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Harnessing Artificial Intelligence in Stock Market Investments: A Neomarxist Approach to Alternative Socioeconomic Funding Agendas for National State Revenue Accumulation

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Abstract

In the current economic, sociological and political landscape of the United Kingdom the successful integration of Artificial Intelligence (AI) computer programs into the socioeconomic organisation of society to make it into a more technologically and economically successful mode of production is discussed in detail. By proposing how through AI driven predicted behaviour of the stock market value of its high technology companies increasing through breakthrough technological news reports effecting the financial markets stock value. As a multiple discipline paradigm of causational socioeconomic effects the system of state revenue accumulation could now represent a new frontier in economics and politics with AI having profound implications for both the distribution of wealth in society and the generation of state income accumulating the national budget state income from technological advancement instead of tax.

This paper explores the potential socio-political and economic impact of using AI-driven stock market predictions gained through the multi-layered contingent causational effect of the cumulative accumulation of increasing amounts of state owned technology derived compound investment return economic capital, initially funded by the government to eventually replace societal income, wealth and goods tax, creating an exponentially increasing amount of state owned wealth.

As the baseline increase of state owned economic from AI accumulates, through the technology share value increase through the state investment in AI as a means of revenue accumulation then the burden of the national budget upon societies citizens through traditional draconian income, wealth and goods tax decreases. This is the theorisation of the establishment of a left-wing economic social superstructure and mode of production for funding social institutions through the power of artificial intelligence. By investing a portion of the national budget on advanced AI driven economic prediction technologies

developed in this paper a strategy is outlined which could dramatically reorganise and facilitate the future financial sustenance of the political budget promoting holistic social equity and economic justice as a underlying theme. Through critical analysis and review of current sociological and economic theories, this theoretical research paper delineates exactly how such a politically driven socioeconomic approach could potentially reconfigure the current mode of production and contribute to the reformation of social tax as the basis for a sustainable left-wing economy.

Keywords

Artificial Intelligence, State Revenue Accumulation, Marxist Funding Strategies, Alternative Tax Revenue, Stock Market Investment, Leftwing Tax Policy, Public Revenue Investment, Machine Learning, Ensemble Models, Auto-Regressive Integrated Moving Average (ARIMA), Seasonal Auto-Regressive Moving Average (SARIMA)

1. Introduction

The interplay between artificial intelligence computer programs and predictions of the activity of financial markets has attracted significant academic and practical interest over the years. AI's potential capabilities and capacity to predict stock market trends and fluctuations through investment strategies to significantly reduce national economic debt through capital return, and managing social funded proxy companies to challenge and rival large-scale financial corporate monopoly portfolios which bottlenecks the competition with both presents unique opportunities for state-led investment both also stimulates competition and initiatives to adopt a humanistic approach to left wing politics and economics. This paper also proposes that taxpayer-funded AI financial investments in the stock market can therefore serve as a viable mechanism for residual taxpayer capital accumulation, replacing the tax burden of the citizens also the consecutive accumulation within a Neomarxist sociopolitical and economic perspective and framework. By channelling and directing the residual income from the accrued profits of the consecutive financial investment into healthcare and social welfare and investment programs through economic development projects, governments can essentially advance the pragmatic ideology of the left-wing political agendas while maintaining fiscal sustainability and profitability.

2. Theoretical Perspective

Marxist sociopolitical, economic and cultural theory provides a critical analytical lens through which we can see the connection and relationship between capital, labor, and state and makes an examination of the direction of social ideology and systemic inequality. Marx and Engels (1848) both argued that the economic superstructure of society is shaped by its foundations, driven by the global mode of production and state generated capital accumulation. In neomodern terms, AI represents a new development in the evolution of the mode of production, one that can potentially be harnessed for progressive social change and progression. This new strategic approach theoretically aligns with the ideas of sociologists, political scientists and economists who have from different perspectives examined the potential of artificial

intelligence technology to significantly transform the economic structures and social relations of the modern day, (Harvey, 2005; Sassen, 2014).

3. Literature Review

3.1 Optimized Artificial Intelligence Methods & Financial Markets

The application of AI in predicting future activity of financial markets has been extensively studied. AI algorithms can currently process vast amounts of input data, identify current and future patterns, and execute stock trades with a precision and speed unattainable by human stock traders (Lo, 2017). Researchers such as Agrawal, Gans, and Goldfarb (2018) have highlighted the transformative impact of AI on economic productivity and market efficiency. AI's predictive information processing capabilities have been demonstrated in various studies in the humanities, showcasing potential high returns on state investment (Brynjolfsson & McAfee, 2014).

The goal would be to create an optimized multi-layered stacked ensemble model combining the statistical model with machine learning models to predict future stock movements with best possible accuracy by taking into consideration historical stock movements and news sentiment analysis.

Specifically created for time series forecasting in which stock values are sequential and temporally dependent are the statistical models known as Auto-Regressive Integrated Moving Average (ARIMA) and Seasonal Auto-Regressive Moving Average (SARIMA) (Developed by George Box and Gwilym Jenkins, 1970). Their ability to capture autocorrelation and trends across time is exceptional. While seasonal, autoregressive, and linear patterns are among ARIMA/SARIMA's strongest suits, non-linear interactions are difficult for them to handle.

A machine learning method called Random Forest (Developed by Tin Kam Ho, 1995) would be used to identify non-linear correlations between elements such as technical indicators like moving averages and macroeconomic variables and stock prices. It efficiently manages high-dimensional data by building decision trees and merging the results. To improve the accuracy of the ensemble model, gradient boosting methods such as XGBoost (Developed by Chen & Guestrin, 2016) would be applied. By employing a method known as stacking, the three models would be integrated into a single ensemble model. The result would be the combined output of all the three models of the ensemble model. Using a stacked ensemble model would significantly increase the accuracy of prediction (Isaac Kofi Nti, Adebayo Felix Adekoya & Benjamin Asubam Weyori, 2020).

To further enhance the model by taking into account news data of various companies, a lexicon-based sentiment analysis technique called VADER (Valence Aware Dictionary and Sentiment Reasoning) (Developed by Hutto and Gilbert, 2014) would be employed.

The result of the news sentiment is going to be used in combination with the stacked ensemble model in order to predict stock prices.

3.2 State Capitalism and Public Investment

State capitalism, which is characterised by significant government intervention in the economy of a nation, is the current sociopolitical and economic framework for how public investments can spur progressive economic development. Mazzucato (2013) argues that the politics of the state has always historically played the crucial role of channelling funding and technological novelty and innovation. This theoretical perspective is also supported by Block (2008), who signifies the crucial importance of state-led investment in fostering new social and economic growth through addressing the systemic social inequalities of the division of labour.

3.3 Marxist Capital Accumulation

Tradition and contemporary marxist scholars have long debated and dreamed of in the premises of historical materialism a change in the state mechanisms of capital accumulation and the implications of these methods for social change. Baran and Sweezy (1966) discussed the specific potential for surplus exponential capital to be accumulated and redirected towards socially beneficial project end points and outcomes. Similarly, O'Connor (1973) highlighted an imperative role of the state in the managing of the economic resources of a nation and the redistribution of wealth to cultural and social economic activities which promote social welfare to be advanced further. These important insights provide a further foundation for the consideration of how AI-driven socioeconomic political investments can be henceforth developed within a Marxist framework of practical application.

4. Methodology

This study is designed to employ a qualitative research methodology, drawing on the comprehensive review of existing theoretical literature in sociology, economics, and political science. By further synthesising the insight developed within these subjects and fields, this paper constructs a pragmatic panopticon model for a solution to rising costs of living through AI-driven state economic and financial investment through exploring the potential application of this working paradigm of left-wing political schematism.

5. Analysis

5.1 AI-Driven Investments & Capital Accumulation

The successful integration of AI into stock market investments offers a uniquely sophisticated tool for national capital accumulation. AI algorithmic prediction of stock market incentive for financial opportunity can analyse real-time market data and identify lucrative investment trends and potentials, executing trades with minimal human input or direct intervention. This artificially enhanced efficiency can lead to further substantial returns, which when redirected towards public goods expenditure and service provision, provides a steadily increasing replacement to income tax.

Researchers have further documented the successful application of AI in terms of financial market advancement. For instance, Narang (2013) demonstrates how AI-driven hedge funds consistently

outperform traditional investment strategies polemicising the common social and private industrial intentionalisation of market strategy in the apex of investment handlers. Similarly, Kroll, Barocas, and Felten (2017) explore the ethical implications of algorithmic trading as a mechanism of exploitation, emphasising the need for frameworks enabling equality of opportunity in order to ensure fairness and transparency.

5.2 Left-Wing Political Funding Agendas

The accumulated profits generated through successful AI-driven investment could be utilised to fund left-wing social economy political agendas, by focusing on potential social equity and all-round economic justice by establishing universal basic income through it. This pragmatic approach thereby aligns with the fundamental Marxist principle of using surplus national capital for the collective common good. Through investing in public infrastructure, healthcare, education, and social welfare programs, governments can specifically address the systemic inequalities of society and improve the quality of life for all of its citizens.

Sociologists such as Wright (2010) have recently argued for the necessity of an alternative economic model which prioritises social welfare and collective enablement over corporate profit maximisation. This perspective is also echoed by Piketty (2014), who highlighted the growing disparities in the wealth of our societies members through the division of labour and the need for redistributive policy to maximise collective gain. Through channelling potential investment returns into a selection of socially beneficial cultural and economic projects, governments can therefore create a more equitable mutually beneficial society for all.

6. Case Studies

6.1 Norway's Sovereign Wealth Fund

One example which illustrates the potential of state-led public capital and revenue investment is Norway's Government Pension Fund Global (GPFG), also known as the Oil Fund. This financial project was initially funded from the revenue appropriated from the country's successful petroleum and oil sector, the GPFG invests public monies in a highly diversified financial portfolio of successful global assets, including equities, bonds, and the real estate market. These returns from long term cumulatively growing economic investments are then used to financially aid and balance the cost of public expenditures and help ensure the long-term financial progress and overall stability of the Norwegian welfare state (Ang, 2012).

6.2 Government-Linked Corporations

Singapore provides another example of how state-led financial investment through a sophisticated substantial network of Government-Linked Corporations (GLCs) and companies designed to gain income for the populace. These economic business entities, operating across a wide range of different sectors, tend to generate significant and substantial profits for the citizens of Singapore which are then reinvested in supplying and funding public goods, institutions and services. Scholars such as Low (2006)

have made a further analysis of exactly how Singapore's developing model of state capitalism is contributing to the progressive economic financial development and social progress of the unitary state.

7. National Policy Implications

Implementing successful artificial intelligence driven investment strategies in the stock market will require significant and robust regulatory frameworks in order to ensure genuine transparency, political accountability, and a pervasive overall ethical standard conduct. Governments must therefore establish guidelines and policy protocol for implementing the practical use of artificial intelligence through public tax revenue investment in financial market fluctuations, addressing further issues such as private data privacy, algorithmic analysis bias, and intentional market manipulation. Additionally, public oversight mechanisms designed to ensure the successful application of AI to the alleviation of national debt and the income tax burden are quintessential to ensuring that future investment returns are appropriately allocated towards socially beneficial projects and programmes.

The intellectual critic and social thinker Zuboff (2019) has further emphasised the innate socioeconomic need for substantial consistent regulatory financial market oversight with the development of the potential of artificial intelligence, highlighting the potential risks of new technological advancements in society. Pasquale (2015) has also signified the importance of the need for greater transparency and accountability in algorithmic decision-making processes concerning private and public stock market investments.

8. Conclusion

The progressive integration of artificial intelligence machine learning processes the into prospective stock market investment interactions concerning world advancing technological breakthroughs, funded by taxpayer revenue, represents a novel and promising avenue for an alternative state capital accumulation system beyond citizen paid income tax and aligns within the neo-modern Neo-marxist socio-political and economic frameworks for national and global social advancement. By developing the potential return of investment which AI technologies potentially offer, future neo-modern governments have the capacity to potentially eliminate the tax payer system of economic substance of the state and generate substantial financial returns, which when further redirected towards welfare programs like universal basic income for its citizens with regional economic development projects, has unbridled promise for the substantial returns of the technology market working for society's citizens. This unique approach offers a substantial upgrade from the underfunding of the state institutions we all regardless of social stature rely upon alongside benefiting the intrepid and bold technology companies willing to invest in humanities future. This new system offers a sustainable investment strategy for funding neo-modern or neo-left socioeconomic political agendas for the collective end outcome of advancing social equity, equality, prosperity and technological advancement, whilst establishing new norms of national revenue generation for future generations

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