Consider the possibility of pushback from established organizations like the IMF, and plan accordingly. People may be resistant because of anxieties about losing power, rivalry for financing, or conflicts regarding the additional money's intended purpose. Concerns about these issues may be allayed, and collaboration between current institutions and the new funds could be fostered if the proper measures were taken. Some potential approaches include spreading the word about the new money's intentions, overcoming financial obstacles, and encouraging inter-institution cooperation and data exchange. The legitimacy

and independence of the new funds might also be safeguarded by measures like restricting political interference and establishing open and efficient governance mechanisms.

V.   Keep an eye on regional and Islamic monetary funds, assessing their performance and making adjustments as necessary to guarantee their long-term viability. As part of this process, they must routinely evaluate their operations, financial resources, and influence on the nations they serve. Improvements may be made by analyzing how well they are doing, what areas need attention, and where they stand regarding success and relevancy. Keeping these funds successful and relevant to the requirements of their member nations requires constant adaptation to shifting economic and financial conditions.

In summary, establishing regional and Islamic monetary facilities as alternatives to the IMF presents a remarkable chance to advance regional economic stability and progress. These funds can boost national autonomy, national control, and international cooperation by facilitating the development of innovative and tailored responses to economic difficulties. The creation of such funds may also help diversify the international monetary system and lessen reliance on a single dominating agency like the IMF. As a result, this has the potential to strengthen the international economy and lessen the likelihood of widespread breakdowns. For this reason, policymakers and stakeholders must take these economic advantages into account and address this endeavor's obstacles and limits to guarantee its success and sustainability.

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Not Applicable.

Informed consent

The study was conducted with equal participation by all authors.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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POLITICA

Shifting Gender Roles in Society and the Workplace: Implications for Environmental Sustainability

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ABSTRACT

United Nations Sustainable Development Goal 5 (SDG-5) focuses primarily on the need to provide women and girls with equal opportunities in all spheres of society, such as education, technology, and work. The research looked at the impact of women's empowerment on Pakistan's environmental sustainability agenda from 1975 to 2022, using a market-based methodology. The findings demonstrate that increasing the number of women in the labour force positively impacts the environment by decreasing carbon emissions. Despite improvements in women's rights and literacy rates, as well as technical and economic progress, the country is producing more carbon dioxide because of its economic and industrial conditions that cannot reduce its adverse effects on the environment. The Granger causality estimates verified that economic development caused female labour market outcomes and female autonomy. In contrast, the bidirectional causality estimates proved that female autonomy caused technical progress and vice versa. The research concludes that even though the technology industry continues to expand astoundingly, women are still disproportionately underrepresented. This is a severe issue because women make up more than half of the population yet still account for less than one-quarter of tech jobs. Women's shifting roles in society and the workplace demand more attention. Several causes, including shifts in economic focus from manufacturing to services and shifting cultural norms about women's moral responsibilities, have all played a part in this development. Women's independence significantly impacts the economy, liberal arts, and environmental footprint. More independent women also tend to have more education and work experience than their less independent counterparts. In turn, it reduces carbon output.

Keywords: Women's empowerment; Environmental sustainability; Carbon emissions; Technological advancement; Labour market outcomes; Pakistan.

1. INTRODUCTION

The term "women's empowerment" refers to creating an enabling environment for women that enables them to establish fair treatment and gain the confidence and resources they need to lead independent lives and make full contributions to ensuring the necessary changes in our societies. It needs concerted effort and commitment from the government, business, and civic sectors (Al Hakim et al. 2022, Hafsah Batool & Rehman 2022). Women's empowerment has improved women's economic, political, and social standing (Abou-Shouk et al. 2021). In a male-dominated society, women's empowerment creates an environment where they may go about their daily lives without worrying about being mistreated or retaliated against or subjected to discrimination or harassment (Ademola et al. 2021). Included in SDG5's list of goals for empowering women is the elimination of all forms of discrimination against and violence against women; the promotion of women's equal participation in political and socioeconomic decision-making; and the implementation of reforms to ensure that women are afforded equal rights to economic, financial, and property ownership.

Hashemi and Schuler (1993) list the many ways in which women are empowered as follows: (a) self-awareness and future vision, including protection from husband's ill-treatment; (b) mobility and appearance; (c) financial security and learning new skills; (d) purchasing rights and power of decision making within the family; (e) participation in financial programmes and interaction ability in public; and (f) joining credit programmes. Better air quality, fertile land, and water availability are all factors that Hanif et al. (2022), Khalil et al. 2022, Ramzan et al. (2022) cites as essential to ensuring environmental sustainability. It is a way for humanity to get what it needs without jeopardising the environment's ability to provide those necessities or to maintain its biodiversity. In 2015, the U.N. General Assembly included it as a sustainable development target, elevating its significance (SDGs). As a result, the SDGs of agenda-2030 has assumed a pivotal role for all U.N. members in the next fifteen years, beginning in 2015. The idea of environmental sustainability is an expansion of the definition of sustainable development, which states that current generations while pursuing their own goals, must also safeguard the needs of future generations so that they are not jeopardised. Environmental sustainability, therefore, is analogous to meeting the resource demands of the current and future generations without jeopardising the ecosystem that provides these services (Ibrahim et al. 2022, Abbasi et al. 2021, Huang et al. 2022). The health of current and future populations depends on the state of the planet. Other people's choices may indeed affect how much worth you have in the future. More than that, the present human generation's facilitation helps build sympathies for future generations to care for the environment comprehensively. Its depletion causes mortality due to dwindling natural resources (Qureshi et al. 2015, Anser et al. 2021, Khan et al. 2022). Women make most of the household's purchasing decisions and have a disproportionate say in what is consumed (Tennyson et al. 2022). To be more specific, women tend to be more careful about the effects of pollution and harmful chemicals on the health of their families (Rumph et al. 2022). In addition, women speak out against environmental destruction of all kinds. Since women's reproductive biology is intrinsically tied to the natural world, it is clear from a survey of relevant literature and presentations at different conferences that there is a long-standing connection between women and the natural world (Broomfield et al. 2021). Similarly, nations with gender non-discrimination are more inclined to protect the environment (Schulz et al. 2022). Additionally, important champions of the environment and ecofeminists are fairly anxious about preserving their children's health from being harmed by environmental difficulties. As a result, the Pakistani government and NGOs have begun working to achieve the Millennium Development Goals of ending discrimination based on gender and empowering women. Local nongovernmental organisations (NGOs) provide vital community services. As a result, the local community has been successfully swayed toward these inexpensive technologies. Environmental non-profits use lobbying and other forms of pressure to get governments to pass and enforce environmental laws. By implementing a slew of policies and programs—including the 10 Billion Tree Tsunami, the Recharge Pakistan, the Clean and Green Pakistan, and the Protected Areas Initiatives—Pakistan has achieved "on track status" concerning Sustainable Development Goal 13 (Climate Change) (Economic Survey of Pakistan, 2021). Climate change is one of the world's most pressing problems. The effects of climate change are being felt worldwide, and Pakistan is no different. The technological transformation helps develop women's empowerment, reduces the gender gap in the socioeconomic system, and gives them the decision-making power to realise the environmental sustainability agenda as the Pakistan government fights climate change through sustainable interconnected policies and strategic recommendations. Like women's participation in the labour force and the financial system may help them cope with the rising price of carbon emissions insurance, women's participation in the labour force can also help them make more environmentally responsible choices in the home and community. Combatting climate change also aids in formulating green policies, such as the efficient use of technology, the exploitation of renewable energy mixes, and the allocation of carbon credits (Lau et al. 2021, Nyahunda et al. 2021, Vazquez et al. 2021).

While there is a wealth of literature on the subject in other economic contexts, there is very little academic research on the issue in Pakistan, making it difficult to advance the cause of women's economic empowerment and ecological sustainability. Specifically for Pakistan, Imran et al. (2021) looked at how learning about environmental issues impacted female students. Twelve women were interviewed systematically by the researchers. Ecological literacy, feminist theory, and the advancement of women were all examined in this research. Environmentally conscious women tend to be more cautious about their impact on the planet. D'Souza &Taghian (2017) looked at how women's spending habits affect sustainability and came to the following conclusion: demand for energy and FDI both cause carbon emissions; however, money supply ultimately leads to a reduction in carbon emissions. Research shows that women's trust in others affects their purchase decisions. In addition, they discovered that women's roles contribute to environmental sustainability. Women who have confidence in public and private institutions are also reported to be more eco-savvy, which helps to guarantee environmental quality. Ibrahim & Asad (2020) examined the importance of educating women and how this might help them achieve economic independence in Pakistan, particularly with strategies to reduce workplace bias against women. It was also shown that there is a negative association between discrimination in the workplace and educational attainment. Choudhry et al. (2019) seek to look at many facets of women's empowerment. The researchers gathered data from 1996 to 2009 about Pakistan. The research concluded that awareness of women's rights and economic independence contribute to women's growth. Mujeed et al. (2021) concluded that investment in R&D, green energy use, and patent filings are required to equip women with current sustainable technology and enhance environmental quality. Researchers discovered that the combination of renewable energy and technological innovation promoted women's independence and, in turn, sustainable development. The effects of gender inequality and environmental deterioration on human well-being in Pakistan were studied Ali et al., (2021). The data they gathered spans the years 1980-2019. Economic development, gender equality, and human well-being are positively related, while a negative and substantial association between gender inequality and human well-being. Thus, to enhance human well-being, the government must reduce gender disparity and boost economic growth[50]. Essential elements contributing to women's empowerment in Pakistan were investigated by Muhammad et al., (2021). Data for 2017–2018 was used from the Pakistan Demographic Health Survey for this study (PDHS). The empirical analysis was performed using a Multiple Regression model, using data from a sample of 1035 married women

as the dependent variable. Several factors were shown to positively and substantially influence women's empowerment: women's education, participation, the wealth index, and men's occupations. They also found that women's age and where they lived favoured their confidence and social standing. Debnath et al. (2020) investigated the drivers of women's entrepreneurship in Bangladesh to better understand women's business activity's role in helping the country reach its Sustainable Development Goals. The researchers sampled 203 women business owners from around Bangladesh. They stress the importance of women's economic independence and business ownership in fulfilling the United Nations' Sustainable Development Goals (SDGs). Elahi & Malik (2021) set out to identify the societal and environmental factors inhibiting the growth of women-owned businesses in Pakistan. The study relied on primary data from five central regions of Pakistan, where 200 social entrepreneurs were interviewed about the challenges they face in operating their businesses. According to the results, women's entrepreneurship in Pakistan is hampered by several factors, including societal expectations, a dearth of available funding, a lack of necessary physical facilities, and a general lack of formal recognition and documentation. Because women's independence is directly linked to their ability to enhance environmental quality, it follows that governments should increase women's access to resources like money and recognition to empower women.

The study has the following novel contribution that is unique in the earlier cited literature. First, the study covered three main aspects of women's autonomy, i.e., women's participation in the labour force (market outcomes), women's literacy rate (social outcomes), and women's access to technology (economic outcomes). The earlier literature mainly focused on one or two outcomes while ignoring any outcome that led to policy lacuna for women's independence (Du et al., 2022, Mujeed et al., 2021, Handayani et al., 2022). Second, the majority of the studies worked on highly developed countries, like China or evenly worked in African economies. In contrast, very few studies worked on Asian women, particularly in Pakistan, which also faced different hurdles to empowering women in the workplace and household affairs (Liu et al., 2021, Nassani et al., 2019). Finally, the country's economic growth matters for sustainable environmental development. Hence, the women's role in deciding on environmental affairs makes the issue more exciting and highlights feminist action as environmental stewards to lead the corporate toward eco-friendly production. The following constructive discussion shapes the study's aims:

I.   To investigate how advancing the status of women might enhance environmental quality.
II. To examine how women's labour force involvement affects the rate of carbon intensity decline, and
III. To analyze how the education level of women, technical development, and economic expansion contribute to lowering carbon emissions.

The research uses cutting-edge statistical methods to draw broad conclusions on gender equality and women's empowerment in Pakistan.

2. MATERIAL AND METHODS

The study collected a data from the World Bank (2022) database for a Pakistan's economy for a period of 1975 to 2020. Carbon emissions served as a response variable of the study. While, women's autonomy, female share in labour market, female literacy rate, technological innovation, and economic growth served as explanatory variables. Table 1 shows the list of variables for ready reference.

Table 1: List of Variables

Variables	Symbol	Unit	Definition	A Priori Expectations
Carbon dioxide emissions	CO2	Kiloton of carbon equivalent	CO2 emissions raise the earth's temperature and cause global warming.	
Women business and law index score	WA	Its value ranges between 0 (lowest) and 100(highest).	The index evaluates how policies affect women's access to economic resources.	Women's autonomy will likely serve as a steward to improving environmental quality.
Female labor force participation rate	FLFPR	% of female total population	The labour force participation rate represents the percentage of 15-and-older women working.	Greater women's autonomy in corporate affairs is likely to indulge in eco-friendly production.
Female literacy rate	FLR	% of female total population	It is the % of people ages not below 15 who can read, write and comprehend a paragraph.	Educated women remain to take care of their surroundings and corporate

Variables	Symbol	Unit	Definition	A Priori Expectations
				environmental affairs.
GDP per capita	GDPPC	% of GDP	It is the income per person within a country.	Continued economic growth increases carbon emissions.
Residents patent rights	Technology Innovation (TIONV)	% of GDP	Patent applications safeguard the rights of the owner.	Women equipped with technology help to reduce carbon emissions.

One of the goals of SDG is to ensure that women are given equal economic, financial, and land ownership rights. Other goals in this area include eliminating all kinds of discrimination against women and eliminating all forms of violence and harmful behaviours against women. Women have more sway in the marketplace because they are the primary shoppers and decision-makers in the home (Daniel et al. 2021). Women are more likely to worry about the effects of pollution and harmful chemicals on their families' health (Giudice et al. 2021). Additionally, women speak out against environmental destruction of various kinds. Since women's reproductive systems are inextricably intertwined with the natural world, it stands to reason that there is a long-standing historical relationship between nature and women, as shown by several conferences and reviews of relevant literature (Albert & Ogunbanjo 2022, Gebhardt et al. 2021, Obinna 2021). It is also evident that nations without discrimination against either gender are more inclined to protect their natural resources. Climate change is one of Earth's most pressing problems. Climate change is a global phenomenon, and Pakistan is not immune to its effects. Women make up almost half of Pakistan's population, and it is clear that climate change has a significant impact there as well. As a result, it will be fascinating to see how empowering women in Pakistan affects the country's emissions and coping with sustainable policy instruments.

2.1. Theoretical Framework

The concept of ecofeminism seeks to shed light on the connection between women and the natural world. Francoise d'Eaubonne, a prominent feminist from France, first proposed the idea in 1974. It does this by adhering to the fundamental premise of equal treatment between the sexes and maintaining a world perspective that respects biological processes (Dipanwita, 2021). Degradation of the environment has hurt women's role in managing the natural resources of their families and communities. Women control access to water, food, and fuel sources. Women produce sixty to eighty percent of the food in developing nations. On the other hand, restrictions regarding inheritance and local traditions sometimes prevent them from owning or leasing property and getting loans (Addaney et al. 2022, Abebe & Flintan 2021). The economy's expansion has been helped by the development of technologies that augment both labour and capital. However, it has also contributed to a worsening in the air quality. Therefore, women should access environmentally friendly technology that may help reduce greenhouse gas emissions. In addition, it is important to point up here that women are seen as being environmentally friendly because of the factors that lead to the natural empowerment of women. The ecofeminist movement promotes the idea that the female labour force should be compelled to have access to technology spillover to reduce greenhouse gas emissions. Women seem to care more about the environment than their male colleagues do (Mujeed et al. 2021).

2.2. Econometric Framework

OLS regression correctly estimates parameters and determines the relationship between independent (predictor) and dependent (regressed) variables. It is a model; therefore, if its assumptions are satisfied, it will provide accurate estimates. Influence statistics may identify OLS outliers due to data variability or inaccuracy. Four methods to visualise impact statistics: R-Student, Hat Matrix, DFFITS, COV RATIO. Influential statistics graphically illustrate outliers. Outliers may modify the regression model's coefficient parameters. Influence statistics may uncover data outliers during regression equation estimation. This graph highlights outliers. An analysis of impact statistics shows how eliminating outliers alters estimated parameters. High leverage values are outliers in the dataset. Each estimated variable may be plotted separately. Leverage graphs show dataset position. The leverage plot's x-axis shows leverage points for each value, while the y-axis shows standardised residuals. The leverage plot illustrates which data points are furthest from other observations and have the largest effect on model fitness. Leverage graphs show whether our model accurately describes input variables. Depending on their distance from the regression line, these figures may be in the upper left or lower right corner of a leverage plot. Robust Least Squares Regression

2.2.1. Robust Least Squares (RLS) Regression

When OLS cannot account for outliers, RLS is used. The robust least square estimator reduces outliers. The method is well-suited to severe scenarios. M-estimation, S-estimation, and MM-estimation83 are outlier-handling robust least squares. Outliers generate model issues. In such instances, we may use robust least square estimators instead of OLS since they are less sensitive to data distortion. Huber (1973) introduced the M-estimation approach for robust LSE. Maximum-likelihood type is M-estimation. This method helps reduce excessive residuals by removing outliers' independent variables. S-estimator was suggested by Rousseeuw and Yohai (1984). This strategy may reduce high leverage points and extreme independent variable values. Yohai (1987) offered the third RLS technique.

It handles S-estimator and M-estimator outliers, or dependent and independent outliers. Equation (1) shows RLS variables, i.e.,

$$CO2 = \alpha_0 + \alpha_1 WA + \alpha_1 FLFPR + \alpha_1 FLR + \alpha_1 GDPPC + \alpha_1 TINOV + \varepsilon$$

$$\therefore \frac{\partial(CO2)}{\partial(WA)} < 0, \frac{\partial(CO2)}{\partial(FLFPR)} < 0, \frac{\partial(CO2)}{\partial(FLR)} > <, \frac{\partial(CO2)}{\partial(GDPPC)} > 0, \frac{\partial(CO2)}{\partial(TINOV)} > 0 \tag{1}$$

Where, CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labour force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation..

2.2.2.   *VAR Granger Causality*

The Granger Causality test identifies causality between two variables. Granger causality analysis measures one variable's ability to predict another. Each variable may be causative in three ways:

I.   To prove unidirectional causality from Y to X, we must show that Y Granger causes X but not Y.

II.   To prove unidirectional causality from X to Y, we must show that X Granger causes Y but not Y.

III. Bidirectional causality: When X Granger causes Y and vice versa, and

IV.   Deficiency of a Causal Relationship: When neither X nor Y causes the other, or when there is no other way to explain the lack of a correlation, we claim no causality exists between the two variables.

For Granger causality, equation (2)'s VAR framework shows, i.e.,

$$
\begin{bmatrix} \ln(CO2)_t \\ \ln(WA)_t \\ \ln(FLFPR)_t \\ \ln(FLR)_t \\ \ln(GDPPC)_t \\ \ln(TIONV)_t \end{bmatrix} = \begin{bmatrix} \tau_0 \\ \tau_1 \\ \tau_2 \\ \tau_3 \\ \tau_4 \\ \tau_5 \end{bmatrix} + \sum_{i=1}^{p} \begin{bmatrix} \sigma_{11t}\sigma_{12t}\sigma_{13t}\sigma_{14t}\sigma_{15t} \\ \sigma_{21t}\sigma_{22t}\sigma_{23t}\sigma_{24t}\sigma_{25t} \\ \sigma_{31t}\sigma_{32t}\sigma_{33t}\sigma_{34t}\sigma_{35t} \\ \sigma_{41t}\sigma_{42t}\sigma_{43t}\sigma_{44t}\sigma_{45t} \\ \sigma_{51t}\sigma_{52t}\sigma_{53t}\sigma_{54t}\sigma_{55t} \\ \sigma_{61t}\sigma_{62t}\sigma_{63t}\sigma_{64t}\sigma_{65t} \end{bmatrix} \times \begin{bmatrix} \ln(CO2)_{t-1} \\ \ln(WA)_{t-1} \\ \ln(FLFPR)_{t-1} \\ \ln(FLR)_{t-1} \\ \ln(GDPPC)_{t-1} \\ \ln(TIONV)_{t-1} \end{bmatrix}
$$

$$
+ \sum_{j=p+1}^{d\max} \begin{bmatrix} \theta_{11j}\theta_{12j}\theta_{13j}\theta_{14j}\theta_{15j} \\ \theta_{21j}\theta_{22j}\theta_{23j}\theta_{24j}\theta_{25j} \\ \theta_{31j}\theta_{32j}\theta_{33j}\theta_{34j}\theta_{35j} \\ \theta_{41j}\theta_{42j}\theta_{43j}\theta_{44j}\theta_{45j} \\ \theta_{51j}\theta_{52j}\theta_{53j}\theta_{54j}\theta_{55j} \\ \theta_{61j}\theta_{62j}\theta_{63j}\theta_{64j}\theta_{65j} \end{bmatrix} \times \begin{bmatrix} \ln(CO2)_{t-j} \\ \ln(WA)_{t-j} \\ \ln(FLFPR)_{t-j} \\ \ln(FLR)_{t-j} \\ \ln(GDPPC)_{t-j} \\ \ln(TIONV)_{t-j} \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \\ \varepsilon_5 \\ \varepsilon_6 \end{bmatrix} \tag{2}
$$

Equations (3) to (8) shows Granger causality for multivariate system, i.e.,

$$CO2_t = c_1 + \sum_{i=1}^{2} \beta_1 CO2_{t-i} + \sum_{i=1}^{2} \beta_2 WA_{t-i} + \sum_{i=1}^{2} \beta_3 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_4 FLR_{t-i} + \sum_{i=1}^{2} \beta_5 GDPPC_{t-i}$$

$$+ \sum_{i=1}^{2} \beta_6 TINOV_{t-i} + \varepsilon \tag{3}$$

$$WA_t = c_1 + \sum_{i=1}^{2} \beta_1 WA_{t-i} + \sum_{i=1}^{2} \beta_2 CO2_{t-i} + \sum_{i=1}^{2} \beta_3 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_4 FLR_{t-i} + \sum_{i=1}^{2} \beta_5 GDPPC_{t-i}$$

$$+ \sum_{i=1}^{2} \beta_6 TINOV_{t-i} + \varepsilon \tag{4}$$

$$FLFPR_t = c_1 + \sum_{i=1}^{2} \beta_1 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_2 WA_{t-i} + \sum_{i=1}^{2} \beta_3 CO2_{t-i} + \sum_{i=1}^{2} \beta_4 FLR_{t-i} + \sum_{i=1}^{2} \beta_5 GDPPC_{t-i}$$

$$+ \sum_{i=1}^{2} \beta_6 TINOV_{t-i} + \varepsilon \tag{5}$$

$$FLR_t = c_1 + \sum_{i=1}^{2} \beta_1 FLR_{t-i} + \sum_{i=1}^{2} \beta_2 WA_{t-i} + \sum_{i=1}^{2} \beta_3 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_4 CO2_{t-i} + \sum_{i=1}^{2} \beta_5 GDPPC_{t-i}$$
$$+ \sum_{i=1}^{2} \beta_6 TINOV_{t-i} + \varepsilon$$
(6)

$$GDPPC_t = c_1 + \sum_{i=1}^{2} \beta_1 GDPPC_{t-i} + \sum_{i=1}^{2} \beta_2 WA_{t-i} + \sum_{i=1}^{2} \beta_3 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_4 FLR_{t-i} + \sum_{i=1}^{2} \beta_5 CO2_{t-i}$$
$$+ \sum_{i=1}^{2} \beta_6 TINOV_{t-i} + \varepsilon$$
(7)

$$TINOV_t = c_1 + \sum_{i=1}^{2} \beta_1 TINOV_{t-i} + \sum_{i=1}^{2} \beta_2 WA_{t-i} + \sum_{i=1}^{2} \beta_3 FLFPR_{t-i} + \sum_{i=1}^{2} \beta_4 FLR_{t-i} + \sum_{i=1}^{2} \beta_5 GDPPC_{t-i}$$
$$+ \sum_{i=1}^{2} \beta_6 CO2_{t-i} + \varepsilon$$
(8)

2.2.3. Impulse Response Function (IRF) and Variance Decomposition Analysis (VDA)

The IRF depicts a system where input determines output. The IRF may give positive or negative directions 10 or 20 years from today. Graphs are the usual approach to depicting and assessing impulse responses, and they always show the influence of a one-standard-deviation impulse on a linked variable. The IRF graphs economic variables' responses to an external shock. VDA is a promising forecasting approach. Variance decomposition studies evaluate how much dependent variable variation may be attributable to independent variable changes. After estimating a vector autoregressive (VAR) model, time series analysis employs variance decomposition to predict future uncertainty. This approach simplifies auto-regressive model analysis and comprehension. Variance decomposition is also shown graphically. Equation (9) shows the VDA operator, i.e.

$$Var(\sigma(CO2,WA) = Var(E[\sigma \perp WA]) + E[Var(\sigma \perp WA)]$$
$$\Rightarrow Var(E[\sigma \perp WCO2) \leq Var(\sigma[CO2,WA])$$
$$Var(\sigma(CO2,RFLFPR) = Var(E[\sigma \perp FLFPR]) + E[Var(\sigma \perp FLFPR)]$$
$$\Rightarrow Var(E[\sigma \perp CO2]) \leq Var(\sigma[CO2,FLFPR])$$
$$Var(\sigma(CO2,FLR) = Var(E[\sigma \perp FLR]) + E[Var(\sigma \perp FLR)]$$
$$\Rightarrow Var(E[\sigma \perp CO2]) \leq Var(\sigma[CO2,FLR])$$
(9)
$$Var(\sigma(CO2,GDPPC) = Var(E[\sigma \perp GDPPC]) + E[Var(\sigma \perp GDPPC)]$$
$$\Rightarrow Var(E[\sigma \perp CO2]) \leq Var(\sigma[CO2,GDPPC])$$
$$Var(\sigma(CO2,TINOV) = Var(E[\sigma \perp TINOV]) + E[Var(\sigma \perp TINOV]$$
$$\Rightarrow Var(E[\sigma \perp CO2]) \leq Var(\sigma[CO2,TINOV])$$

The study collected a data from the World Bank (2022) database for a Pakistan's economy for a period of 1975 to 2020. Carbon emissions served as a response variable of the study. While, women's autonomy, female share in labour market, female literacy rate, technological innovation, and economic growth served as explanatory variables. Table 1 shows the list of variables for ready reference.

3. Results and Discussion

Table 2 shows the descriptive statistics of the variable. According to Table-2's descriptive statistics, the average annual CO2 emissions are 104283.8-kilo tonnes, while the middle annual emissions are 89745-kilo tonnes. The range for CO2 emissions is similarly broad, from a high of 208370 K/T to a low of 60310 K/T. Additionally, the standard deviation is 47083.34. Besides, CO2 emission has typical skewness and Platykurtic curve since the kurtosis value is 2.439285, which is smaller than the standard kurtosis value of 3. Similarly, the mean value of the women in business and the law index is 41.915, and the median value is 38.125. Women's average level of independence is 50%, with a high of 55.625 on the women's business and law index and a minimum of 38. Additionally, the value of its standard deviation is 4.700. In a similar vein, the women's business and law index has a leptokurtic curve (3.375 > 3) and a long tail skewness (positive skewness). The mean and median values for FLFPR are 15.81 and 15.51, respectively. Similarly, the lowest number is 7.04, with a maximum value of 24.22, indicating that just 24% of the entire population comprises the labour force. The standard deviation is 5.57 as well. Besides, (FLFPR) exhibits long tail skewness (positive skewness) and has a platykurtic curve (1.77< 3). Moreover, the mean value of (FLR) is 26.57, and its median value is 21.90. Additionally, FLR may go as high as 46.94 and as low as

14.77. This data demonstrates that women in Pakistan comprise 31% of the country's literate population. The female literacy rate has a platykurtic distribution and normal skewness.

Table 2: Descriptive Statistics

Methods	CO2	WA	FLFPR	FLR	GDPPC	TINOV
Mean	104283.8	41.91576	15.81261	26.57872	1032.255	84.80435
Median	89745.00	38.12500	15.51500	21.90770	1011.018	40.50000
Maximum	208370.0	55.62500	24.22000	46.49004	1502.891	313.0000
Minimum	60310.00	38.12500	7.040000	14.77155	599.6920	16.00000
Std. Dev.	47083.34	4.700034	5.578111	12.86320	255.8030	80.47018
Skewness	0.791089	1.046238	-0.072570	0.355056	0.059438	1.600316
Kurtosis	2.439285	3.375331	1.771451	1.403666	2.073915	4.723725

Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate,
FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

The average GDP per person is $1032.255, with the median being $1011.01. GDP percent range from a high of US$1502 to a low of US$600. This equates to an annual income of $1051 per person. Besides, the standard deviation of GDP PC is 255.80, and it exhibits average skewness and platykurtic curve. Notwithstanding, the mean value of technology patent applications is 84.80, and the median is 40.50. Likewise, the highest value of patent applications is 313, and the lowest is 16. A high kurtosis value implies that the (highest value) of PAP is abnormally dispersed, suggesting the presence of outliers. It also exhibits long-tail skewness and a leptokurtic distribution, with a standard deviation of 80.47. Table 3 shows the correlation matrix.

Table 3: Correlation Matrix

Variables	CO2	WA	FLFPR	FLR	GDPPC	TINOV
CO2	1					

WA	0.580501	1				
	(0.0000)	-----				
FLFPR	0.856282	0.328119	1			
	(0.0000)	(0.0260)	-----			
FLR	0.953135	0.475062	0.871727	1		
	(0.0000)	(0.0008)	(0.0000)	-----		
GDPPC	0.938196	0.372020	0.926585	0.904489	1	
	(0.0000)	(0.0109)	(0.0000)	(0.0000)	-----	
TINOV	0.923857	0.722242	0.724782	0.841863	0.812595	1
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	-----

Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate,
FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

According to the findings, the women's business and law index have a strong and positive correlation with CO2 emissions, and the coefficient value for this correlation is 0.58. This research implies that women's independence is linked to higher carbon emissions, showing how the lack of access to technology and the power to make policy decisions may have severe environmental consequences. Thus, it is essential to educate females about environmental concerns. In addition, they should be given a voice in environmental decision-making to encourage women to embrace environmentally responsible behaviours. There is a positive connection between FLFPR and CO2 emissions, and the coefficient value for this correlation is 0.85, suggesting a correlation between women's growing engagement in the workforce and higher levels of carbon emissions. The logical inference is that the environmental impact of the labour market's response to women is negatively impacted, leading to more carbon emissions being released into the atmosphere. Consequently, providing women with access to environmental education may help decrease carbon emissions by inspiring more ecologically responsible behaviour among female citizens. The fact that GDP per capita and carbon emissions are positively connected, with a value of 0.98, demonstrates that a country's economic growth comes at the expense of environmental deterioration. Patent applications have been shown to correlate positively with CO2 emission, with a coefficient value of r = 0.92. This indicates that economic expansion began with the accumulation of technical spillovers, producing carbon emissions. In addition, it exposes the fact that the manufacturing technique that is currently being employed is not ecologically friendly. As a result, Pakistan has to move toward innovation and environmentally friendly technologies to reduce its carbon emissions. The female labour force participation rate, the female literacy rate, and GDP per capita share are all positively correlated with a women's business law and index with a coefficient value of r = 0.32, r =0.47, and r =0.37 respectively. This indicates that an increase in the female literacy rate led to an increase in female labour force participation in the labour market, which in turn led to an increase in the productivity of females. In addition, the filing of a patent has a significant and favourable link with women's business legislation and index, demonstrating that using technology and creativity increases women's autonomy. There is a significant association between the filing of patent applications and women's autonomy. In addition, female literacy rate, GDP per capita, and technology innovation are significant variables that

positively correlate with female labor market, and their respective coefficient values are 0.87, 0.92, and 0.72. The findings suggest that an increase in the literacy rate of women leads to an increase in female involvement in the labour force, which leads to an increase in the country's economic growth share in the nation's production via the use of technology. Like GDP per capita and patent applications, the female literacy rate positively correlates with the patent applications. Despite this, patent applications correlate positively with economic growth. It indicates that the technology spillover and innovation increase the output of female labour, which further increases national outputs, leading to an increase in GDP per capita in the economy. Prior to estimate RLS regression, the first step is to get influence statistics of the model. Figure 1 shows the influence statistics for ready reference.
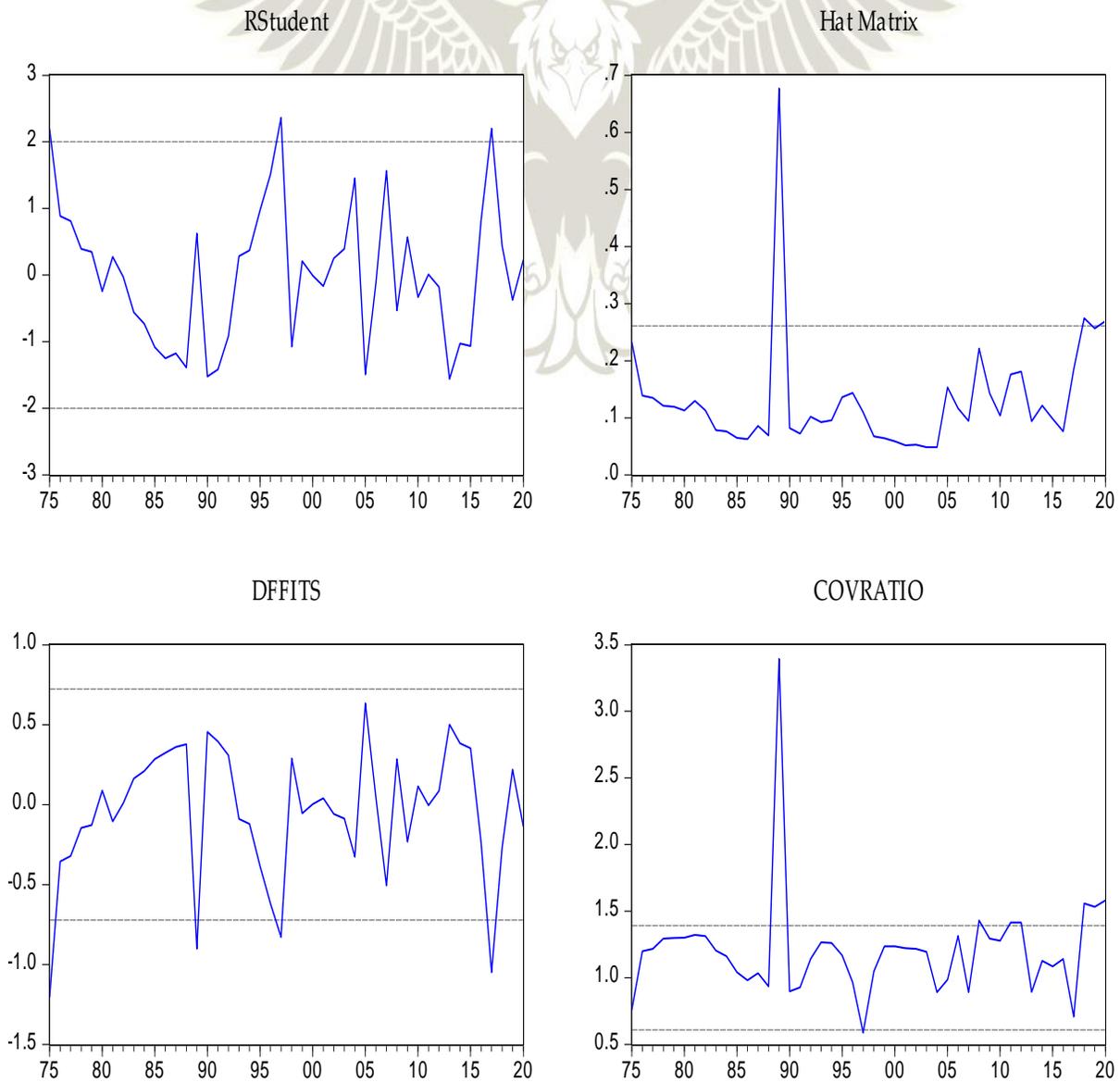

Figure 1: Influence Statistics
Source: Author's illustration.

Figure 1 shows that there are four different influences, and they are represented by the signifiers R-student, Hat-Matrix, DFFITS, and COVRATIO, respectively. In the R-students data set, there are two instances of an outlier, whereas, in the Hat-Matrix data set, there is only one. In addition, there are four outliers in the 'DFFITS' influences, and there are two outliers in the 'COVRATIO' impacts. Figure 2 shows the leverage plots for ready reference.
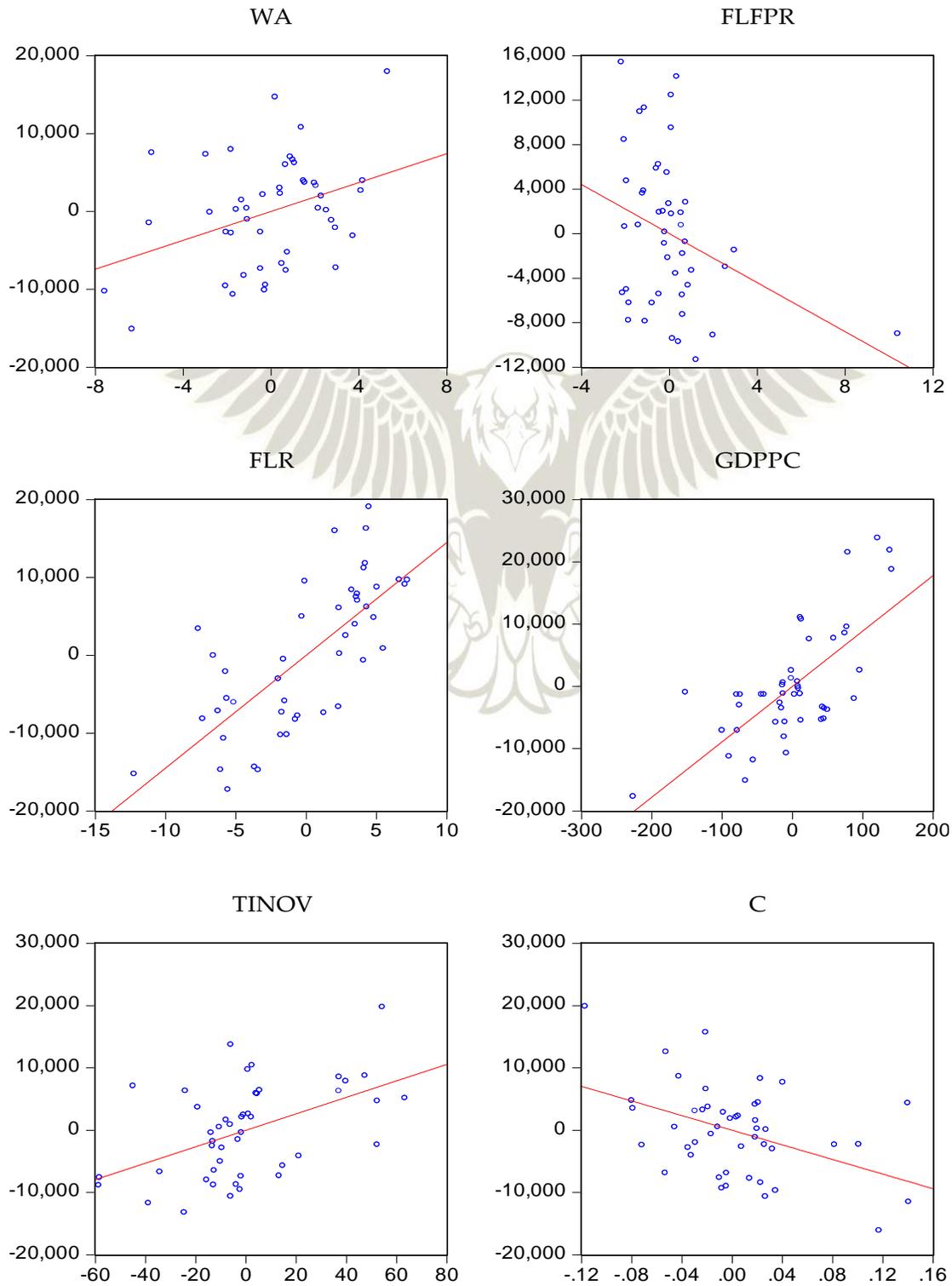
Figure 2: Leverage Plots

Source: Author's illustration. Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

Figure 2 exhibits Leverage plotting findings. There are two outliers in a positive direction and two in a negative direction in the women in business and the law Index. The female labour force participation plot reveals two positive and two negative outliers. In addition, there is one extreme case among the patent applications. On the other hand, the leverage plot of the female literacy rate and GDP per capita is considerably more favourable since most of the data sit on the regression line. As a result, parameter estimations using the RLS-M estimator are doable. Table 4 shows the RLS –M estimator for ready reference.

Table 4: RLS-M Estimator Results

Dependent Variable: CO2				
Variables	Coefficient	Std. Error	z-Statistic	Prob.
WA	903.5299	401.5891	2.249886	0.0245
FLFPR	-1045.900	555.5770	-1.882547	0.0598
FLR	1465.871	232.6424	6.300963	0.0000
GDPPC	85.95492	15.30199	5.617238	0.0000
TINOV	135.9138	39.65443	3.427456	0.0006
C	-56488.68	20750.97	-2.722219	0.0065
Robust Statistics				
R-squared	0.854546	Adjusted R-squared		0.836365
Rw-squared	0.983728	Adjust Rw-squared		0.983728
Non-robust Statistics				
Mean dependent var	104283.8	S.D. dependent var		47083.34
S.E. of regression	6864.916	Sum squared resid		1.89E+09

Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate,
FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

The results of M-estimation, as shown in Table 4, are shown below (Robust least square). Results estimate that an increase of one unit in the women's autonomy index, the female literacy rate, the GDP per capita, and patent applications leads to an increase of 903.52 units, 1465.87 units, 85.45 units, and 135.91 units, respectively, in CO_2 emissions. Based on these findings, it seems that women's independence negatively affects environmental standards. Rises in carbon emissions correlate with increases in women's autonomy, as corroborated by Glass et al. (2016), Du et al. (2022), and Mujeed et al. (2021). Similarly, the average percentage of female literacy in Pakistan is 31%, which is much too low to reduce and increase carbon emissions. This discovery contradicts what Asteria et al. (2020) found: higher female literacy levels lead to lower carbon dioxide emissions. In order to raise knowledge about the risks of carbon emissions, it is crucial to boost the literacy rate of women. In addition, the data shows that when GDP per capita rises, so do emissions, indicating that economic growth come at the expense of environmental quality. This conclusion is consistent with the results of other studies showing that rising levels of GDP per capita are associated with higher levels of carbon emissions (Zaman et al. 2016, Rashid Khan et al. 2021, Njoh 2021). The use of technology affects environmental quality, as shown by the fact that the predicted results of patent applications lead to increased carbon emissions. This finding agrees with other research by Ullah et al. (2021), Gao et al. (2022), and Awan & Sroufe (2020), revealing that technology innovation/resident patent rights increase carbon emissions. There is a negative association between the female labour market outcome and CO_2 emissions, with a coefficient value of -1045, indicating that for every one unit change in the female participation in labour force, CO_2 emissions fell by 1045 units. In addition, it exemplifies that the female labour force actively supports green environmental projects in the marketplace, which is a critical factor in reducing carbon emissions. The R-Square and the Adjusted R-Square values are pretty near one, indicating a solid match between the data and the model.
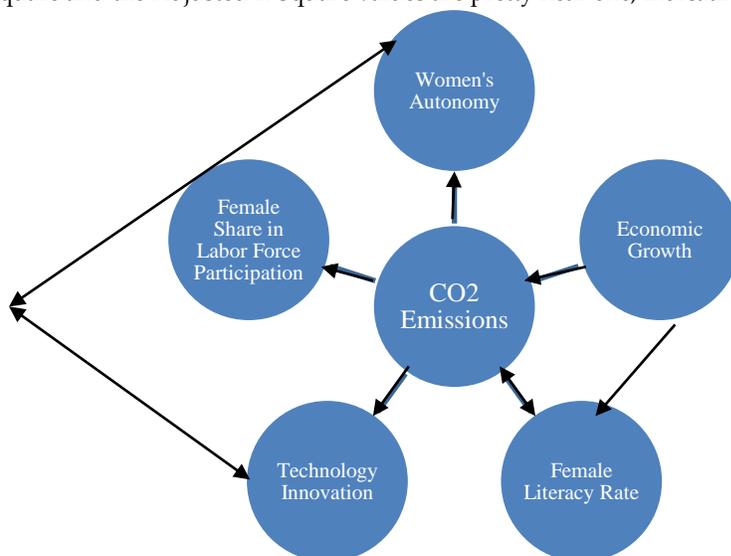
Figure 3: Granger Causality Estimates
Source: Author's illustration.

Figure 3 shows the Granger causality estimates for ready reference. The findings reveal bidirectional causality between the rising percentage of women in the labour force and carbon emissions and between technological advancement and women's independence. This finding suggests that a rise in carbon emissions is responsible for improved labour market results and that the converse is also true. In addition, continuous national progress is linked to technological innovations that pave the way for women to participate fully in the business sector. Carbon emission Granger cause women's autonomy, female labour force participation rate and technology innovation, which confirmed the emissions-led women's autonomy and technology innovation. Finally, economic growth Granger causes women's autonomy, and female share in the labour force substantiates the hypotheses of growth-led women's autonomy in a country. Table 5 shows the impulse response function (IRF) estimates.

Table 5: IRF Estimates of Carbon Emissions

Period	CO2	WA	FLFPR	FLR	GDPPC	TINOV
1	4674.140	0	0	0	0	0
2	6017.269	333.2168	827.8265	2325.074	849.3686	60.04620
3	5974.464	415.2675	1487.335	2970.311	1386.709	424.2108
4	5971.075	761.4303	1964.842	3169.576	1760.076	117.7976
5	5705.270	1020.569	2098.605	3462.660	2076.415	-249.1427
6	5250.982	1110.493	2294.227	3655.574	2208.018	-417.0061
7	4815.479	1124.307	2474.670	3795.509	2286.596	-536.9198
8	4487.871	1055.959	2546.783	3936.689	2332.990	-668.4325
9	4249.545	930.9877	2594.404	4092.904	2323.388	-788.2893
10	4068.868	773.8822	2640.725	4257.478	2283.395	-902.6858

Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

According to the findings, factors such as women's autonomy, female labour market outcomes, female literacy rate, and sustained economic development are anticipated to increase carbon emissions over the next ten years. Even though technological innovation has produced contradictory outcomes, it has been demonstrated that technological innovation contributes to reducing carbon emissions as of the fifth period of forecasting. This indicates that the country is progressing toward using cleaner production technologies over time. Figure 4 shows the overall IRF estimates for ready reference. Table 6 presents the variance decomposition analysis (VDA) results, which discovered that the female literacy rate is projected to exert a more significant variance error shock on carbon emissions in the next ten years, as shown by the value of 24.320%. In addition, the consequences of female work and sustained economic expansion would impact carbon emissions, with an estimated variance error of 9.085% and 7.697%, respectively. The innovation in technological capabilities is expected to be the least impacted factor, with an estimated variation of 0.553% across time. Figure 5 shows the overall VDA illustrations for ready reference.

Table 6: VDA Estimates of Carbon Emissions

Period	S.E.	CO2	WA	FLFPR	FLR	GDPPC	TINOV
1	4674.140	100	0	0	0	0	0
2	8061.169	89.33969	0.170867	1.054588	8.319119	1.110188	0.005548
3	10676.47	82.24568	0.248696	2.541925	12.48276	2.319906	0.161036
4	12932.09	77.37613	0.516181	4.040962	14.51511	3.433564	0.118057
5	14886.18	73.08409	0.859581	5.037133	16.36516	4.536927	0.117108
6	16555.37	69.14979	1.144925	5.993018	18.10716	5.446980	0.158130
7	18016.10	65.53542	1.356239	6.947342	19.72828	6.210373	0.222345
8	19331.56	62.30935	1.476316	7.769619	21.28167	6.850370	0.312673
9	20545.97	59.43911	1.512274	8.472775	22.80858	7.343257	0.424006
10	21689.16	56.85775	1.484368	9.085532	24.32073	7.697910	0.553703

Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.
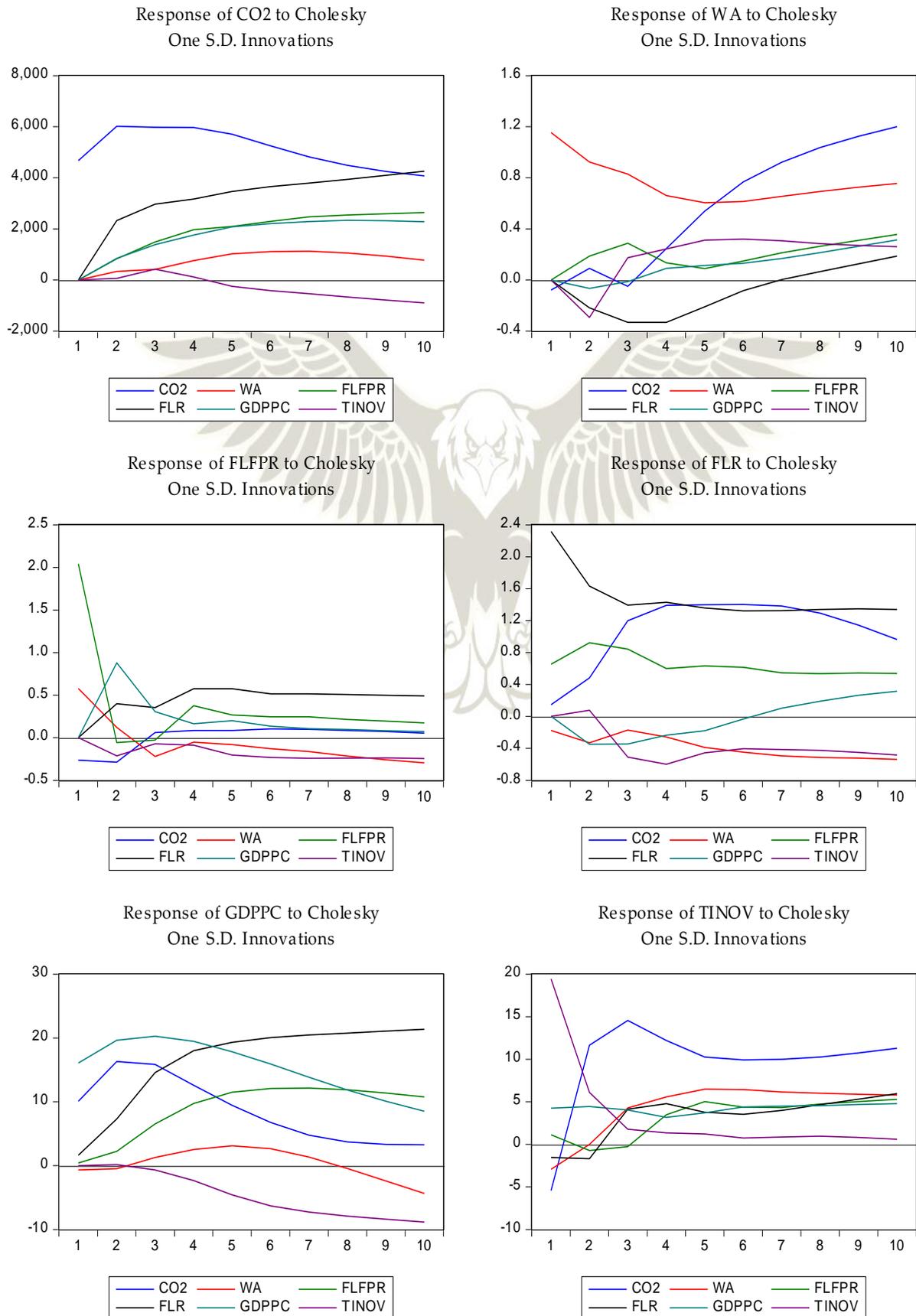
Figure 4: Overall IRF Estimates

Source: Author's illustration Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.

Figure 5: Overall VDA Estimates

Source: Author's illustration Note: CO2 shows carbon emissions, WA shows women's autonomy, FLFPR shows female labor force participation rate, FLR shows female literacy rate, GDPPC shows GDP per capita, and TINOV shows technology innovation.
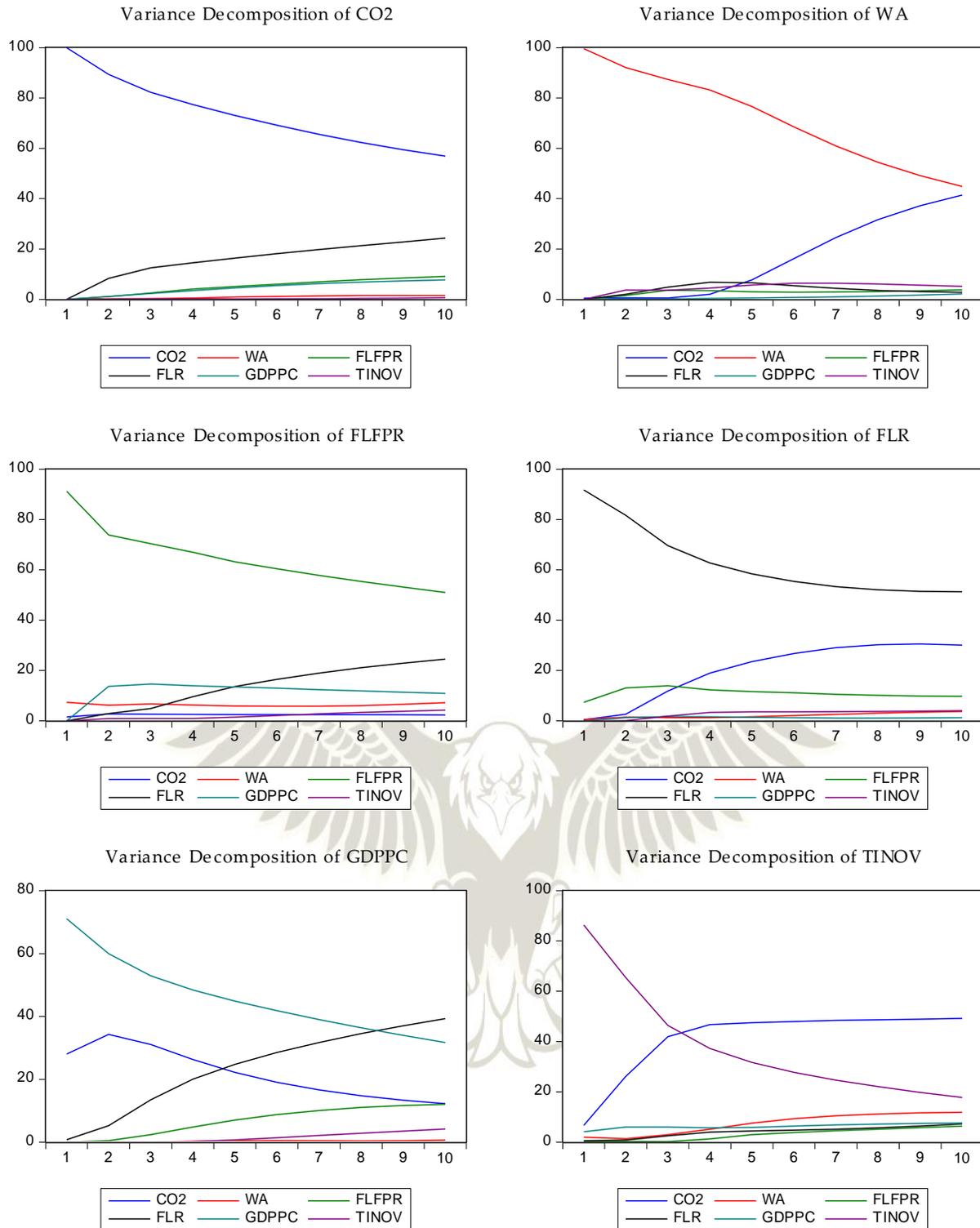
4. CONCLUSIONS AND POLICY RECOMMENDATIONS

Climate change is one of the planet's most significant and challenging problems. Pakistan is not an exception since the phenomena of climate change also have a significant impact. This research investigates how enhancing women's economic and political standing in Pakistan affects preserving the natural environment. For this purpose, the study developed a link between carbon emissions, women's autonomy, the female labour force participation rate, the female literacy rate, continued economic growth and technology innovation. The data was collected from 1975 to 2020. The result of using robust least squares demonstrates that increasing women's autonomy worsens the quality of the environment. However, this also reflects that the female workforce is advocating green environmental efforts in the market, which assists in lowering carbon emissions. The relationship between the two factors supports the argument, which is a positive development. The production of environmentally friendly goods in marketplaces traditionally linked with

women's work eventually contributes to improving the quality of the environment by reducing carbon dioxide emissions. The literacy rate of women has been shown to correlate positively with carbon emissions. The per capita income positively correlates with carbon emissions, leading to economic outcomes at the expense of environmental degradation. The diffusion of new technologies and innovations leads to an increase in labour outcomes, increasing national outputs. However, it increases carbon emissions. Economic progress was the impetus for the buildup of technical spillovers, which is the root cause of carbon emissions. It exposes the fact that the manufacturing technique that is currently being employed is not environmentally friendly. The Granger causality estimates show that women's autonomy and the rising proportion of patent applications move in both directions. Further, the female literacy rate and carbon emissions move simultaneously in both directions. Technology is moving in the same direction as the percentage of women participating in the workforce. Based on these results, it can be deduced that women's empowerment is essential for enhancing the quality of the environment.

A significant proportion of women must be employed in the labour force to achieve economic autonomy. It would enable females to feel more empowered to participate in the decision-making process, eventually enhancing the environment's quality. Access to high-quality education for girls and women is a prerequisite for gender equality and the achievement of sustainable development. Women should be educated about the environment and given a voice in environmental decision-making to encourage them to embrace environmentally responsible behaviours. Environmental education should be provided to women to encourage environmentally responsible behaviour on the part of women, thus reducing carbon emissions. In addition, the supply of 4% of GDP share is necessary to be begun in order to begin particular measures to enhance the female literacy rate. The billion tree Tsunami initiative has to be strengthened further, and one way to do so is to provide additional cash to the project. The overall quality of the environment will almost certainly increase as a direct result of this. Carbon emissions and the destruction of the ecosystem are global problems. Therefore, a reaction from the global community should also be requested via different platforms, such as the future conference of parties, to apprehend the threat amicably posed by excessive carbon emissions.

Pakistan should collaborate with the rest of the world to properly combat the already excessive levels of carbon emissions through innovative thinking. The empowerment of women, the establishment of environmental regulations, the imposition of a tax on carbon emissions, and the development of environmentally friendly technology can all contribute to promoting global sustainable development. Future leaders will likely be drawn from the ranks of women, who already possess the leadership skills necessary to tackle problems related to ethical sustainability in procurement and increase their employment participation. Women in green business tend to care better for the world than men do. Women's autonomy is essential to sustainable development, as are equitable opportunities and a supportive society. As a result of a growth strategy that is related to economic inequality, ecocide, biodiversity loss, and the question of healthcare, women's living conditions in cultures dominated by males are growing increasingly precarious. These cultures are also racist, violent, and discriminating. Because of the inextricable link between people and ecosystems, as well as between economic activities and civic systems, the current model of development needs to be rapidly revised to pave the way for a caring society that emphasizes the long-term viability of both people and ecosystems. It is necessary to generate development patterns that are just and equal. The most promising opportunity for a revolutionary and long-lasting recovery in terms of women's rights is found in the service society.

Ethical approval

Not Applicable.

Informed consent

The study was conducted with equal participation by all authors.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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Data and materials availability

The data is freely available at World Development Indicators published by World Bank (2022) at
https://databank.worldbank.org/source/world-development-indicators.

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POLITICA

Navigating the Paradox of Democracy and Military Control: An Analysis of an Imaginary Country's Political Landscape

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ABSTRACT

The rise of a military-led "deep state" is a global phenomenon that seriously threatens democratic governments everywhere. A hypothetical nation called "Sherwan" has a military-led "deep state" that controls the government, the economy, and the media. The military maintains its grip on power through a convoluted system of manipulation and compulsion, all while hiding its true nature behind the facade of democratic institutions. A combination of the military's dominance of political parties and the election process and the government's efforts to silence the media and civil society have made it difficult for the country's citizens to have confidence in the democratic system. There is no possibility of enforcing responsibility or monitoring, allowing the military-led deep state to function without restraint. The military's obsession with its preservation slows economic growth by diverting resources from defence and undercutting free-market ideals. This research delves into the numerous facets of the military-led deep state. It considers potential responses to the threats it presents to democratic governance, open government, and the rule of law. This research, which uses the made-up nation of Sherwan as an example, sheds light on the workings of a military-led deep state and offers suggestions for combating it to promote freer, more democratic societies.

Keywords: Military-led deep state; Fantasy country; Conspiracy theories; Power game; Challenges; Solutions.

1. INTRODUCTION

The fact that "Deep State" occurs in the primary title of so many academic publications (4610 total) implies that it is a subject of interest and concern to many scholars in various fields. There has been a rise in the use of the phrase "Deep State" in recent years, notably in conversations about politics and government, both in the United States and elsewhere.

1.1. Arguments for and against the existence of a deep state

When people talk about the "deep state," they refer to a group of people who they think are working behind the scenes to influence government policy and political choices (Braun, 2019; Johnson, 2021). In recent years, this idea—often linked to conspiracy theories—has gained traction, notably in the United States (Douglas, 2019; Verma, 2020; Hellinger, 2018). The concept of a "deep state" is often founded on the premise that the government and other institutions are managed by an elite cabal immune to public and democratic review (Michaels, 2017). Supporters of the theory say that influential people act in their self-interest rather than the public good (Stroebe & Frey, 1982; Follesdal, 2010). On the other side, many who disagree with the deep state notion say it is nothing more than a conspiracy theory designed to undermine faith in government and democratic institutions (Dean, 2009; Baden &Sharon, 2021). They argue that there is no evidence to prove the existence of a hidden network of strong persons who can affect government policy and that the concept of a deep state is generally based on vague and unfounded allegations (Pozen, 2010; Molina et al. 2021). There are people and organizations with too much sway in many nations' governments and other authoritative bodies. Nevertheless, this does not prove there is no covert deep state at work (de Vries, 2006). They are more likely to be able to influence politics via legitimate channels like lobbying and campaign donations. There needs to be more evidence to establish a deep state as a cohesive and coordinated network, despite the fact that the idea may appeal to people distrustful of government and other organizations. When assessing political and social phenomena, one should be wary of statements that depend on indistinct or unproven assertions and instead look to complex data and facts.

1.2. Inconsistency of a military-controlled deep state with democratic values

The concept of a military-controlled deep state implies that the military is exerting influence over this shadowy organization and that its members are looking out for themselves rather than the public (Pedersen, 2011). It is worth noting that the idea of a "deep state," especially one dominated by the military, is fraught with controversy and supported by little hard evidence (O'Donnell, 2020; . Mainstream scholarship and journalism do not support the idea that the military or any other group is secretly controlling the government from behind the scenes, even though there may be instances of individuals acting in their self-interest or engaging in corrupt activities within government institutions. Furthermore, any military engagement in political matters should be subject to democratic monitoring and responsibility since armies exist to serve and defend their nations and inhabitants. While the military plays a vital role in ensuring national security, the concept of a military-controlled deep state that operates outside of democratic governance and accountability is antithetical to the ideals of a well-functioning democratic society (O'Connor, 2011).

1.3. Introduction to conspiracy theories related to a hypothetical military-led deep state

In place of hard proof, conspiracy theorists generally rely on conjecture and assumptions about who or what is behind an event or circumstance (Raikka, 2009). Every field, from politics and administration to science and medicine, is fair game for conspiracy theorists (Jolley & Douglas, 2014). Theories that vaccinations are part of a worldwide effort to control or damage people or that the moon landing was staged are both examples of conspiracy theories. Although some conspiracy theories may be founded on actual events or include kernels of truth, they frequently depend on little evidence (Cosentino, 2020). They may be destructive if they propagate misinformation or incite violence. When considering such beliefs, thinking critically and being dependent on trustworthy sources is necessary. However, the idea of a military-led deep state has inspired several conspiracy theories. First is the belief that the military manipulates and ultimately influences a country's political leadership via covert operations and other means. The military may resort to violence, extortion, or other means to influence politicians and further its goals. Second, the military and intelligence institutions are being run by hidden organizations, and there might be many different interests at play among these groups. Third, the military or the deep state stages false flag operations to further its agenda when someone other than the actual perpetrator of an assault or other event is blamed for it. Finally, dissent and criticism of the military's control are supposedly stifled by the "deep state. Censorship, propaganda, or even physical force may be used against their opponents.

2. OVERVIEW OF THE IMAGINARY COUNTRY

Let us make up a crafted nation named "Sherwan" for this exercise. The military in Sherwan has amassed so much power that they effectively run the nation and its civilian institutions. A sham of democracy, political parties are just vehicles for advancing special interests and silencing dissenters. The military in Sherwan controls the country's most important industries and resources, notably its oil, gas, and mineral reserves. They are also in charge of the country's infrastructure, including the roads, the phone lines, and the banks. This gives the military the power to control economic policy and direct the country's progress towards military goals. Regarding news and dissenting opinions, the military in Sherwan likewise has a firm hold over the media. They utilise their authority to stifle citizens' rights to free expression and assembly to keep a tight rein on the populace. Despite the country's autocratic government, the military in Sherwan employs political parties to provide the appearance of democracy. There are elections, but the military manipulates the results to guarantee that only their chosen candidates are elected. Existing political parties are generally either under the direct authority of the military or substantially influenced by them. The military in Sherwan also has a say in the country's diplomatic and military decisions abroad. These nations do such actions for their own benefit, whether it is natural resource control, geopolitical standing, or regional sway. Concerns about the erosion of democracy and the rule of law by a military-led deep state are warranted. A lack of democratic supervision and accountability means military decisions are made in secret and without input from the general populace. Corruption, power abuse, and human rights abuses are all possible outcomes. To solve this problem, it is essential to have a free press, a robust civil society, and an impartial court that can hold the military to account for its acts. Putting the military under the command of civilians elected to that position is also crucial, fostering a culture of democratic ideals such as openness, accountability, and regard for human rights. Only by advocating for these ideals can a democratic society flourish and the

military-led deep state be broken down.

3. INVESTIGATIVE FOCUS AND AIMS IN AN IMAGINARY COUNTRY

The following research questions are offered about the Sherwan economy.

I. How does a military-led deep state differ from other kinds of authoritarianism, and what are its distinguishing characteristics?

II. How does a deep state driven by the military function in reality, and what mechanisms does it utilize to keep power?

III. How does a military-led deep state affect the country's long-term economic, social, and political growth?

IV. How difficult is it to hold a deep state commanded by the military to account, and what safeguards can be implemented to maintain openness and oversight?

V. What role do non-state entities like civil society, the media, and the like play in undermining the military-led deep state and bolstering democratic rule?

VI. What are the options for dealing with a deep state dominated by the military, and what can we learn from the history of countries that have successfully opposed such regimes?

VII. How can the rest of the world help in the fight against military-led "deep states" and for a democratic rule? And

VIII. What ways are there to ensure regional and international safety in the face of the threats posed by a deep state dominated by the military?

In keeping with the research question, the following are the objectives of the investigation:

I. To examine the features and functioning of a military-led deep state in a hypothetical economy.

II. To investigate how a military-led deep state stays in power and how it impacts the country's economy, society, and government.

III. To focus on increasing openness and watchdog activity inside a military-led "deep state" and

IV. To evaluate the impact of non-state actors like civil society and the media on efforts to reform the military-led "deep state" and foster democratic rule.

4.   VALUE OF THE STUDY

The study points out a few possible contributions, such as shedding insight into the strategies used by military-led deep governments to preserve their control and quash opposition in an alternative reality. The study's identification of these processes and analysis of their effect should aid in raising awareness of the dangers presented by military-led deep states and informing attempts to avoid their establishment or oppose their influence. The research also highlighted threats to democratic governance's openness, accountability, and the rule of law by investigating the effects of military-led deep states on these concepts. Due to this, the relevance of these ideals and the necessity to defend them against military-led deep states would be brought to a broader audience. Promoting openness and accountability, building democratic institutions, and boosting civil society involvement are ways the research helped inform efforts to fight the effect of military-led deep states. The study's recommendations provide helpful direction for either avoiding the rise of military-led deep states or opposing their influence in nations where it already exists. The research helps fill in the picture of the financial toll exacted by deep states run by the military. The research contributes to economic strategies that put growth and development ahead of the interests of a tiny elite by shedding light on how these regimes priorities their interests above broader economic progress. Ultimately, the research significantly adds to our knowledge of military-led deep regimes and the difficulties they provide to attempts at establishing representative government and advancing the economy. The research has the potential to encourage more open, transparent, and democratic societies by bringing attention to these dangers and suggesting potential remedies.

5.   POLITICAL SYSTEM UNDER MILITARY-LED DEEP STATE

5.1.   Control of political parties by the military

The military does not only run the government and the economy; they also back one political party or leader because they are in sync with their goals. In Sherwan, the military's preferred political party is typically given advantages over its rivals through funding and attention from the local media. Because of this, they have a distinct edge in elections, which are often influenced in their favour. The military-led deep state in Sherwan utilizes its influence to intimidate and compel opposition parties. This includes violence and threats against opposition leaders and their followers. This further diminishes the credibility of the electoral process and the ability of opposition parties to compete effectively in elections. A military-led deep state could take over the electoral process, naming their favourite candidate the winner, notwithstanding the election's results. It may spark demonstrations and civil disturbances, but the military usually steps in to end it. The military-led deep state in Sherwan could resort to various measures to preserve its holds on power, such as widespread monitoring of the populace or eliminating civil society groups that threaten their rule. These actions harm democracy, restrict fundamental freedoms of expression and assembly, and violate basic human rights. Furthermore, they allow those in charge to avoid responsibility for their actions and foster an atmosphere conducive to corruption and abuse of power. A transparent and impartial electoral body that can guarantee fair elections is needed to fix this problem. Supporting opposition parties and leaders who are working to promote democracy and human rights is also essential, as is international pressure and support from other countries in order to hold the military-led deep state accountable for its actions. A long-term dedication to advancing democratic principles and institutions and a willingness to stand up to authoritarianism and corruption would be required to bring down Sherwan's military-led deep state.

5.2. Elections being used as a façade

In our hypothetical circumstance, it may be exceedingly challenging to secure fair elections if the military-led deep state has already set the head of the electoral commission and included them in their operations. There are, however, specific measures that may be taken to lessen the impact of the problem. One option is to form a group of credible civil society groups, objective media outlets, and foreign observers to act as a watchdog and observer group. This group may keep an eye on the polls from beginning to finish, reporting any problems they find along the way. In addition, the group may check that the election commission is adhering to universal norms for fair voting. Providing a safe and confidential method for reporting election malpractices would be another crucial step. Because of this, more people may feel safe coming forward to report wrongdoings they have observed. Promoting public knowledge and education on democratic norms and procedures may also decrease the risk of election malpractices. Promoting free and fair elections, voter education, and the perils of electoral malpractices might require enlisting the help of civil society groups, the media, and other stakeholders. Foreign pressure and assistance may be essential in supporting free and fair elections in such a setting. International organizations, governments, and civil society groups can promote transparent and credible elections by advocating for them and providing resources and assistance to local civil society organizations, the media, and election observers. While it may be difficult to guarantee free and fair elections when the commission's leader is unmovable, some measures may be taken to improve the situation and make the electoral process more democratic. In order to implement these measures, there must be concerted efforts to promote democratic principles and institutions, as well as robust collaborations between civil society, the media, and international organizations.

5.3. Role of election commission under the military-led deep state

In a hypothetical country like Sherwan, where a military-led deep state is in charge, ensuring free and fair elections may be difficult. However, creating an open and impartial electoral body may help advance the cause of legitimate elections. For starters, the electoral commission has to be formed with members who can make decisions without being swayed by the military-led deep state. One way to do this is to use an open and inclusive process to choose members, including a broad spectrum of civil society groups and other relevant parties. Voter registration, polling, vote counting, and the declaration of results are all components of the election process that must fall within the purview of the electoral commission. They must be allowed to investigate allegations of vote rigging or voter intimidation and rule on them. The electoral commission has to be given the authority to operate transparently and responsibly to guarantee fair elections. They must disseminate all information about the election, including but not limited to the rules, processes, and results. In addition, they need to let impartial observers watch the election and report on it to assure its legitimacy and independence. Election commissions may employ tools like electronic voting machines, online voter registration, and digital counting and tabulation systems to increase public confidence in the integrity of the electoral process. This can make voting more secure, quicker, and less susceptible to human mistakes or fraud. It is crucial to increase public trust in the electoral commission and the election process in a context where the military-led deep state controls many areas of the electoral process. Education and awareness initiatives may help by informing voters of their rights and obligations as voters and the electoral commission's role in holding fair and transparent elections (Arthur, 2010). Promoting credible and fair elections relies heavily on establishing a transparent and independent electoral commission (Chipenzi, 2016). However difficult it may be in a made-up country like Sherwan, it is nevertheless a necessary action in fostering democratic principles and establishing a robust and healthy democratic society.

5.4. Role of judiciary under the military-led deep state

Even if a military-led deep state exists and dominates most elements of society, the court may still play an essential role in maintaining the rule of law and advancing democratic norms. The judiciary plays a crucial role in society by serving as a neutral and objective place where legal issues may be settled, and laws are enforced. When the military-led deep state is in charge, the court may consider cases involving election malpractices, human rights violations, and other concerns. Judiciary may serve as a check on the authority of the military-led deep state by ensuring it operates within the bounds of the law and the constitution. This may include holding trials on the legality of activities performed by the military-led deep state and rendering an impartial verdict on whether or not these actions violate the law or democratic standards. Judicial appointments should be made based on merit and independence rather than political factors to ensure that the judiciary can fulfill its constitutional mandate. Judges must be allowed to make judgments according to the law and the facts without fear of retribution or influence from the military-led deep state. The judiciary may advance public trust and confidence by keeping all court procedures accessible to the press and public and making rulings by well-established legal precedent. The public's faith in the judicial system can be bolstered, and the military-led deep state's acts can be held to account if this is implemented. Foreign support and pressure are also crucial in bolstering an independent judiciary in such a circumstance. International organizations, governments, and civil society groups may support the court by providing resources, technical help, training, and advocacy for a fair and impartial judiciary (Squatrito, 2021). However difficult it may be for the court to do its job while a military-led deep state is in power, it is essential to maintaining democracy and the rule of law.

6.   MILITARY DOMINANCE AND CONTROL IN SHERWAN

When the military is in charge of a country's "deep state," it is typically also in charge of the government and other institutions, including the courts. Because the military may be able to influence or dominate the legal system, it may be challenging to hold the military-led deep state responsible via conventional legal methods. However, the military can have internal methods for holding personnel responsible for wrongdoing or breaches of military law. Military personnel who break the law or conduct irresponsibly may face court-martial or internal disciplinary punishment. Although the military may be hesitant to hold itself responsible, it is vital to remember that the military is frequently the primary source of power and control under a deep state run by the military. In this kind of

setting, it is essential to have a free and independent press, a strong civil society, and an impartial court to provide responsibility for wrongdoing outside the scope of the military. It is necessary to establish a larger framework for accountability that is outside of the military and represents democratic norms and principles, even while the military may have its internal systems for holding its members responsible.

6.1.   Challenges of implementing laissez-faire economics in a military-led deep state

Laissez-faire economics, sometimes known as free-market economics, is a school of thought that promotes limited government involvement in business and industry (Henry, 2008). The government's function in a laissez-faire economy is confined to safeguarding private property, enforcing contracts, and ensuring the rule of law (Chandra, 2021). According to this idea, the market can and should function with little oversight from the state. Executing a laissez-faire economy in a hypothetical military-led deep state may be challenging when the military controls the government and institutions. The military-led deep state's priority may be self-preservation above support for free enterprise. Without the safeguards of the rule of law and independent institutions, property rights and contracts may be more vulnerable, making it more difficult to sustain a laissez-faire economic model. In addition, a military-led deep state may care more about preserving its authority than defending the nation from external threats. Because of this, military spending may be cut, leaving the nation exposed to attack. A hypothetical military-led deep state may not be the best fit for a free-market economy since the military would likely priorities its survival above advancing free trade. To avoid corruption in any field, economic or otherwise, it is crucial to have a government that answers to the people and institutions that can act as checks and balances.

7.   THE MEDIA'S ROLE IN PROTECTING THE SHERWAN ECONOMY

The media has an essential regulator role by reporting on abuses of power and breaches of human rights by the government and other vital interests (Suzor, 2019). The media may serve as a check on the authority of the military-led deep state if it reports on their acts and exposes any abuses of power or corruption they may be engaging in. Increased public understanding and mobilization of public opinion against the military-led deep state may result from this. By objectively reporting on political events and conducting investigations into and reporting on problems linked to government policies and acts, the media may play a significant role in fostering an environment of openness and accountability. This may give way for the public to monitor government choices and hold the military-led deep state responsible for their activities. By reporting on elections fairly and objectively, encouraging citizens to become informed voters, and hosting open forums for public discourse, the media may help spread support for democratic principles and practices. This may give a means for people to have a voice in government and help restore faith in democratic institutions. To fulfill this function effectively, the media must be protected from governmental censorship and coercion, function freely without fear of punishment, and report the news without fear of reprisal. In addition, the media has an obligation to its audience to offer accurate and fair coverage of all issues. The international community's backing and pressure may be necessary to help independent media survive under these conditions. As well as advocating for press freedom and independent media, international organizations, governments, and civil society groups may contribute resources, technical aid, and training to support the media. The media is a crucial institution in promoting democratic ideas and preventing a nation from being entirely dominated by the military, even though it may find it difficult to operate efficiently in a scenario when a military-led deep state is in power.

8.   CONSTITUTIONAL PROTECTIONS FOR THE SHERWAN ECONOMY

Changes to the Constitution may be essential if a nation is threatened by a military-led deep state and wants to prevent the military from seizing power. The condition of affairs and the make-up of the military-led deep state will determine what kinds of reforms, if any, are necessary. Potential amendments to the Constitution might include the following; first, constitutional amendments that establish a clear line of authority should keep the military and civilian administration strictly distinct. This may include establishing a free and independent press capable of holding the military to account, as well as a strong and independent legislature. Second, the Constitution might be changed to prevent military members from running for office or joining political parties. Third, electoral commissions, political parties, and civil society groups are all examples of democratic institutions that constitutional amendments might bolster. Fourth, the Constitution might be modified to include such provisions to guarantee that the military promotes human rights and protects civilians, and fifth, the military's operations could be monitored, and the military would be held responsible for any abuses of power if independent monitoring mechanisms were established by constitutional amendment. In the grand scheme of things, amending the Constitution may be a significant step towards averting or dealing with a deep state driven by the military. It is essential, however, that any modifications be made democratically and inclusively and accurately represent the people's will.

9.   STUDY REFLECTIONS

The military-led deep state in the crafted nation of Sherwan poses severe problems for democratic rule. It is difficult to question the military's supremacy because of its broad and far-reaching influence over significant institutions, such as politics, the media, and the economy. Threatening the credibility of the democratic system is the repression of free media and civil society and election process manipulation. There is no possibility of enforcing responsibility or monitoring, allowing the military-led deep state to function without restraint. Even with these obstacles, there may be methods to fight against the military-led deep state. It is possible to restore faith in democratic institutions by creating a fully independent court and guaranteeing the impartiality and openness of election commissions. The military-led deep state may be challenged if civil society and free media are bolstered. Constitutional reforms are necessary to avoid the military becoming an all-consuming force in the country's progress, including steps to restrict the military's engagement in politics and its influence over the economy. At its core, the threat posed by the military-led deep state is not one of political power or

economic supremacy but of democracy and human rights. We can only expect to create more open, transparent, and democratic societies that are responsive to the demands of their residents if we acknowledge this difficulty and strive towards answers.

10. ACTIONABLE STEPS

Given their dominance over society, holding a military-led deep state responsible may be complicated and challenging. Nonetheless, several tools are available for enforcing their accountability and spreading democratic principles. For starters, civilian institutions like the court, civil society groups, and independent media may all play essential roles in keeping the military-led deep state responsible. Abuse of authority may be uncovered, corruption and human rights breaches reported on, and political reforms promoted with the help of these organizations. These organizations may constrain the military-led deep state and advance democratic principles by increasing public knowledge and rallying public opinion. Second, foreign organizations and institutions may play a significant role in enforcing accountability on the part of the military-led deep state. International institutions like the United Nations and the International Criminal Court may investigate and prosecute human rights abuses and breaches of international law. The military-led deep state may be pressured to reform its conduct and follow democratic standards via international sanctions. Third, the military-led deep state may be held responsible via diplomatic pressure and engagement. Countries may use diplomatic and economic penalties against a country that refuses to recognize a military-run government if they want to modify its conduct. It can encourage political transformation and human rights protection via diplomatic channels. Overall, it takes a concerted effort on a national and international scale to bring a military-led deep state to justice. It is feasible to restrict the authority of the military-led deep state and create a more democratic and accountable government by constructing robust and independent institutions, promoting democratic principles, and utilizing diplomatic and legal measures to exert pressure on the deep state.

11. IMPEDIMENTS TO THE STUDY

The fact that the research assumes the existence of a nation named "Sherwan" is a significant caveat. While this may help study military-led deep states in a lab setting, it may not accurately represent the complexity and subtleties of real-world examples. The research needs more empirical evidence to adequately evaluate the consequences of military-led deep states since it is based on a hypothetical example. It may not be easy to properly convey these regimes' complex and dynamic character, even while the analysis may depend on previous research and case studies of real-world situations. Given the complexity and breadth of difficulties that may entail military-led deep states, the research may not be able to investigate all of their facets and concerns in detail.

12. ANTICIPATED DEVELOPMENTS AND OPPORTUNITIES

In order to better understand the causes and effects of these regimes, future studies should concentrate on particular real-world instances of deep states, relying on empirical data and interviews with important players. The elements contributing to the genesis and maintenance of deep states may be more easily identified via a comparative investigation of several examples. Efforts to build democratic institutions, promote openness and accountability, and involve civil society are all potential responses to deep states that might be the subject of future study. The consequences of military-led deep states on economic growth, especially resource allocation, investment, and expansion, might benefit from further study. The study provides an exquisite starting point with the help of a hypothetical country case for further analysis of the complicated and problematic subject of military-led deep states. There is a great lot of promise for future research in this area.

Author's Disclaimer

Ethical approval

All international standards have been adopted and compliance..

Informed consent

The study was conducted with equal participation by all authors.

Conflicts of interests

The authors declare that there are no conflicts of interests.

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POLITICA

Navigating the Perils of a Banana Republic: Lessons from Pakistan's Economic Crisis

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ABSTRACT

Banana republics have been a persistent phenomenon in developing countries facing socio-economic, environmental, and geopolitical issues. This study focuses on the economy of Pakistan, a developing country facing severe economic challenges. Due to high currency devaluation in terms of US$, Pakistan is on the brink of default. The strict policies of the International Monetary Fund (IMF) towards developing countries like Pakistan are preventing them from accessing dollars to stabilize their economic indicators. As a result, Pakistan is not receiving loans from neighbouring and foreign countries. Political instability and conflicts between political parties are hindering the country's progress, while poverty is increasing at an alarming rate due to high inflation, food inflation above 40%, and skyrocketing petrol prices. Additionally, terrorism and domestic violence are increasing, while the judiciary and establishment are becoming politicized. The environment is deteriorating, and the country faces food insecurity risks, earthquakes, and wars with neighbouring countries where disputes are in a cold war. This study uses a qualitative case study approach to analyze Pakistan's challenges and potential policies to address them. The study focuses on five dimensions: economic, political, social, judicial and establishment, and geopolitical risks and challenges. The findings suggest that comprehensive and integrated policies are necessary to address the root causes of Pakistan's economic challenges. The study emphasizes the importance of promoting economic diversification and investing in social protection programs to reduce poverty and inequality. It also highlights the need for democratic governance, a strong judiciary, and an independent establishment to promote stability and development. Finally, the study stresses the importance of addressing environmental risks and geopolitical challenges to ensure sustainable development.

Keywords: Banana republic; Pakistan economy; IMF policies; Political instability; Environmental risks; Geo-political challenges.

1. INTRODUCTION

Banana republics are countries that heavily rely on a single export commodity, often controlled by foreign corporations that exploit their resources and political systems. This phenomenon has been observed for years, mainly in Latin American and Caribbean countries (Euraque, 1996). However, the persistence of these issues in the 21st century remains concerning, as many countries, including Pakistan, still need to grapple with similar problems.

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This study focuses on Pakistan's economy, which faces severe socio-economic, environmental, and geopolitical challenges typical of Banana republics. These issues have hindered the country's development and impeded the improvement of the standard of living of its citizens. The root causes of these issues are multifaceted and complex, including historical factors, economic policies, and political instability. This study aims to analyze the root causes of these issues and explore potential policies that can promote pro-growth and pro-poor development in Pakistan. Addressing these issues requires a comprehensive approach considering the interplay between economic, social, and environmental factors. By understanding the underlying causes of the country's problems, policymakers can implement effective policies promoting sustainable and inclusive growth. To achieve this goal, the study first provides an overview of the historical context of Banana republics and the key characteristics that define these countries. Then, it discusses Pakistan's socio-economic, environmental, and geopolitical challenges, highlighting their impact on its development. Next, the study examines the root causes of these challenges, including economic policies, political instability, and the exploitation of natural resources. Finally, the study proposes a set of policy recommendations that can promote pro-growth and pro-poor development in Pakistan. These policies address the root causes of the country's problems, including improving the business climate, promoting economic diversification, and ensuring sustainable resource management. The study believes these recommendations can help Pakistan achieve sustainable and inclusive growth and serve as a blueprint for other countries facing similar challenges.

2.   A Deep Dive into the Historical Roots of Banana Republic

The term "Banana republic" was initially used in the late 19th and early 20th century to describe countries in Latin America and the Caribbean that relied heavily on a single export commodity, typically bananas, and were controlled by foreign corporations that exploited their resources and manipulated their political systems (Moberg, 1996; Bucheli, 2004). The American writer O. Henry popularized the term in his book "Cabbages and Kings," specifically about Honduras (Henry, 1912; Townsend, 2019; Coleman, 2021). Banana republics are characterized by several key features, including a heavy reliance on a single export commodity that constitutes a large portion of their GDP and exports, domination of production and exportation of the commodity by foreign corporations from developed countries, and a political system that is often marked by corruption, instability, and authoritarianism. The ruling elites in these countries often maintain power through force or manipulation (Southgate & Roberts, 2016). The economic history of Banana republics is defined by cycles of boom and bust as the commodity's global demand and supply conditions fluctuate. The country's economy may experience rapid growth and development during boom periods. However, the benefits are often concentrated among a small group of elites, while most of the population remains poor and marginalized. Economic stagnation, social unrest, and political instability may ensue during bust periods. Banana republics have also been criticized for their negative impact on the environment due to the monoculture of the commodity, which leads to the depletion of natural resources and the degradation of ecosystems. The ruling elites have often been accused of suppressing dissent and violating human rights. In conclusion, Banana republics are countries that rely heavily on a single export commodity, are controlled by foreign corporations, and exhibit political instability, corruption, and authoritarianism. While the history of Banana republics is well-known, their continued existence in the 21st century remains a cause for concern (Donovan, 2013).

3. Socio-Economic, Environmental, and Geopolitical Factors Affecting Pakistan's Economy

Pakistan's economy is facing significant challenges due to various factors, including high currency devaluation, stringent International Monetary Fund (IMF) policies, political instability, and conflicts between political parties. These challenges have led to the country being on the brink of default and unable to access loans from neighbouring or foreign countries (Zaman, 2023). The high inflation rate, particularly in food prices, and skyrocketing petrol prices have increased poverty levels, making it difficult for many Pakistanis to afford basic necessities. This has resulted in a decline in the standard of living for many citizens, limiting their access to healthcare, education, and other essential services (Suleman et al., 2022). Environmental challenges are also significant in Pakistan, with food insecurity risks, earthquakes, and conflicts with neighbouring countries (Tabasam et al., 2022). The deterioration of the environment due to deforestation, soil erosion, and pollution has decreased agricultural productivity, making it difficult for farmers to produce enough food to feed the population. Furthermore, natural disasters can severely impact the economy and infrastructure, hindering development efforts (Abbas et al., 2022). Geo-political challenges further complicate Pakistan's development, including terrorism, domestic violence, and political polarization (Khan et al., 2022). These challenges create a climate of insecurity and instability, deterring foreign investment and exacerbating poverty levels. Additionally, the risks of war with neighbouring countries over disputes, such as territorial or resource rights, can have catastrophic consequences for the country's economy and infrastructure (Zaidi & Nrimal, 2022). Pakistan faces significant socio-economic, environmental, and geo-political challenges that hinder the country's progress and development. The high levels of poverty, inequality, and unemployment, coupled with environmental degradation and geo-political instability, have created a challenging environment for citizens, limiting their access to essential services and opportunities for economic growth. Table 1 shows Pakistan's socio-economic and environmental challenges.

Table 1: Pakistan's Economic Indicators

Economic Indicators	Value
GDP	$376.493 billion (nominal; 2022)
GDP growth rate	The growth rate of 4% in 2022 is expected to decline to 2% in 2023.
Food Inflation rate	45.10% in February 2023
Poverty rate	37.5% in 2022

Economic Indicators	Value
Exchange rate	1US$ = 282 KR in March 2023
Foreign reserves	US$ 8.70 billion, as of February 10, 2023
External debt	US$126.3 billion in December 2022
Social Indicators	**Value**
Literacy rate	58% in December 2022
Life expectancy	67.79 years in 2023
Infant mortality	55.777 deaths per 1000 live births
Health expenditures	3% of GDP in 2022
Government education expenditures	1.77% of GDP in 2022
Domestic violence	32% of women experience abuse in 2022
Environmental Indicators	**Value**
CO2 emissions	1.04 tons of CO2 per capita in 2021
Forest cover	4.2 million hectares in 2022
Renewable energy	5%of total energy in April 2022
Soil erosion	65% of the total Pothwar plateau has 48 been eroded

Source: Pakistan's macrotrends (2023); UNFPA (2022); Knoema (2022), and Pakistan's economic survey (various issues).

Table 1 focuses on socio-economic and environmental indicators. Pakistan's nominal GDP in 2022 was $376.493 billion, with a growth rate of 4% in 2022, which is expected to decline to 2% in 2023. The food inflation rate in February 2023 was recorded at 45.10%, indicating a significant rise in the prices of food items. Pakistan's poverty rate was 37.5% in 2022, highlighting the large population below the poverty line. The exchange rate of the Pakistani rupee to the US dollar was 1 US$ = 282 PKR in March 2023, and Pakistan's foreign reserves amounted to US$ 8.70 billion as of February 10, 2023. The country's external debt was US$126.3 billion in December 2022, a significant concern for the country's economy. Pakistan's literacy rate in December 2022 was 58%, indicating that more than 40% of the population cannot read and write. The life expectancy in Pakistan in 2023 was 67.79 years, which is lower than the global average. The infant mortality rate was high, with 55.777 deaths per 1000 live births. Pakistan's health expenditures were 3% of GDP in 2022, while the government's education expenditures were 1.77% in the same year. Moreover, domestic violence was a significant issue in Pakistan, with 32% of women experiencing abuse in 2022. The environmental challenges include CO2 emissions per capita, which was 1.04 tons in 2021. The second indicator is the extent of forest cover in Pakistan, which was 4.2 million hectares in 2022. This value reflects the total land area of forests, including natural and planted forests. The third indicator is the percentage of renewable energy in Pakistan's total energy mix, which was 5% in April 2022. This indicates the proportion of energy derived from renewable sources such as solar, wind, and hydropower. The final indicator is soil erosion, which affects the Pothwar plateau, with 65% eroded. These indicators provide valuable insights into Pakistan's environmental status and its progress in mitigating environmental challenges such as greenhouse gas emissions, deforestation, and soil degradation.

4. Understanding the Root Causes of Pakistan's Complex Challenges

The root causes of Pakistan's challenges can be attributed to several interconnected and complex factors. One of the main factors is the country's heavy reliance on a few exports commodity, which has led to limited economic diversification and vulnerability to fluctuations in global demand and supply conditions. The government's failure to develop policies that promote economic diversification has resulted in limited job creation and income opportunities, perpetuating poverty and inequality (Ejaz & Mallawaarachchi, 2023). Additionally, the stringent policies of the International Monetary Fund (IMF) towards developing countries like Pakistan have prevented the country from accessing the necessary funding to stabilize its economy, leading to high inflation rates and currency devaluation (Batool t al. 2022; Salman & Ali, 2022). Political instability and conflicts between political parties have also hindered Pakistan's progress (Zeeshan et al., 2022; Khan et al., 2022). Politicizing the judiciary and establishment has eroded the public's trust in the government and institutions, leading to a lack of confidence in the country's future. The exploitation of Pakistan's natural resources by foreign corporations has contributed to the country's environmental degradation and food insecurity (Aslam et al., 2022; Razzaq et al., 2022). The risks of earthquakes and wars with neighbouring countries over disputed territories further exacerbate the country's vulnerability. The root causes of Pakistan's challenges involve economic policies, political instability, and the exploitation of natural resources. Addressing these issues will require a comprehensive approach that includes policies that promote economic diversification, stability, and equitable distribution of resources, along with improving governance and addressing environmental concerns.

5. Mapping out the Research Questions and Objectives

The following are the research questions and objectives of the study, i.e.,

I.   What are the underlying economic policies and factors contributing to Pakistan's vulnerability to global market conditions and limited access to funding?

II.   How has political instability and conflicts between political parties in Pakistan affected the country's progress and development?

III.   What are the environmental risks and impacts of the exploitation of Pakistan's natural resources, and how do they contribute to food insecurity, earthquakes, and conflicts with neighboring countries?

In line of the research questions, following are the key objectives of the study, i.e.,

I.   To analyze the root causes of Pakistan's economic challenges, including the country's heavy reliance on a single export commodity, IMF policies, and limited economic diversification.
II.   To examine the impact of political instability and conflicts between political parties on Pakistan's development and governance.
III.   To assess the environmental risks and impacts of the exploitation of Pakistan's natural resources and their contribution to food insecurity, earthquakes, and conflicts with neighboring countries.

Based on the stated research questions and objectives, the study move forward towards developing its methodology

6. Mapping the Research Approach

The study employs a qualitative case study approach to analyze Pakistan's socio-economic, environmental, and geopolitical challenges and explore potential policies to promote pro-growth and pro-poor development. The case study approach allows for an in-depth analysis of the country's specific context and enables the exploration of the multiple dimensions that contribute to its challenges. The data sources for this study are primarily secondary sources, including academic articles, reports, and policy documents. The study uses a systematic search strategy to identify relevant literature on Pakistan's challenges and potential policies. The analysis is based on the following dimensions: economic, political, social, judicial and establishment, and geopolitical risks and challenges. The qualitative analysis involves synthesizing the data collected from various sources. Table 2 shows the search strategy for reviewing the earlier literature.

Table 2: Search Strategy for Literature Review

Database	Search Terms
Scopus	"Pakistan" AND ("economic challenges" OR "political instability" OR "environmental degradation")
Web of Science	"Pakistan" AND ("poverty" OR "terrorism" OR "geo-political risks")
JSTOR	"Pakistan" AND ("judiciary" OR "establishment" OR "pro-growth policies")
Google Scholar	"Pakistan" AND ("food insecurity" OR "natural resource exploitation" OR "pro-poor development")

The data were analyzed using thematic analysis, which involves identifying patterns and themes across the data. This analysis enables a comprehensive understanding of the challenges faced by Pakistan and potential policy solutions to address them. Table 3 shows the thematic analysis with different dimensions of the study.

Table 3: Dimensions and Themes for Thematic Analysis

Dimension	Themes
Economic	Currency devaluation, IMF policies, loans and debt, inflation, petrol prices
Political	Political parties, conflicts, instability, domestic violence
Social	Poverty, food insecurity, terrorism, environment
Judicial and Establishment	Politicization, corruption, human rights
Geo-political Risks and Challenges	Disputes, cold war, earthquakes, wars

Limitations of the study include potential biases in the selected literature, limited access to primary data, and the imaginary nature of the case study country. However, the study aims to mitigate these limitations by employing rigorous search strategies, triangulating data from multiple sources, and using a rigorous analytical approach. Table 4 shows the different criteria for selecting literature.

Table 4: Criteria for Selecting Literature

Criteria	Description
Relevance	Articles related to Pakistan's challenges and potential policies
Date	Articles published between 2020-2023
Language	Articles in English
Quality	Articles published in peer-reviewed journals and reputable sources
Sample size	Studies include a significant sample size of Pakistan's population and relevant stakeholders

The qualitative case study approach provides valuable insights into Pakistan's challenges and potential policy solutions, which can inform future research and policy-making efforts in similar contexts.

7. Discoveries and Discourse

The findings of this study suggest that Pakistan is facing many challenges that require urgent attention from policymakers. The economic challenges are particularly severe, with high inflation and currency devaluation leading to a lack of access to loans and contributing to poverty. The political instability and conflicts between political parties further exacerbate the economic challenges and impede progress towards sustainable development (Pasha et al., 2023; Noor et al., 2023). Additionally, the rise in terrorism and domestic violence threatens the country's security and stability. Moreover, the politicization of the judiciary and establishment leads to a lack of accountability and hinders the delivery of justice. The environmental challenges, such as food insecurity and the risks of earthquakes, also pose significant threats to the country's well-being and development.

The potential policies suggested by this study focus on promoting economic diversification, investing in social protection programs, promoting democratic governance, strengthening the judiciary and depoliticizing the establishment. These policies aim to address the root causes of the challenges faced by Pakistan and pave the way for sustainable development. Overall, this study highlights the need for urgent action to address the challenges faced by Pakistan and similar countries, emphasizing the importance of a comprehensive and integrated approach that addresses economic, political, social, judicial, and environmental dimensions. Table 5 shows the economic diversification strategy, its potential benefits and challenges for Pakistan.

Table 5: Economic Diversification Strategy

Economic Diversification Strategy	Potential Benefits	Challenges
Developing Manufacturing Industries	- Provides employment opportunities - Increases economic growth - Encourages foreign investment	- Requires significant investment in infrastructure and human capital - Competition with existing industries
Promoting Tourism	- Generates foreign exchange - Creates job opportunities - Promotes cultural exchange - Attracts foreign investment	- Requires significant investment in infrastructure and marketing - Dependence on external factors such as global travel restrictions and security concerns
Expanding Agricultural Production	- Provides employment opportunities - Increases food security - Diversifies the economy	- Limited availability of fertile land - Dependence on weather patterns and climate change
Encouraging Technological Innovation	- Increases productivity and efficiency - Attracts foreign investment - Creates high-skilled employment opportunities	- Requires significant investment in research and development - Competition with established technological hubs

The study's findings indicate that economic policies, political instability, and the exploitation of natural resources are the main factors contributing to the challenges countries like Pakistan face (Xu et al., 2023). Therefore, it is essential to implement policies that address these root causes rather than just treating the symptoms. One of the key recommendations is to promote economic diversification. Overreliance on a single commodity or sector can make a country vulnerable to external shocks and fluctuations in the global market. Diversification can reduce this vulnerability and create more sustainable and inclusive growth. Moreover, investing in social protection programs can help reduce poverty and inequality, which are often the result of economic policies prioritising the interests of the wealthy and powerful over the general population (Ogujiuba & Mngometulu, 2022; Sattar et al., 2022)). Table 6 shows the social protection programs, their potential benefits and the challenges Pakistan's economy faces.

Table 6: Social Protection Programs

Social Protection Program	Description	Potential Benefits	Potential Challenges
Conditional Cash Transfers	Giving families money in exchange for enrolling their kids in school or getting regular checkups is an example of conditional cash transfer.	Reducing poverty and improving education and health outcomes	High administrative costs, difficulty in targeting the poorest households

Social Protection Program	Description	Potential Benefits	Potential Challenges
Universal Basic Income	Regardless of their financial situation or job position, all residents would be eligible for an assured wage.	Reducing poverty, increasing financial security and economic activity	High costs, potential disincentive to work
Public Work Programs	Providing employment opportunities for the unemployed or underemployed through public works projects	Reducing poverty, increasing access to public goods and services	Limited availability of funding and implementation challenges
Food Assistance Programs	Providing food assistance to vulnerable households, such as through food vouchers or food banks	Reducing food insecurity, improving health outcomes	Limited availability of funding, potential dependency on aid
Microfinance Programs	Providing small loans and financial services to the poor to support income-generating activities	Supporting entrepreneurship and income generation	High interest rates, potential debt burdens
Health Insurance Programs	Providing affordable health insurance to vulnerable populations, such as the poor or those with chronic illnesses	Improving access to healthcare, reducing financial burdens of illness	Limited availability of funding, potential administrative challenges

The study also highlights the importance of democratic governance, a strong judiciary, and an independent establishment in promoting stability and development. Political instability and conflicts between political parties can undermine the rule of law and create uncertainty, deterring investors and harming the economy. The politicization of the judiciary and establishment can also erode public trust and undermine the effectiveness of these institutions in promoting justice and accountability (Akram & Azhar, 2022). Table 7 shows vital reforms that help escape Pakistan's economy from miseries.

Table 7: Proposed Reforms for Strengthening Governance in Pakistan

Reforms	Description	Benefits	Challenges
Independent judiciary	Establish an independent judiciary that is free from political influence	Ensures fair trials and upholds the rule of law	Resistance from those who benefit from the current politicized system
Professional civil service	Implement a professional civil service that is merit-based and independent	Improves efficiency and effectiveness of government	Resistance from politicians who rely on patronage appointments
Transparency and accountability	Increase transparency and accountability in government decision-making processes	Reduces corruption and enhances public trust in government	Resistance from those who benefit from the current lack of transparency and accountability
Depoliticizing state institutions	Depoliticize state institutions such as the police and military	Ensures impartiality and professionalism in the institutions	Resistance from those who rely on political influence to maintain power
Strengthening anti-corruption measures	Implement and strengthen anti-corruption measures and institutions	Reduces corruption and enhances public trust in government	Resistance from those who benefit from corrupt practices

Finally, the study addresses environmental risks and geopolitical challenges to ensure sustainable development. Climate change, natural disasters, and other environmental risks can devastate the economy and society. Moreover, conflicts and tensions with neighbouring countries can create geopolitical risks and undermine regional stability. Overall, the discussion highlights the need for a comprehensive and integrated approach to address the challenges faced by Banana republics. It is not enough to address the symptoms of the problem; instead, policies must be designed to address the root causes and create a more stable, equitable, and sustainable future.

8. What We Know and What We Suggest for the Future

Banana republics remain a significant challenge in the 21st century, and Pakistan's economy represents the dire circumstances many countries face due to historical and current systemic issues. The IMF's policies, while intended to promote economic stability, can often exacerbate the challenges developing countries like Pakistan face. Access to foreign currency and loans in dollars can lead to significant currency devaluation and inflation, making it difficult for the country to attract foreign investment and stabilize its economy. Pakistan's political instability and corruption have also contributed to its economic and social challenges. The inability of political parties to work together and address the needs of the country's citizens has resulted in poverty and increased violence. The judiciary's

role has been limited, and the establishment has become politicized, making it challenging to comprehensively address the country's issues. The environmental risks in Pakistan are significant, with food and earthquake risks further compounding the country's challenges. The potential for conflict with neighbouring countries further destabilizes the region, leading to economic and social turmoil. The lessons learned from Pakistan are critical to understanding the challenges many developing countries face. Policymakers must address systemic issues that contribute to economic instability, including promoting sustainable economic development, addressing corruption, and promoting political stability. Access to foreign currency and loans in dollars must also be addressed, as this can contribute significantly to currency devaluation and inflation. In conclusion, while rooted in history, the concept of a Banana republic remains relevant today. The challenges faced by Pakistan illustrate the need for policymakers to work together to promote sustainable economic development and address the systemic issues that contribute to poverty, instability, and conflict. We can only address the challenges developing countries face and build a better future for all through coordinated efforts.

Short-term policy implications for Pakistan's economy include measures to stabilize the currency, such as increasing interest rates and reducing imports to control the trade deficit. The government could also implement policies to increase revenue through taxation, reduce the budget deficit, and provide subsidies for essential goods to mitigate the effects of inflation. Additionally, efforts should be made to improve the country's security by strengthening law enforcement and counterterrorism measures.

In the medium term, Pakistan's economic policies should prioritize diversification and promote the growth of non-traditional sectors such as technology, manufacturing, and services. This can be achieved through investments in education and training programs, encouraging private sector investment, and developing infrastructure to support the growth of these sectors. The government could also work to increase exports and develop trade relations with neighbouring and other countries.

Long-term policy implications for Pakistan's economy involve structural reforms that address the root causes of the country's challenges. This includes improving governance, promoting political stability and transparency, reducing corruption, and strengthening institutions such as the judiciary and the establishment. Additionally, measures should be taken to address environmental concerns such as deforestation, soil erosion, and pollution and promote sustainable development. The government should also work towards resolving geopolitical issues and building stronger diplomatic relationships with neighbouring countries to avoid conflicts over resources and territory.

A comprehensive approach addressing economic, political, social, judicial and establishment, environmental, and geopolitical challenges are necessary for Pakistan's long-term sustainable development. This would require collaboration and coordination between the government, private sector, civil society, and international organizations to implement the necessary policies and reforms.

Ethical approval

All international standards have been adopted and compliance.

Informed consent

The study was conducted with equal participation by all authors.

Conflicts of interests

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Cafe Politics: How Food Service Operators Influence University Students' Satisfaction and Dining Frequency

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ABSTRACT

The study delves into the intricate relationship between cafe operations and politics and how it influences the overall dining experience of university students. This research aims to explore the influence of cafe operations on the satisfaction and behaviour of university students and its effect on their dining frequency. The data were gathered through a survey of 201 students, employing a convenient sampling technique. The results suggest that the quality of food, ambience, value for money, food and beverage options, and service quality significantly impact students' overall satisfaction with the campus meal service operation and their dining frequency. These findings emphasize the importance of food service operators focusing on food quality, ambience, value for money, food and beverage options, and service quality to attain student satisfaction. These factors could positively impact the university's reputation, student retention, and marketability to potential students. This study is significant for university food service operators as it provides valuable insights into the various elements of the food service experience that influence student satisfaction and dining frequency. This research contributes to the existing literature by filling the gap in knowledge regarding the impact of cafe operations on student behaviour and satisfaction. Moreover, this study provides a robust framework for future research. Ultimately, this research aims to enhance university students' dining experience, thereby improving their overall academic performance and well-being.

Keywords: Cafe politics; Student satisfaction; Dining frequency; Food quality; Service quality; University reputation.

1. INTRODUCTION

"Cafe politics" is a term that refers to the political influence on campus cafe operations and its effect on student satisfaction and behaviour (Jeaheng et al., 2023; Pal et al., 2022). This study aims to provide valuable insights into this complex phenomenon. University food service plays a crucial role in catering production globally due to the increasing number of food outlets university students utilize during their academic tenure (Kennedy et al., 2022). However, providing satisfactory food service has been challenging, given the growing enrollment, substandard conditions of student food service, and economic constraints. Despite these obstacles, there is an opportunity for cafe management to enhance student satisfaction by improving employee performance (Raihen et al., 2023).

It has become increasingly problematic for food service providers to cater to the heterogenous dining habits of Millennials (generation Y), which make their needs complex (Barska et al., 2023). The university trend report indicates that only 28% of students were satisfied with the healthy menu provided on campus. At the same time, 34% expressed satisfaction with the food service, significantly impacting their dining frequency (Smith et al., 2020). Therefore, food service providers must understand consumer needs and behaviour to attract and retain their customers (Xin et al., 2023).

Based on the given discussion, the following are the key research questions of the study, i.e.,

I.   What are the key factors that influence university students' satisfaction with campus cafe operations?
II.   How do these factors impact the dining frequency of university students?
III. What is the relationship between student satisfaction with cafe operations and their overall academic performance and well-being?

The stated research questions connected with the study's objectives, i.e.,

1.   To identify the key factors that significantly impact student satisfaction with campus cafe operations.
2.   To explore the relationship between these factors and student dining frequency.
3.   To investigate the potential impact of student satisfaction with cafe operations on their overall academic performance and well-being.

Extensive research has examined and evaluated various food parameters, including service quality, value for money, food quality, and ambience in campus food service (Burkov et al .2023; Liu et al., 2023; Jeaheng et al., 2023). Limited research has been conducted to explore university students' perceptions of on-campus dining services. This knowledge gap is significant as campus food service is a primary component of the catering industry worldwide, given the increasing number of food outlets university students use during their studies. Both residential and non-residential students rely on on-campus dining services, and their level of satisfaction can significantly impact their overall dining frequency. Thus, it is essential to understand students' behaviour and viewpoints regarding campus food service. Previous research has emphasized the importance of meal and beverage quality attributes such as climate, appearance, optics, gloss, cleanness, flavour, scent, appearance, and stability, which significantly influence student satisfaction (Nussinovitch & Hirashima, 2023; Mathew & Radhakrishnan, 2022). However, there is also a need for more research on the relationship between residential students' food plans and non-residential students' food plans. Customer satisfaction is crucial for any business, and the lack of it can lead to frustration and social discomfort. This study aims to investigate students' level of satisfaction with on-campus meal service and dining constancy related to different factors such as meal quality, quantity, value, and ambience. The research employs various measurement tools to enhance the quality of service in food performance, including consumers' perceptions of price and quality, which are primary factors governing customer level and satisfaction and influencing consumers' end-good behavioural intentions. Furthermore, the ambience is crucial in driving restaurant success, making it an essential factor to consider when examining campus dining services.

2. LITERATURE REVIEW

Globally, numerous studies have been conducted to investigate the level of satisfaction with on-campus food services, including services provided by contracted companies, limited food services, and multi-site restaurants and services (Tennant, 2018; Joung et al., 2014; El-Said & Fathy, 2015; Klassen et al., 2005). These studies have examined various attributes such as beverage options, location, meal quality, service quality, and cleanliness and have assessed price to determine satisfaction levels. The perception of quality, as embedded in service and food, reflects individuals' overall satisfaction with the service and food provided and the discrepancies between their expectations and actual experiences (Zhong & Moon, 2020). While quality perception is subjective and depends on individual experiences, it is not analyzed quantitatively due to its complex and intangible nature, which requires a comprehensive understanding of the concept. Hence, it is crucial to evaluate and analyze previous research that addresses these essential characteristics that affect customer perception and, ultimately, their satisfaction levels with food services in highly developed educational institutions.

2.1. Customer Satisfaction

Customer satisfaction plays a vital role in the success of any business, and the lack thereof can lead to frustration, social discomfort, and a loss of business. In the food industry, contentment and discontentment can significantly influence customer behaviour and work ethic, ultimately impacting culinary success (Singh et al., 2023). Customers' perceptions of food service, including their preparedness to spend and frequency of eating out, are critical indicators of the quality of service and its outcomes (Maschio et al., 2023). Previous investigations have highlighted the importance of customer satisfaction in determining the quality and outcome of food service. Earlier studies identified five practices that university food providers should follow to ensure customer satisfaction (Alnaim et al., 2023; Hsu & Lin, 2023)). These include providing high-quality food courts with comfortable seating, actively seeking and acting on feedback from students, extending opening hours to accommodate student schedules, using data to make informed decisions, and offering a diverse mix of food options that cater to the unique design and culture of each campus (Rayuwati et al., 2022; Khanafer et al., 2022; Kubik et al., 2003; Davison et al., 2022). By implementing these practices, university food providers can ensure that their cafeteria services cater to the needs and preferences of their customers, ultimately enhancing overall customer satisfaction and success. The study's first research hypothesis is as follows:

H1: The greater the satisfaction of university students with campus food service operations, the more likely they are to spend more money and dine out more frequently, leading to increased culinary success for the food service provider.

2.2. Food & Beverage Quality and Customer Satisfaction

Previous research has indicated that the quality of food and beverages is a critical factor in determining student satisfaction with campus dining services. The study identified various food and beverage quality attributes that impact customer satisfaction, such as colour, freshness, smell, texture, aroma, appearance, flavour, shape, consistency, gloss, and temperature (Bowen & Grygorczyk, 2022). Kim et al. (2006), involving 276 customers at Oklahoma State University's food court, found that food quality was the most crucial factor in customer satisfaction. Customers gave positive feedback and referrals to food service providers who provided high-quality food. Further, food quality attributes such as appearance, taste, and freshness significantly impacted customer satisfaction and returned more than factors such as cleanliness, convenience, value, and price (Kin et al., 2009). Based on these findings, the study has the second research hypothesis, i.e.,

H2: The quality of food and beverages significantly and positively impacts students' satisfaction levels.

It is crucial for campus dining services to prioritize food quality and ensure that it meets or exceeds student expectations. By doing so, they can enhance student satisfaction levels, leading to increased business success and positive word-of-mouth referrals.

2.3. Service Quality and Customer Satisfaction

Numerous studies have suggested various tools for measuring, evaluating, and improving food service quality (Qayyum et al., 2022; Jain & Gupta, 2004)). For example, SERVQUAL has been developed to bridge the gap between customers' expectations and the service provided by the company. This tool identifies five aspects, assurance, empathy, reliability, tangibles, and responsiveness, to help improve service quality (Ammar & Saleh, 2023). Similarly, Stevens et al. (1995) developed DINESERUE, which uses the five aspects of the SERVQUAL model to measure customer perceptions of service quality in the food industry. Although these service rating scales are commonly used, they still need to fully capture the concept of service quality in the restaurant industry. Previous research has found that service quality is essential in determining customer satisfaction and loyalty in food establishments (Song et al., 2022; Nizam et al., 2022). For instance, it was found that service quality factors rank second after food quality, which affects students' satisfaction with a food institution. Furthermore, this research indicates that students' perception of the cleanliness of service features in the cafeteria is more significant than other service features, particularly the atmosphere and service. Results have shown a strong correlation between service quality and student satisfaction. Therefore, students' perception of service quality is crucial in the food service industry and a necessary predictor of students' behaviour and perception (Kwun, 2011). Based on the discussion, the study's third hypothesis is as follows:

H3. The quality of service has a significant and positive impact on the student's level of satisfaction.

Food and beverage and service quality are critical factors in determining customer satisfaction and loyalty in the food service industry. Various tools have been developed to measure and improve these factors, but they need to capture the concept of service quality fully. As such, it is essential to consider service and food and beverage quality to enhance customer satisfaction in food establishments.

2.4. Value for Money and Customer Satisfaction

Customers' satisfaction is significantly influenced by their perception of the price and quality of products or services. These two elements also impact the intention of consumers to engage in good practices (Ahmed et al., 2023). Price is a crucial customer service concept that must be justifiable and fair compared to competitors (Kalyanaram et al., 2022). Customers are likely to return if prices are moderate; otherwise, if prices are too high or unfair, they may be displeased and not return to avail of the service. This is especially relevant for students with limited budgets and always looking for a balanced and inexpensive meal. The price of university meal services is the primary concern of every student since students have limited funds. Students prefer cheaper food options when university resources are inaccessible (Moya et al., 2023). The amount of food served should be commensurate with the price paid, allowing students to trust the worth or value obtained and providing them with contentment and nutrition (Fernando et al., 2022). The fourth hypothesis of this study is as follows:

H4. The amount of money spent has a significant and positive impact on the student's level of satisfaction.

2.5. Quality of Food and Customer Satisfaction

Based on the survey results, a large proportion of students at the university campus are dissatisfied with the meal plans offered by the cafeteria. This dissatisfaction stems from the fact that a significant portion of the student body is content with the cafeteria's meals, leading to a divide in opinions (Hayes et al., 2003; Andaleeb & Caskey, 2007; El Zein et al., 2019). However, recent statistics indicate that most students are unhappy with the quality of the food and services provided by the cafeteria, even though they are willing to pay for them (Bauer et al., 2004; Ladhari et al., 2008). The lack of fulfilment of their expectations by the food authority has resulted in a negative relationship between students and the institute and the student's behaviour towards the cafeteria's service providers (Smith et al., 2020; Thompson et al., 2022). Numerous studies have been conducted on the impact of food service operations on satisfaction levels and attitudes toward campus dining (Zhang & Kwon, 2022; Van Embden et al., 2022). Despite this, the researcher has yet to find any previous research on the behaviour of Pakistani university students towards campus food operations, leaving a gap in the literature. It is essential to understand why students are dissatisfied with the university campus's meal plans. Poor quality food and inadequate services can negatively impact students' perceptions of the institution, affecting their overall satisfaction levels. Furthermore, students' behaviour towards service providers can impact the campus's culture and reputation. The study will investigate the relationship between food quality and the students' satisfaction levels to validate the fourth hypothesis. The findings will help identify areas of improvement and inform policy decisions to enhance the quality of food services on the university campus. Ultimately, this will contribute to the student's overall satisfaction levels and positively impact their behaviour towards service providers, leading to a better campus culture. The fifth hypothesis of the study is as follows:

H5. Food quality has a significant and positive impact on the student's level of satisfaction.

2.6. The Ambience and Customer Satisfaction

The environment in which food is served, known as ambience, plays a vital role in the success of a restaurant. External factors, such as the social and physical environment, temperature, aroma, time, sound, and distractions, influence food and meal choices (Kim et al., 2022). Additionally, dietary variables affect food choices and preferences, including temperature, aroma, and meal colour. However, the impact of the brightness of the health system on meal choices has yet to be entirely understood (An et al., 2022; Chow et al., 2022). The surroundings in which people eat are the primary variable that influences their dining experience. Restaurant creators, architects, and retail professionals know how nature affects human behaviour and eating habits. The environmental literature on human food includes the impact of external stimuli, such as colour, aroma, light, temperature, and others (Navaf et al., 2022; Abedi-Firoozjah et al., 2023). Colour is a powerful stimulant in both indoor and outdoor food settings. In advertising, colours are a robust tool for direct marketing. Colours influence the environment and biotic processes, such as hunger, thirst, and heat production. They can create specific emotional responses and direct attention (Kim & Lee, 2020). Traders use colours to add an image or create a particular atmosphere. Warm colours stimulate the body, while cool colours make people feel more comfortable (Wan et al., 2020). Many people prefer bright lighting, while others prefer dimmer lighting, which feels more comfortable and slows their movement. For example, changing the amount of light on a table with peanut butter seems to entice people to want more food when the surface is lightened (Brates & Molfenter, 2021). Research shows that the relationship between lighting and meals is limited. However, warm lighting makes people feel more comfortable and relaxed, resulting in more food intake, while dimmer lighting reduces the time people spend at a restaurant (Bschaden et al., 2020; Choi et al., 2022). Bright lighting in fast-food restaurants may encourage faster food intake, while home-based food combined with dimmer lamps will likely encourage more and less energy consumption (Cummings et al., 2021; Folkyord, 2020).

The temperature of the food or the temperature of the surrounding environment can evaluate the effects of temperature. The stomach responds differently to hot and cold food. For example, hot milk should reduce human food intake compared to cold milk (Vallath et al., 2022; Harrison, 2021). Warm meals taste pleasant, while hot foods increase metabolism and body temperature. The ambient temperature influences food intake and food choices. Warmer temperatures reduce food intake, and cooler temperatures increase it. Many studies are experimental and quantitative in animal models. Consumer comparison data have shown a significant tendency for variations in food purchases (Kitz et al., 2022). Therefore, a cool air-conditioned area can soften where needed, while a warm area can compress it (Suen et al., 2021). To validate the fifth hypothesis of the study, the impact of ambience on students' level of satisfaction will be investigated. The findings will help identify areas of improvement and inform policy decisions to enhance the quality of the dining experience on the university campus. Ultimately, this will contribute to the student's overall satisfaction levels and positively impact their behaviour towards dining environments, leading to a better campus culture. The sixth hypothesis of the study is as follows:

H6. Ambience has a significant and positive impact on the student's level of satisfaction.

2.7. Customer Satisfaction and Dining Frequency

Numerous factors influence food and meal choices, including time of day, day of the week, season, and previous meals consumed (Paoli et al., 2019). Researchers suggest that even the sleep cycle can impact dietary patterns (Manoogian et al., 2019; Zhao et al., 2020). In the real world, individuals tend to regulate their food intake based on the previous meal, which differs from laboratory tests that predict consumption based on predetermined amounts. Disruptions in standard dietary patterns can adversely affect operational and health functions, and the time of day can influence specific food choices and amounts consumed. The amount and type of food consumed result from the impact of time of use. For example, consuming a more significant portion in the morning can reduce daily ingestion, and reducing the allotted time for meals on free days can be an alternate way to cut down on food (Queiroz et al., 2021). The seventh hypothesis of the study is as follows:

H7: The students' overall satisfaction significantly and positively impacts their dining experience.

3. CONCEPTUAL FRAMEWORK

The conceptual framework proposes six hypotheses that examine the factors that impact students' dining experience, particularly their satisfaction level. The proposed model includes five independent variables (food quality, service quality, variety, ambience, and cost) and two dependent variables (students' satisfaction level and dining experience). The model aims to illustrate the relationship between these variables and how they affect the students' overall dining experience. The study aims to explore the impact of various independent variables on the dependent variables. Specifically, it examines the relationship between food quality, service quality, variety, ambience, and cost, and the student's overall satisfaction level and dining experience. The proposed model will help to understand how each independent variable influences the dependent variables, leading to a comprehensive understanding of the factors that impact students' dining experiences. In conclusion, the proposed study examines the factors that impact students' dining experience in a university campus setting. By understanding the impact of independent variables, such as food quality, service quality, variety, ambience, and cost, on the dependent variables, students' satisfaction level, and dining experience, the study will contribute to developing effective strategies for improving campus food operations. The conceptual framework is proposed to check these hypotheses (see, Figure 1). This model includes independent and dependent variables and shows the link between these variables. Here are five independent variables and two dependent variables.
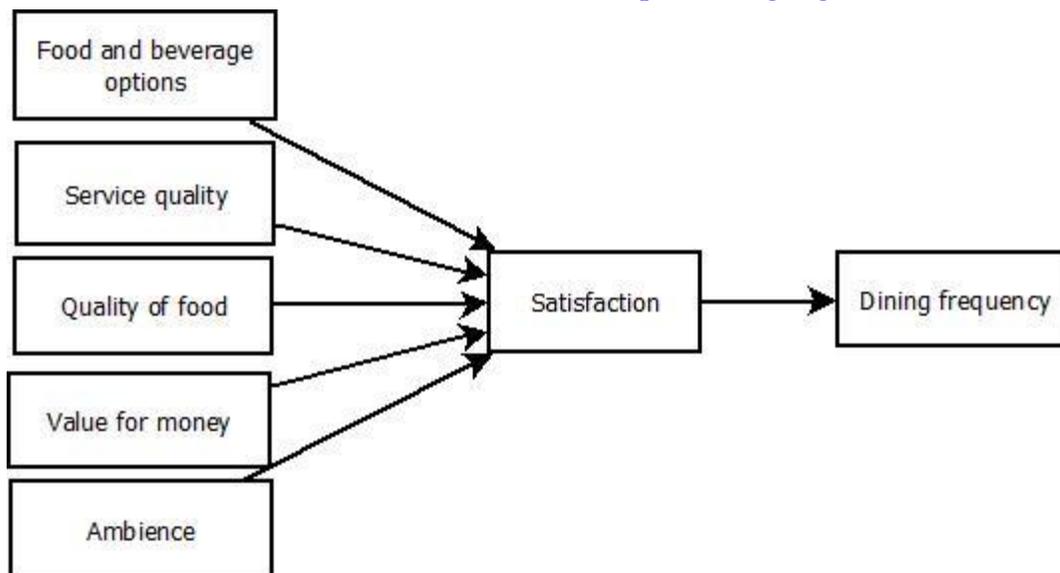
Figure 1: Conceptual framework
Source: Self extract from different earlier literatures.

4.   METHODOLOGY

4.1.   Population of the Study

To gather data for the study, the study selected Pakistan, one of the famous public sector universities, as the target population and drew a sample from various departments within the university. The study utilized a convenient sampling technique to collect data, distributing 350 questionnaires among the student population. At the time of data collection, the university's total population was 3500. After collecting the responses, 201 usable responses were obtained and used for analysis. This method of sampling allowed for a relatively easy and efficient way of gathering data from a diverse range of students at the university. However, it is essential to note that the results obtained from this sample may not necessarily represent the entire student population at the university, as the sample was not selected through a more rigorous or random sampling method.

4.2. Items Measures

To measure the various constructs under investigation, a five-point Likert scale was utilized. The study sourced all the items from the work of Smith et al. (2020). Five items were used to measure food quality, while ambience and value for money were assessed using four and two items, respectively. Furthermore, food and beverage options were gauged using three items, whereas service quality was measured using nine items. Lastly, customer satisfaction was evaluated using four items. By employing these items, the study aimed to comprehensively understand the various factors that impact students' satisfaction levels regarding the university's food and dining services.

4.3. Statistical Framework

The study used a multiple regression model to estimate the impact of five independent variables, i.e., food quality, service quality, the value of money, ambience, and cost, on two dependent variables, i.e., students' satisfaction level and dining experience. The model illustrates the relationship between these variables and their influence on the student's dining experience.

Model -1

The regression equation for satisfaction level (SL) is as follows:

$$SL = \beta_0 + \beta_1 FQ + \beta_2 SQ + \beta_3 VM + \beta_4 AMB + \beta_5 COST + \varepsilon_1 \tag{1}$$

Where SL is the satisfaction level, FQ is the food quality, SQ is the service quality, VM is the value of money, AMB is the ambience, COST is the cost, β_0 is the intercept, β_1 to β_5 are the coefficients for the independent variables, and ε_1 is the error term.

Model 2

Similarly, the regression equation for the dining experience is:

$$DE = \beta_0' + \beta_1' FQ + \beta_2' SQ + \beta_3' VM + \beta_4' AMB + \beta_5' COST + \varepsilon_2 \tag{2}$$

Where DE is the dining experience, β_0' is the intercept, β_1' to β_5' are the coefficients for the independent variables, and ε_2 is the error term.

The coefficients in the model represent the change in the dependent variable associated with a one-unit increase in the corresponding independent variable, holding all other variables constant. The error terms ε_1 and ε_2 capture the unobserved factors affecting satisfaction and dining experience. The study used multiple regression analysis to estimate the coefficients, which involves minimizing the sum of squared errors between the observed and predicted values. The study uses statistical tests, such as the t-test and F-test, to determine the significance of the coefficients. Zaman (2023) introduced cross-panel techniques in his influential work to address the issue of cross-panel biases in regression estimates. In summary, the econometric framework for this study employs

multiple regression analysis to estimate the impact of food quality, service quality, variety, ambience, and cost on students' satisfaction level and dining experience. The regression equations provide a quantitative estimation of the relationships between the variables, and the coefficients and statistical tests provide insight into the relative importance of each variable in shaping the students' dining experience.

5. RESULTS

The present study includes a descriptive analysis, which provides information on the respondents' demographic characteristics, such as age, gender, and education level. Table 1 has been included to present the relevant data.

Table 1: Demographic Survey

Demographics		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Female	61	30.3	30.3	30.3
	Male	140	69.7	69.7	100
	Total	201	100	100	
Education	Graduate	20	10	10	10
	Postgraduate	11	5.5	5.5	15.4
	undergraduate	170	84.6	84.6	100
	Total	201	100	100	
Age	21 to 30	180	89.6	89.6	89.6
	above 30	9	4.5	4.5	94
	18 to 20	12	6.6	6	100
	Total	201	100	100	

Note: Survey Results.

Table 1 presents the results of a demographic survey conducted on the study participants. The table shows the frequencies and percentages of respondents for each category in the three demographic variables: gender, education, and age. In terms of gender, the table indicates that out of the 201 respondents, 61 (30.3%) were female, and 140 (69.7%) were male. The cumulative percent shows that 30.3% of the respondents were female, and 69.7% were male. Regarding education, the majority of respondents (170, 84.6%) were undergraduate students, while 20 (10%) were graduate students, and 11 (5.5%) were postgraduate students. The cumulative percent shows that 15.4% of respondents had either graduate or postgraduate education, while the rest (84.6%) were undergraduate students. In terms of age, the majority of respondents (180, 89.6%) were aged between 21 and 30, while 12 (6%) were under 18 to 20 years old, and 9 (4.5%) were above 30 years old. The cumulative percent shows that 89.6% of respondents were aged between 21 and 30, while 4.5% were above 30. Overall, the table provides a summary of the demographic characteristics of the study sample. This information can help in understanding the characteristics of the population under study and in interpreting the study results.

The present study utilized Pearson's Correlation as a statistical analysis technique. This method assesses the strength and direction of the relationship between the dependent and independent variables measured. Specifically, the Pearson product-moment correlation coefficient was utilized. Correlation analysis was conducted to examine the collected data, and the results are presented in Table 2.

Table 2: Correlation Estimates

Variables	DF	SL	AMB	VM	FQ	SQ	COST
DF	1						
SL	.509**	1					
AMB	.314**	.733**	1				
VM	.456**	.641**	.503**	1			
FQ	.520**	.578**	.339**	.567**	1		
SQ	.560**	.782**	.729**	.678**	.636**	1	
COST	.511**	.799**	.836**	.649**	.468**	.830**	1
**. Correlation is significant at the 0.01 level (2-tailed).							

Source: Author's estimate.

Table 2 presents a correlation matrix that shows significant positive correlations between dining frequency, satisfaction level, ambience, variety, food quality, service quality, and cost. Specifically, the correlation coefficients between satisfaction level and the other variables range from 0.5 to 0.8, indicating strong positive correlations. The strongest correlation is between satisfaction level and service quality (r=0.782), followed by cost (r=0.799) and ambience (r=0.733). There are also significant positive correlations among the independent variables (food quality, service quality, variety, ambience, and cost), with the strongest correlation being between service quality and ambience (r=0.729), followed by service quality and cost (r=0.830). These findings suggest that the different aspects of the dining experience are interrelated and contribute to overall satisfaction. In conclusion, the correlation matrix provides evidence that the variables in the study are positively correlated and may have a significant impact on the students' overall dining experience and satisfaction level.

This study, Model-1, was used to predict customer satisfaction based on food quality, ambience, value for money, service quality, and cost. The model summary is presented in Table 3, which provides information on the regression analysis. 'R' represents the multiple correlations, the combined correlation of all independent variables on the dependent variable. The value of R achieved, which is 0.909, indicates a strong positive correlation. Additionally, the R-square is an important indicator as it shows the combined impact of all independent variables on the dependent variable. The value of R square, which is 0.827, indicates that all the independent variables contribute towards 82.7% of the change predicted in the dependent variable.

Table 3: Model-1 Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.909[a]	0.827	0.823	0.475
a. Predictors: (Constant), SQ, FQ, VM, AMB, COST				

Source: Author's estimate.

Table 4, presenting the results of hypothesis testing, indicates that the variables under consideration have significant relationships with customer satisfaction. The first hypothesis (H1) postulated a positive relationship between food quality (FQ) and customer satisfaction. The results reveal a significant positive relationship between FQ and customer satisfaction, as indicated by a p-value of 0.000 and a positive beta coefficient of 0.286. Therefore, H1 is supported. The second hypothesis (H2) posited a positive relationship between ambience (AMB) and customer satisfaction. The analysis indicates a significant positive relationship between AMB and customer satisfaction, as evidenced by a p-value of 0.000 and a positive beta coefficient of 0.411. Therefore, H2 is supported. The third hypothesis (H3) proposed a positive relationship between value for money (VM) and customer satisfaction. The findings indicate a significant positive relationship between value for money and customer satisfaction, as indicated by a p-value of 0.002 and a positive beta coefficient of 0.176. Therefore, H3 is supported. The fourth hypothesis (H4) suggested a positive relationship between food and beverages cost and customer satisfaction. The analysis reveals a significant negative relationship between COST and customer satisfaction, as evidenced by a p-value of 0.081 and a negative beta coefficient of -0.126. Therefore, H4 is not supported. Finally, the fifth hypothesis (H5) posited a positive relationship between service quality (SQ) and customer satisfaction. The results reveal a significant positive relationship between SQ and customer satisfaction, as indicated by a p-value of 0.000 and a positive beta coefficient of 0.541. Therefore, H5 is supported.

Table 4: OLS Estimates for Model 1

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-1.152	0.193		-5.983	.000
	FQ	0.286	0.080	0.197	3.575	.000
	AMB	0.411	0.051	0.402	8.063	.000
	VM	0.176	0.057	0.133	3.107	.002
	COST	-.0126	0.072	-0.074	-1.755	.081
	SQ	0.541	0.095	0.341	5.694	.000
a. Dependent Variable: SL						

Source: Author's estimate.

Table 5 shows that this model's multiple correlation coefficient (R) is 0.872, indicating a strong positive relationship between the independent variables and the dependent variable. The coefficient of determination (R Square) is 0.760, meaning that the independent variables can explain approximately 76% of the variance in the dependent variable in the model. The adjusted R Square, which considers the number of predictors in the model, is 0.753. This indicates that the independent variables in the model explain a substantial portion of the variance in the dependent variable, even when adjusting for the number of predictors. Finally, the standard error of the estimate for the model is 0.737, indicating the average distance between the actual and predicted values of the dependent variable. Overall, this suggests that the model fits well and reasonably estimates the relationship between the independent and dependent variables.

Table 5: Model-2 Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.872[b]	0.760	0.753	0.737
b. Predictors: (Constant), SQ, FQ, VM, AMB, COST				

Source: Author's estimate.

Table 6 shows that the food quality coefficient (FQ) is not statistically significant (p=0.392), meaning there is no evidence that food quality significantly impacts dining frequency. The ambience (AMB), value for money (VM), and service quality (SQ) coefficients are all statistically significant with p-values < 0.001, indicating that they have a significant positive effect on dining frequency. The coefficient for food and beverages cost (COST) is negative, indicating that a higher cost is associated with a lower dining frequency, but this coefficient is not statistically significant (p=0.094). The constant (3.216) represents the expected value of dining frequency when all independent variables are set to zero. This model suggests that ambience, value for money, and service quality are critical factors in predicting dining frequency. In contrast, food quality and cost are not significant predictors.

Table 6: OLS Estimates for Model 2

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.216	0.315		10.206	0.000
	FQ	0.076	0.088	0.052	0.859	0.392
	AMB	0.270	0.068	0.236	3.955	0.000
	VM	0.385	0.080	0.293	4.788	0.000
	COST	-0.162	0.096	-0.098	1.684	0.094
	SQ	0.437	0.121	0.257	3.609	0.000
a. Dependent Variable: DF						

Source: Author's estimate.

Table 7 results provide credence to hypothesis H7, which states that patrons' satisfaction levels correlate with their frequency of eating out. One key finding from the data was that patrons more satisfied with their meals were likelier to return to the restaurant. As a result, it is safe to assume that the degree to which customers are satisfied significantly impacts how likely they are to return to a particular restaurant or chain.

Table 7: Regression Estimates between Student's Satisfaction and Dining Frequency

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
2a	(Constant)	2.195	0.163		13.502	0.000
	SL	0.443	0.053	0.511	8.376	0.000
a. Dependent Variable: DF						
Goodness-of-Fit Estimates						
Model	R	R Square	Adjusted R Square		Std. Error of the Estimate	
2a	0.511[a]	0.261	0.257		0.844	
a. Predictors: (Constant), SL						

Source: Author's estimate.

The result also implies that the hypotheses based on the variables were accepted, meaning that the research's assumptions and correlations were checked out as predicted. This gives credence to the study's results and supports the idea that customer happiness is a critical factor in influencing patronage in the restaurant industry. These results suggest that the study might have real-world relevance for restaurant and food service businesses. In order to enhance client loyalty and repeat business, companies should priorities customer happiness. Thus, these findings can guide the creation of focused initiatives to boost customer satisfaction and loyalty, which can boost operational efficiency.

6. CONCLUSIONS

The main objective of this study is to investigate the satisfaction of university students who dine at the on-campus nutrition centre, specifically about the quality indicators of the services provided. The study examines how food quality, quantity, variety, meal and

beverage categories, and services influence the frequency of students' dining at the cafeteria. All seven hypotheses tested in the study were supported, indicating that all attributes and services of the nutrition centre significantly impact the satisfaction of students who use the facility. The study's findings suggest that the food quality, ambience, value for money, meal and beverage categories, and service quality significantly influence students' satisfaction with the nutrition centre and hence, their regularity of dining at the cafeteria. Therefore, food service providers should utilize these five criteria to express customer satisfaction and differentiate themselves from their competitors on campus. The study highlights the importance of university management assessing the opening hours of the nutrition centre, the meal and beverage categories offered, the facility's ambience, institutional culture, and community development to ensure customer satisfaction and increase the frequency of students' regularity. Additionally, ethical practices by the sellers can increase customer confidence and reduce scepticism towards the services provided, thereby enhancing customer satisfaction. In conclusion, the results of this study demonstrate the crucial relationship between absolute satisfaction and the quality of the food, ambience, value for money, meal and beverage categories, and service quality in the context of the on-campus nutrition centre. The findings provide valuable insights for food service providers and university management to improve student services and increase their satisfaction and regularity of dining at the nutrition centre.

6.1. Policy Implications

The research paper highlights the overall dissatisfaction of university students with cafeteria management, which requires specific steps to be taken to address the problem (Jamil & Qayyum, 2022). The study opines that the main problem with the cafeteria's performance is the need for a healthy environment, negatively impacting the students' satisfaction. The management's behaviour and standards could also be better, leading to further dissatisfaction. Furthermore, the limited variety of food and beverage options, the pricing of meals, and inadequate seating capacity are contributing factors that must be addressed to improve the cafeteria's performance and increase student satisfaction. Solutions to these issues are crucial to increase student satisfaction and improving the cafeteria's overall performance. By improving the environment and management behaviour, offering a wider variety of food and beverage options, and adjusting the pricing and seating capacity, cafeteria management can significantly enhance the student's experience. This will increase student satisfaction levels and, ultimately, attract more end-users to the cafeteria. It is essential to recognize that implementing ethical practices can also increase customer confidence (Jamil et al., 2022) and reduce scepticism towards the services (Jamil & Qayyum, 2021). In conclusion, addressing the identified issues and implementing specific solutions will enhance the cafeteria's performance and increase student satisfaction. It is necessary to consider the importance of ethical practices in gaining the trust and confidence of the end users. This will lead to a more prosperous and sustainable cafeteria management system, benefitting the university and its students.

6.2. Challenges Faced by University Cafeteria Management and Potential Solutions

The university cafeteria faces certain limitations that its management must consider. First and foremost, the quality of the meal served must be appropriate and meet hygiene standards. Secondly, students typically demand healthy food options that are easy to consume, given their limited schedules and on-the-go lifestyles. It is essential for the cafeteria management to bear in mind that their clientele is comprised of students who expect healthy and affordable meals that meet their standards. Despite having limited budgets, students demand high-quality food, which challenges the cafeteria's management to meet these demands. In order to meet these requirements, the management must employ a smart strategy to ensure the sustainability of their business.

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