

# Innovation, Human Development, and Livelihood: A Comparative Analysis of the Republic of Cameroon and the Republic of Korea in the Context of the Russia-Ukraine Conflict

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**Abstract:** The study explores the situation of the global livelihood crisis due to the impact of COVID-19 and the Russia–Ukraine conflict that has caused stagflation. The study is comparative and examines the experience of Cameroon and the Republic of Korea (ROK) with a focus on innovative technology and the development of human resources to tackle unemployment, inflation, and falling living standards. The study is set to look into the technological innovation and livelihood differences between the two countries, analyze the relationship between human development and livelihoods, assess the impact of the Russia–Ukraine war on the two countries, and draw development lessons for Cameroon to learn from the ROK. The study adopted a comparative quantitative research design, and secondary data from the World Bank were used for the years 2010 to 2022. The methods used in the analyses were descriptive statistics, paired-sample t-tests, correlation analysis, Ordinary Least Squares regression (OLS), conceptual modeling of the study, and critical path analysis. The results highlight that there are significant disparities between Cameroon and the ROK in terms of innovation, human development, and GDP per capita PPP. It was, however, discovered that the impact of the stagflation phenomenon, especially the unemployment and inflation, had similar impacts in both countries, irrespective of technological development. The findings also reveal that innovative technology is a significant factor in lowering unemployment and that unemployment, in turn, has a negative impact on livelihood. The study ends with the conclusion that innovation and technological development can help in long-term recovery by minimizing unemployment and enhancing the living standard. It suggests that Cameroon should focus on innovative policy, human capital development, peace-building, and income redistribution policies to improve economic resilience and sustainable livelihood recovery.

**Keywords:** *Livelihood Outcomes, Innovation Technology, Human Development, Stagflation.*

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## I. INTRODUCTION

The global livelihood crisis driven by the combined impact of COVID-19 and the Russia–Ukraine conflict has created stagflationary and inflationary effects. The state of stagflation, causing global livelihood questions, is on one axis the outcome of the one-year-old Russia - Ukraine war that led to inflation and on another the result of the global pandemic created unemployment. Su and Dai and Ullah and Andlib,

(2022) acknowledged that one of the core 21st century dilemmas of unemployment within Europe came with global pandemic crash. This background knowledge focuses to reveal the two mentioned global events that slow employability at the same time increase cost of living. A review of Eser and Karadi and Lane (2020) on the European Central Bank's Philip curve supports the investigation of the livelihood question in the midst of Inflation. The concepts of innovative technology and human capital development are

designed at the base of the step towards recovery. The Russo – Ukraine war sparked a hike in commodity prices across the world. Consumer Retail Price Index is a generally accepted technique used when studying inflation statistics. It is the average price of a basket of basic survival commodities. Energy, water, food, shelter and some mineral and metallic prices are usually included in the basket of consumer price index computation. A rapid and skyrocketing price of one of the items in the basket will definitely cause a shift in the inflation figures of a nation.

Russo – Ukraine war affected petroleum (petrol, gas, gasoline) and all other products associated with this world wide used product. Russia is a strong member and player of OPEC due to its role in global supply of petrol (Jareer & Myers 2009). Jareer and Myers (2009) noted that Russia seems the number one supplier of gas and petrol to Europe and certainly the second global supply of petroleum products. The war created tension between Russia and Europe since the EU strongly denounced the invasion of Ukraine. Ukrainian global allies do not want to remain indifferent knowing Russia took a similar step in 2014 when Crimea was seized by the Kremlin. This tension and the constant support of Ukraine against Russia cause retaliation in the form of limited supply of gasoline into Europe. As the war intensified following sanctions, the Nord stream pipeline linking Europe was blown off which further hindered suppliers. Low production and the supply of petroleum products from a distant USA into the European market skyrocket global oil prices. The ties between USA and Europe got a little soar when the European economy suspected and accused the USA of exploiting the union through exorbitant oil prices. They claimed the USA had sidelined their ties and friendship in oil price deals.

Oil price cap intervention strategies have been used by nations across the world in order to narrow the persistence run away characteristics. Though with some critics based on the dark side of price cap (Engel & Heine, 2017), the importance of petroleum products in the air transport industry, the maritime transport system, the rail and land transport necessitated government regulation and intervention. The functioning of the transport system of every nation is dependent upon petroleum products. The electric car industry designed to limit the dependence on carbonated products is at an infant stage and gradually accepted across the world. Until fully embraced, petroleum products hold a strong position within the basket of retail price index computation.

Santacreu and LaBelle (2022) confirmed a global supply chain bottleneck created during the health sector tragedy which intensified following the February, 2022, invasion of Ukraine. Transportation of food items and fertilizers from Ukraine and Russia Ports are constantly disrupted. Ukraine is known for its supply of wheat flour and other agricultural products into the international market especially Africa and other developing nations. Experience shows that the shortages in the supply of wheat flour in addition to global supply problems had led to global price hikes of bread. Bread is one of the food items that cannot be left out of retail price index calculations. The ongoing run-away inflation also falls within cost push categorization. It is indeed run – away, as the alarming rate of egg price increase in the USA market had

called the attention of senators. Cost pushes inflation since the major cause of the ongoing inflation source from the raw material shortages. Inflation affects livelihood through the cost of living. According to Wolla (2013) research, run- away or hyperinflation quickly eradicate the value of national currency. Too much money is used to buy too few goods creating hardship even when there may be high employment figures. Creeping inflation is permitted since it is an indicator of progress, but high inflation values affect living and should be addressed by policymakers.

The earlier paragraphs justify the source of unprecedented high commodity prices. This next puzzle is to envisage the same pattern in line with the hollow associated with global unemployment. By the mid towards the end of 2022, the global economy began noticing characteristics of Stagflation. COVID era raised a time in human civilization where the classification of nations (high and low income, advanced or developed and developing) and nations into rural and urban areas seems not necessary (Antipova, 2021). Advance nations and urban areas are back home as do the developing nations and rural areas. The pandemic placed many firms and nations irrespective of their infrastructural nor advanced state into frustration. Survival and livelihood related concerns were no longer an issue only to the denizens of the Sub Sahara, Middle East, Latin America, other Eastern nations and migrants. The nature and characteristics of the pandemic makes everyone across the world question survival. This subsistence question is associated with health conditions brought forth by the health sector tragedy and its spillover effects. This research will therefore attempt to answer these questions:

What`s the difference in the level of innovation technology between Cameroon and the Republic of Korea?

What`s the difference in livelihood between Cameroon and the Republic of Korea?

What`s the relationship between human Development and livelihood outcomes in both countries?

What effect has the Russia-Ukraine conflict had on both countries?

What development lessons can Cameroon adopt from the Republic of Korea

Pessimism is the core feature of the 2019 - 2023 global meltdown. This is always the state of the globe during a turmoil of this magnitude. However, the ongoing catastrophe had created fear in addition to pessimism. Pessimism loomed in the sphere of investors, entrepreneurs, firms and business when the globe was struck by the Subprime and other global recession. It is possible that investment reservations noted in previous financial crises could transmit to livelihood or survival questions. The COVID-19 crash is a disease that instantly affects humans. The fear of death is a core factor driving global pessimism. Of course many lost their lives at the early stage of the virus with more records in Italy, United Kingdom and the USA. It speeded so fast and created a more deadly effect in other nations compared to the source nation

China. By March of 2020, the world was in panic due to high death tolls (Cucinotta and Vanelli, 2020). This caused the World Health Organization (WHO) to term it a pandemic, followed by the declaration of a state of emergency. WHO is contemplating on uplifting the state of emergency as the peak seems over while its effects gradually slow down. The sudden rise of death in China within the early days of January of 2023, is the cause of the decision dilemma.

Global appetite (symptom of COVID), an element of healthy living sunk in the midst of massive death and illness. This seemingly is not associated with other catastrophes that source from the financial sector. The pain of infections and illness became another livelihood threat. The lungs or breathing difficulty is the major symptom showing infection. The mentioned sore throat, headache and fever created a poor health condition to sustain work (Alimohamadi and Sepandi and Taghdir and Hosamirudsari, 2020). Global statistics from WHO recorded more infection compared to the number of dead. Infection and serious illness were not features of the earlier 21st century crisis. Early crises indirectly affected livelihood through poor performance of business and entrepreneurial ventures. However the health sector crisis is special as its effects started from humans and transmit its spillover to businesses as shown by the 2022 poor stock, bond and gold market performance.

Guo and Hu and Yuan, D. et al. (2022) called to notice, a significant public confidence in WHO due to its efforts in overcoming the challenges of the disease. A necessary step to take, however, the WHO's measures to limit spread, contributed more to the slump. Quarantine, lockdowns, compulsory face masks and social distance makes it hard to sustain and maintain the same level of work force within companies. Many firms shorted while others reduced workforce rendering many jobless. Unemployment statistics hike, feeding and sustainability becomes a social problem. Many nations took social policies to subside the downs of the global hollow. Dergiades and Milas and Panagiotidis (2022) noted that most social welfare policies like the USA 1000 dollar monthly support allowance to the unemployed was more due to the labor market response than the pandemic. This social emergency allowance is not much a practice of the capitalist economies, however a usual practice for socialist economies around the world. Temporal unemployment benefits are allocated to socialist nationals to support subsistence. COVID crash further activated the social policy not only for socialist nations but equally for capitalist economies due to high layout and joblessness. The review of Cole and Ferrarese (2018) reiterated that capitalism is a form of life and due to sustainability needs, it interwove with other forms of life.

In addition to the mentioned cause structure of the global livelihood question (fig 1), national and regional political crises around the world also aggravated the limited job opportunities and loss of money value conditions. For example, the current tension between Taiwan and China and the old South China Sea conflict add the weights of supply chain bottle necks on the nations around this region. The instability in the Tigris region of Ethiopia and Eretria is able to affect the employability of these nations. Numerous, long

and recurrent Middle East conflicts keep tension high in this part of the world. The Anglophone war is an additional setback affecting prices and employment opportunities within the nation of Cameroon. The twin evil (unemployment and inflation) presently crushing many nations of the world, hardly take place at the same time. Peterson and Portugal (2017) reaffirmed that on many occasions, there is a tradeoff between the features of the slump and boom.

Inflation is a feature of the trough while unemployment is the characteristics of the slump. Losing the value of money at same time attack by unemployment is suicidal to national as survival and subsistence is a night mare. Economists and scholars had acknowledged that the persistence boom supported misallocation of human capital. Chen and Lin (2021) suggested that misallocation of capital (in all forms) negatively drives economic performance. Proponents of this school of thought believe that recession is needed after a boom to engineer creativity and optimization of human capital. Innovative technology is stimulated during economic downturns in order to correct and subside its side effects. The state of darkness caused the early humans to get into innovative thinking which led to the discovery of fire. Innovative ideas surface mostly in the midst of challenges and setbacks. This premise and the research of Dubina and Carayannis and Campbell (2012) supported that effective human capital allocation may be made possible mostly in moments of economic downturn.

This article is not designed to study the ongoing Russia – Ukraine war neither is motivated to study the global pandemic. Its center theme is innovative technology and how it is able to support human capital in seeking solutions to the challenges of the global meltdown. South Korea is technologically more advanced than Cameroon. It is of concern to study and compare the spillover effects of stagflation on the two nations with separate technological backgrounds. It is possible to conceive that a technologically advanced nation may shield the shocks of stagflation better than a developing economy. In this case technology may be an ingredient of survival and a spin board out of an unprecedented tumor. Global recession does not have the same depth nor the same timing across all nations. Inflation and unemployment stroke some nations before others and some nations are faster to recover than others.

Some nations deviate and shield the waves of global contagion via existing fiscal and monetary stabilization policies. Some nations are slower to respond than others while others are confused on the appropriate responsive policies. In this case, the length of trough now slump is never the same for all nations during global economic stagnation and recovery. The Stable South (Latin) America continent with few or no regional (nation) crises suffer just from the waves of the first two mentioned causes of the livelihood question. This means the length or depth of the turmoil may be less compared to western nations and may not actually impact some nations. Davidescu and Manta and Hapau and Gruiescu and Vacaru (2023), literature associated the impact differences across nations to the level of global integration and connectedness. The study is therefore objective to study whether technologically advanced nations suffer less/more

during periods of global turmoil than developing economies. In another perspective, how do the differences in innovative technology and economic advancement relate to the shocks from the global stagflation? It is specifically motivated to study the possible recovery path for the nation of Cameroon and South Korea considering innovative technology and human capital development. The main puzzle: what is the role of innovative technology and human capital development in the economic recovery of Cameroon?

The next section of the article focuses on analyzing varied innovative technology associated with the ongoing human civilization while presenting the research method. Technology seems to contribute to human capital development and is strongly connected to livelihood. It unveils all the dimensions of innovative technology and how it may ease human sustainability as key materials in addition to the raised problem indicators. The third section presents the results and raises some critical paths towards improving livelihood. The results of the econometric model raised in the experimentation process is applied to identify a solution path to the raised problem. The last section offers discussions and explanations of the results. It also offers policy recommendations that can support recovery and improve livelihood for the nations of Korea, Cameroon and the global. This is a solution oriented article stimulated by global stagflation. It may add to existing literature on innovation, technology, human capital development and global stagnation. However, it can also suggest instant recovery policies for nations affected by the slump.

## II. RESEARCH METHODOLOGY

This section unveiled the materials used and the research steps applied in investigating today's livelihood problem by answering the already mentioned research questions

The experimentation process was supported by secondary data obtained from the World Bank data base. The research data were macroeconomic proxies associated with the research problem for Cameroon and the Republic of Korea. A historic 13 years (2010 – 2022) data was extracted for each of the indicators. The considered solution axis to the livelihood problem was designed to center on the theme of innovative technology and to some degree human capital. It is believed that human capital needs to adapt to technological advancement in order to exploit the advantages of new discoveries. Here, a detail of these solution variables was raised, followed by a brief review of the already noted problem variables and ended with the experimentation step.

Innovation technology is never unidirectional, but comprises all the new ideas and changes within varied sectors and disciplines able to ease human existence or subsistence. The World Wide Web (www) resulting from Satellite and Internet technology motivated the notion of a global village. Dixon, (2009) associated the global village ideology stemming from the late 20th century to innovation and technology. Marketing as an academic discipline gained much of its relevance because of the discovery and the use of the internet tools.

The global village and global market place created by the internet had helped the marketing discipline to innovate from the production era during the industrial revolution to the sale, consumer and to the societal era. Terziu, (2020) study aligned the e-commerce era to the role of the internet which entails that national boundaries in production and selling are eradicated. It becomes very easy to outsource production to a cheap labor economy while distribution is made across the world with internet connection and communication. Google site, SpaceX and other satellite firms are credited for giving the world a new dimension. The premise, "distance is no longer a barrier" and the widely studied concept of globalization is due to the innovative satellite and internet technology. Nazir and Khan (2021) noted that limited internet service hindered a leverage opportunity in distance learning for the Pakistani population during the quarantine and lock down periods of the pandemic.

The birth of satellite and internet paved a new set of globalization paths in human civilization embedded in smart technology. Computers, smart phones and television sets of all varied forms are elements of the smart innovative technology. The global village initiative cannot be completed only with WWW and the presence of the Internet. It requires the mentioned instruments to optimize its importance and usage. A combination of network, computer and smart phone technology makes it possible for Latin America, Africa, Asia, and the Middle East to have live evidence of happenings across the world via BBC, CNN, Aljazeera and other international oriented TV stations. The Dark Continent appellation of Africa is turning to history because every interior of Africa is known and reported through the presence of these internal media, local television channels, electricity and the presence of solar panels (Simmet, 2018).

The phone technology began from the fixed and innovated to the mobile but not smart and today smart phones. The innovation had made it possible to have information from all social media. Apple, Samsung, Nokia, today Tesla and many other Eastern firms have set the pace for this innovative communication. Smart phones are not only important for communication but in extension, they have numerous functions like photography and a search tool.

The global village philosophy will never be at the limelight without a combination of satellite, internet and smart technology. It may not be a coincidence that the richest people in the world are those who exploit the opportunity in satellite, internet and smart phone technology in communication. For example Amazon and its founder got their international reputation and image while taking advantage of the internet and satellite technology. Meta Inc and Facebook surfaced as a giant social media platform due to the presence of World Wide Web and satellite technology. Tik Tok on its own cannot show this great success without the presence of internet service. WWW and satellite technology have given birth to great and successful business ideas boasting globalization and public relation (Ifigeneia and Dimitrios, 2018).

Computer technology and its evolution from fixed, desktop, laptop and its smart format is envisaged by many scholars as the core transformer from dark ages and medieval to modern civilization. This innovation has helped much in the business and educational sector. The birth of Microsoft packages like soft, excel, power point, publish and Microsoft project has helped documentation of files and production of lessons notes within the education sector. Traditional methodology of teaching has replaced innovative use of projectors and power points. Emails address fast communication compared to letters written. According to Kanyanga (2022), keeping of accounting records shifted from physical paper work to electronic like computerized accounting and improved performance of Kenyan firms. The balance sheet of firms, the statement of company performance, cash flow and shareholder equity statement are now done with the use of the computer. The computer age came to facilitate the work of the management and accounting departments. Possible to assist monitoring and control through the work of internal and external auditors.

Block chain computer engineering product is an innovation within computer science that helps in the monitoring and control of firms. The services of computer engineering led to the creation of outsourcing cloud computing products able to facilitate the operation of organizations (Golightly and Chang and Xu and Gao and Liu, 2022). Though smart phones and computers seem performing similar roles today, the social media services actually surface with the birth computer and its varied forms. The field of data science gained recognition due to the discovery of computers. Computer technology seems like the discovery that has shone the light of a new era in the universe. It may not be the first discovery but its birth has expanded the sphere of living. In addition to data science, computer science, software and hardware engineering, cyber security and many other academic disciplines had surfaced. Many more job opportunities are born due to the smart computer and phone technology.

Computers created an opportunity for serious innovation in the banking sector. Decentralization of the banking sector and financial system is made possible through electronic banking applications. The Digitalization and controversial cryptocurrency like Bitcoin are products of the internet and computer technology. Shcherbatykh, et al. (2021) confirmed that digitalization has been able to transform the banking sector and give room for new banking payment systems (e-banking and e-commerce).

The energy sector, conventional weapons and artificial intelligence innovative technology is gaining so much attention. Innovation into Solar energy, Wind energy and other environmental care related sources of power is highly promoted by the UNO. Szetela, et al. (2022) study on renewable energy sources noted that they help to limit the amount of carbon dioxide (CO<sub>2</sub>) emission. Modern tools like nuclear formally used as a source of power are today a serious threat to livelihood. Nuclear technology supplies electricity to advance metropolitan cities and nations of the world but its side effects were noted in Japan after the sudden earthquake and the loss of life. The political arm of global governance is

placing enough efforts to limit the number of nuclear deposits and nuclear power around the world. This initiative is aimed to limit the threat associated with the destruction of the earth.

The world may welcome all forms of innovative technology for economic development. However, Dauvergne (2021) caution the need of second thought on those that can reduce healthy living, take over the job market or suppress genuine resistances like artificial intelligent (AI). Humanoid creators are today in Japan and other advanced nations doing marketing, recording and receptionist within firms narrowing job opportunities (Dijmărescu and Ionescu, 2021).

The transport sector has also witnessed numerous technologies especially with the introduction of modern sport and electric cars. The discovery of modern air planes, ships and intercity trains are additional innovative technologies of the industry. The reviewed innovative technology proxy by global Innovation index (GII) and other extracted material or variable are presented on Table 1

### III. RESULTS AND DISCUSSION

The trend chart (fig 2) shows on the left Y – axis living standard (GDP per capita PPP) and on another right Y axis innovative technology (GII) for Cameroon and Republic of Korea. The wide gap between the line graphs (GII) is descriptive evidence of the technological and innovative difference between the Republic of Korea and Cameroon. The Bar chart's height difference depicts a historic difference in the living standards of both nations. Cameroon's innovation potential fluctuated from 2010 towards 2022, however it remains below the figures of the Republic of Korea. The Korean living standards increased between 2010 and 2021 and remain higher above the values for Cameroon. This realization does not offer inferential evidence to suggest a statistical difference in terms of innovation between the two nations. Innovation difference between the two nations is not the central theme, however, acknowledging the gap, statistically offers a justifiable step towards the core research puzzles. For both nations and through the plot, it is hard to depict a causal relationship between the measures of innovative technology and livelihood.

A similar comparative historic time series graph shows the same wider gap between human advancement (human development index) for the Republic of Korea and Cameroon (fig 3). While GDP per capita PPP seems indifferent for the nation of Cameroon over time, it has really increased for the Republic of Korea. The Human development index for both nations seem stable with slight fluctuation over the considerable period. However, the Asian nation's values stand out above those of the Central African economy. As earlier discovered (fig 2), it is not possible to figure out any cause - effect relationship between the human development index and the GDP per capita PPP. This means the plot cannot say whether improved human development will lead to low or high standard of living for the nationals of both nations. Diagrammatic representations form an aspect of descriptive analysis and do not apply significant levels based on the assumption of a normal distribution. The plots cannot suggest if there is a significant difference in human development

between the two nations. Such inferential statistical findings can only be provided through a pair t test statistic

One of the specific research problems is to investigate whether a technologically advanced nation like the Republic of Korea is able to shield the shocks of the ongoing turmoil better than a developing nation like Cameroon. The three investigated indicators (global innovation index, Human Development Index and GDP per Capital PPP) of an advanced state of a nation acknowledged a significant positive difference between the Korean economy and Cameroon (table 2). Going by Global innovation index (GII), the Republic of Korea is significantly ( $p < 0.000 < 0.05$ ) innovative than Cameroon.

The findings also noted that Koreans are more developed and adapted to the ongoing innovation than Cameroonians as measured by the Human Development Index ( $p < 0.000 < 0.05$ ). The record equally accounts for high and significant per capita GDP at purchasing power parity of Koreans than Cameroon ( $P < 0.000 < 0.05$ ). This statistic supports the choice of Korea as an advanced nation compared to Cameroon. Further from this confirmation, the results show that the effects of the ongoing meltdown are not associated with the level of advanced or innovative technology. COVID crash seems to have a similar global effect on all nations. Instead though not significant, advanced nations seem to suffer more during the stagflation era than developing economies.

Technology could not be used to shield the shocks of the dreaded and deadly disease. The paired t test results acknowledge that the inflation, unemployment and GDP growth figures are insignificantly different between the advanced economy of Korea and the developing nation of Cameroon. This does not mean they are not struck by the twin evils but rather, they seem to have the same pressure irrespective of the advanced, innovative and technological standing of an economy. The experimentation process steps next into designing a solution path towards recovery for the nation of Cameroon. The Pearson correlation coefficients (table 3) were used to check for multicollinearity or dependency along the econometric experimentation.

Human development index (HDI) and GDP per capita purchasing price parity (GDP PC PPP) have collided (coefficient of 0.972). It is not possible for both proxies to play the role of predictor in the causal analysis. Livelihood remains the core research problem but human development may seem to be an indicator of living standard. The more the human mind advances, the more they may earn and therefore improve living standards. The experimentation process makes use of both variables in all the test considerations except with the noted caution. GII and HDI also show a negative significant correlation (coefficient -0.643), however, fall short of the 0.80 limit of dependency. Similar conclusion is noted between GII and GDP PC PCC (coefficient of -0.638).

Statistical evidence (fig 4) does not go against the rational relationship between innovative technology (proxy by GII) and unemployment. Directionally the relation is negative ( $t = -2.62$  and  $coef. = -0.87$ ) and by magnitude it proves a

significant effect of NII on unemployment ( $0.025 < 0.05$ ). A similar negative findings surface between HDI and unemployment, however, the results are insignificant ( $p > 0.07 > 0.05$ ,  $t = -2.05$  and  $coef. = -0.66$ ). There seems to be no genuine solution path when the same root factors are regress against inflation. The noted high GII vs Inflation ( $coef. = -0.75$ ) and HDI vs Inflation ( $coef. = -0.60$ ) does not establish a significant effect between the variables. Innovative technology has a negative ( $t = -2.13$ ) but insignificant effect on inflation ( $p > 0.62 > 0.05$ ). Human development equally records an inverse ( $t = -1.70$ ) but insignificant ( $p > 0.124 > 0.05$ ) effect on inflation.

An attempt to experiment with the causal relationship between unemployment, inflation and economic growth was not successful. The result noted a negative ( $t = -1.78$ ,  $coef. = -0.52$ ) but insignificant ( $p > 0.106 > 0.05$ ) role of unemployment on growth. It is normal that national GDP will subside in the midst of high unemployment figures. The result indicates a positive ( $t = 0.95$  and  $coef. = 0.28$ ) but insignificant ( $p > 0.37 > 0.05$ ) impact of inflation on growth. This aligns with the creeping inflation argument, which states that every economy needs some basic level of inflation figures to match with development and advancement (Mishkin, 2010). The next step in the econometric process (path diagram) is to regress the twin evil and economic growth (predictors) against livelihood (GDP per capita ppp) the criterion. A flow is visible from unemployment to livelihood. The linear regression confirms a significant ( $p < 0.039 < 0.05$ ) and negative ( $t = -2.42$  and  $coef. = -0.75$ ) role of unemployment on livelihood question. There is no flow path linking inflation or growth and livelihood. The result noted a positive ( $T = 1.23$ ,  $coef. = 0.35$ ) but insignificant ( $p > 0.25 > 0.05$ ) contribution of inflation on GDP per capita PPP. GDP growth went against or surface a contradictory result, that is, negative ( $t = -2.05$ ,  $coef. = 0.60$ ), however insignificant ( $p > 0.071 > 0.05$ ) effect on subsistence. Without income inequality and high exchange rates, GDP growth will normally lead to high GDP per capital purchase power parity.

#### IV. CONCLUSION AND POLICY RECOMMENDATION

In project management, a critical path method similar to the flow chart (fig 4) is applied for cost and time estimation. The difference between the path method here and the critical path method studied in project management is the significant consideration. With the critical path method, all paths are visible until the path with the longest time is known. Immediately the result between one variable and another is insignificant, the path becomes irrelevant since it is not considered as the solution path. The critical path method in project management supports the project manager to determine slack or float times between various channels of completing the task. Research presents all paths to show the desired model specification or the conceptualized framework. The result identifies a single significant path towards finding the solution to the livelihood problem created by stagflation (Innovative technology – GII to Unemployment and to livelihood – GDP per Capital PPP).

The noted solution path (Innovation – Unemployment - livelihood) aligns to the number line mathematical equation suggesting that two negatives create a positive outcome. The

causal relationship between technology and unemployment is negative and the relationship between unemployment and livelihood is also negative. This entails the relationship between Innovation and livelihood is positive. Mian and Hussin and Slaninová and Shahzadi (2022) equally realized that improving innovative technology reduced unemployment among young graduates.

High unemployment definitely creates negative results on living standards. Gedikli and Miraglia and Connolly and Bryan and Watson (2022), study supported this inverse relationship and said it is tense for long duration and for male compared to female. The five pillars of global innovation index computation include human development and research alongside institutions, infrastructure, market sophistication, and business sophistication. This shows that human capital innovation is part of the GII, confirmed by Lau and Mahalik and Pal and Gozgor, (2023) study on technology, productivity and human capital. This justify though not statically confirmed by the correlation coefficient, the irrelevant nature of the path stemming from human development towards livelihood (fig 4)

There could be many successful paths in research through which a solution to the current stagflation can be solved. But the collected data and the designed conceptualization within this study offer just a channel for the nation of Cameroon to attempt recovery steps. The adapted critical path model from the project management offers an opportunity to test all the channels but considering only a single path having the highest number of days. The path method (flow chart) equally offers the opportunity to test for the significance of all the paths and consider not only one but all those paths that are statistically significant at an acceptable significant level (95%). In this regard, the Cameroon policy makers may not focus on economic growth mechanisms to seek a way out of the stagflation. This is because the result shows that improving growth may not necessarily mean improving the well-being of nationals suffering from hike commodity prices and joblessness. Rational thinking flows that improve GDP normally results in high growth figures, a possible means of improving human subsistence. However, the results contradict the normality and rather shows that the ongoing survival issues in Cameroon cannot be solved through normal reasoning but by scientific findings.

The statistical findings also noted that the Inflation Reduction Act (IRA) may work well for the Republic of Korea but not for Cameroon. Evidence shows that Cameroon may not be able to fight stagflation while focusing on inflation reduction strategies. Such strategies may be very expensive since it flows with high government spending. This may be by subsidizing production and import due to its cost push characteristics. The Korean economy may still be financially viable though a COVID crash to support such an initiative, but the 12years' old war striking the Anglophone regions of Cameroon may place the economy on its knees financially. Prices of basic commodities may stabilize over time, especially when the three costs of the ongoing stagflation are targeted. The price may stabilize once the Kremlin and Kiev decide to engage in a peace talk agreement. The global effect of COVID crash is slowing down and may be neutralized over

time. If the first and the second causes of inflation are targeted the government of Cameroon needs to engage in a peace talk with its Anglophone population. On this note, diplomacy and politics are the two channels to combat inflation and not through financial initiatives or applying monetary and fiscal tools. It is possible to use the bond market and the central bank to target inflation, but it requires a sound mind with the right skills since such policies are contradictory and may add more fire to the existing problem. The government of Cameroon should target the root cause of the inflation especially those within its power.

Reduced prices without improving job opportunities remains a serious problem to living standards. Within the twin evil, one has a stronger effect (unemployment) on livelihood than the other (inflation). The scientific result flows with reasoning because it is better to have a job and suffer higher prices than to be jobless with lower prices. Though hyperinflation takes away all hard earned money and equates the worker to a jobless state, it is always momentary and can be targeted. It is for this reason the COVID crash seems to be the prime root cause of stagflation. Also supported by its features, statistical evidence shows that no nation is stronger than the other in the pandemic. Joblessness hike in many advanced nations and the Republic of Korea was not an exception. Its effects, though not significantly different, are high for the Asian nation compared to Cameroon. Nearness to the source nation (China) and its contagion (spread) effects may support this disparity between the two nations.

To conclude, Innovative technology (internet, computer, satellite, social media etc.) cannot be used to shield the shocks or the waves of a crisis like the COVID crash and persistence regional wars. The technologically advanced nature of an economy may be an instrument of resistance to financial crises like the subprime crisis but not when struck by disease and war. Deadly diseases and wars may not have speed brakes to narrow its effects on livelihood, however, technologically advanced nations may be able to recover from the shocks faster than less innovative nations. Technology may not help to narrow the effect of inflation on Cameroon; neither can this be subsided through interest manipulation, tidal and expansionary fiscal policies. Political and diplomatic steps may be applied to narrow the inflationary effect of the war in the nation. This may be true if there is a clear way out of the Russo – Ukraine war and the global pandemic.

Targeted innovation and technological advancement strategies may have a long run but not a momentary positive solution to the unemployment and improve living standards. The issue with this scenario path is income inequality measured by the Gini coefficient (index). Chen and Gozgor, and Koo (2021) study involving 141 OECD nations realized income inequality related issues with the outbreak of the pandemic. Higher inequality gap (the difference between the equality line and Lorenz curve) hinders the required improved living standards even with improved innovation and subside unemployment figures. This may justify the projected USA new tax policy and the 2022 tax argument raised in the Global Economic Forum. A tax of about 20% should be levied on the income of the extreme rich in order to narrow income inequality (the gap between the rich and the very poor) in the

society. It is hard to narrow the effects of unemployment and improve living standards if 90% of national wealth is in the hands of about 10% of the population. The Cameroon, Republic of Korea and global policy makers should adapt the

Gini coefficient and all its related concepts of income redistribution while objectively striving to quench the effects of the current state of stagflation. This should act as a supportive back up tool in social welfare stabilization policies.

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Table 1 Operationalization of the Global Livelihood Question

Nature	Description	Proxy
The Problem of Stagflation	Increase Price	Inflation
	Joblessness	Unemployment
Economic and Human Effects	National Meltdown	GDP growth
	Livelihood Question	GDP per Capita PPP
Solution	Innovative Technology	Global Innovation Index
	Human Capital	Human Development Index

Source: Author from Existing Literature

Table 2 Comparative Analysis

Variation Evidence of Innovative technology and livelihood (2010 – 2022)				
Pair	Means	t	df	Sig
GII (Korea – Cameroon)	32.82	22.78	11	0.000
HDI (Korea – Cameroon)	0.36	111.76	12	0.000
GDP PC PPP (Korea – Cameroon)	35500.28	26.82	12	0.000
Comparative effect of stagflation (2019 – 2022)				
Pair	Means	t	df	Sig
Inflation	-0.80	-1.15	3	0.335
Unemployment	-0.28	-1.00	3	0.391
GDP Growth	-0.95	-1.81	3	0.168
Significant level = 95% (0.005)				

Source: Data from the World Bank and IMF projections

Table 3 Dependency and Collinearity Analysis

Variables	GII					
	1	HDI	UnE	Inf	Growth	GDP PC PPP
GII	1					
HDI	-0.643*	1				
UnE	-0.438	-0.382	1			
Inf	-0.366	0.035	0.364	1		
Growth	0.431	-0.303	-0.422	0.088	1	
GDP PC PPP	-0.638*	0.972**	-0.373	0.020	-0.245	1

\*.Significant at the 0.05 level (2-tailed). \*\*. Significant at the 0.01 level (2-tailed).

Source: Data from the World Bank and IMF projections

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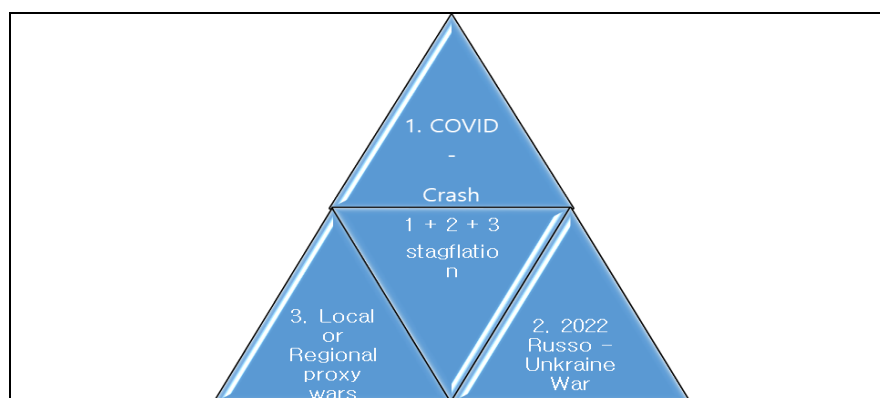


Fig 1 The Cause Structure of Global Livelihood Question  
Source: Created by Author through Existing Literature

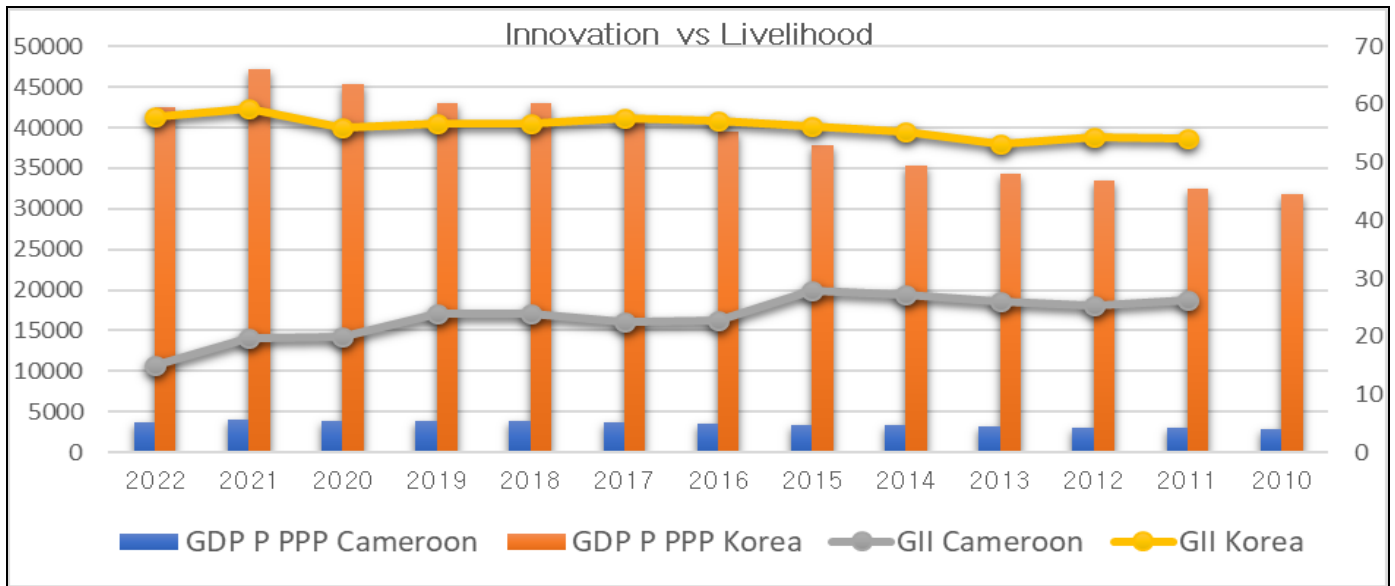


Fig 2 Innovation and livelihood Trend  
Source: Data from world Bank and IMF projections

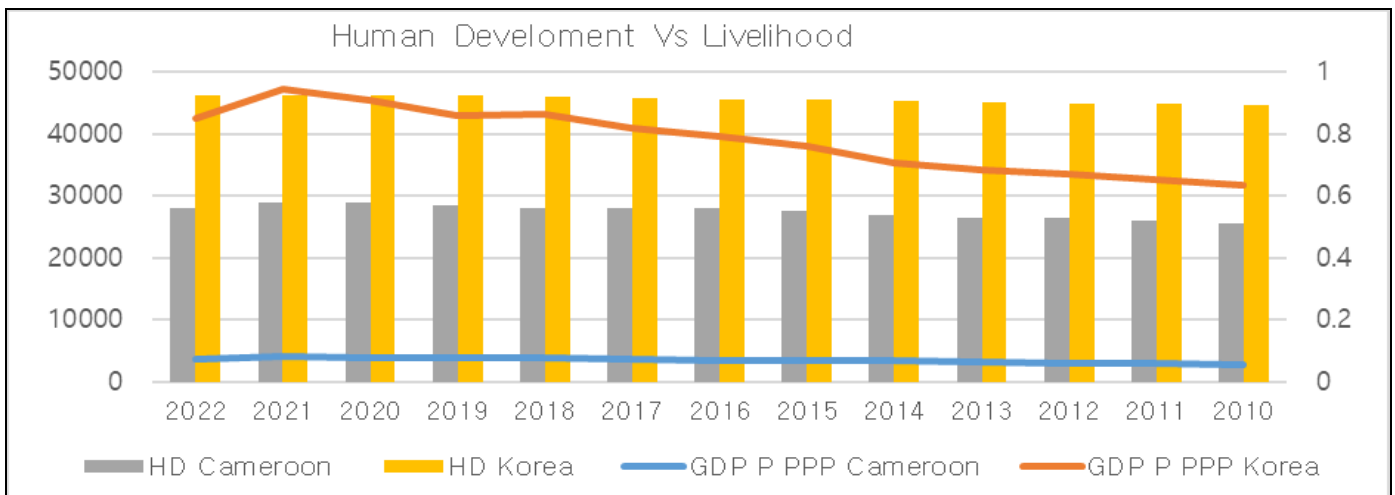


Fig 3 Human Development and Livelihood Trend  
Source: Data from world Bank and IMF projections

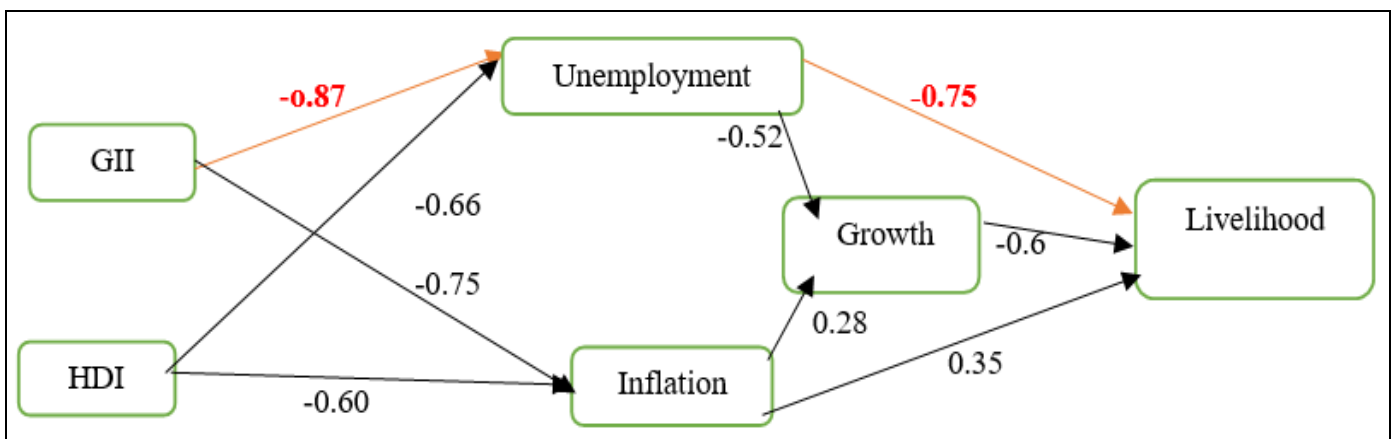


Fig 4 Livelihood Solution flow chart for Cameroon  
Source: Econometric Findings resulting from world Bank and IMF projections Statistics

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