Business Intelligence for Decision Making in Economics

Chapter | First Online: 23 November 2016

pp 125–158 | Cite this chapter

Artificial Intelligence in Financial Markets investment banks such as Goldman Sachs and JP Morgan. The preferred closed funds vehicle for selling to clients is through financial derivatives. According to the International Monetary Fund (IMF) financial derivatives are: 'financial instruments that are linked to a specific financial instrument or indicator or commodity, and through which specific financial risks can be traded in financial markets in their own right. Transactions in financial derivatives should be treated as separate transactions rather than as integral parts of the value of underlying transactions to which they may be linked. The value of a financial derivative derives from the price of an underlying item, such as an asset or index [IMF. International Monetary Fund. Financial Derivatives. http://www.imf.org/external/np/sta/fd/, 2015]) by developing an algorithm which uses data from the US stock market. The secondary output is to use the same algorithm as a model, which is scaled to fit and solve issues regarding automated decision making at the government level. This is similar to a basic Business

The novelty of our sophisticated Business-Automated Data Economy Model (BDM) is mainly due to how our model is applied. This research is the first time Big Data has been analyzed by an integrated model with a focus on automated decision making as a proxy for developing better and smarter investment procedures. The analysis contributes to decision making made by individuals, corporations as well as offering viable solutions for governments. This interdisciplinary research is created as a path to adjust policy making through the use of intelligent systems based on Big Data and BI for creating policy and to select the most suitable path to follow.

- Own it forever
- Own it forever

Buy Chapter →

Buy eBook →

Hardcover Book

EUR 106.99
Price includes VAT (Poland)

- Durable hardcover edition
- Dispatched in 3 to 5 business days
- Free shipping worldwide - see info

Buy Hardcover Book →

1. A network economy is a new organizational form of economies that is not situated in a hierarchical system but in a horizontal distribution of power and relations. As a result, so there are no clear leaders that impose themselves on smaller economies.

2. Overheating the economy leads to faster pace production. This leads to an increased consumption of resources in order to maintain the production cycle at a microeconomic level. At a macroeconomic level the unemployment rate decreases and the overall standard of the economy improves. Contributing factors may include the overall output of an economy and a reduction in the rate of unemployment to lower than the natural rate of unemployment. As a result, revenues to the government in the form of taxes are increased in a way similar to the evolution of the Okun's law [18]. Furthermore, if the economic

accelerated when capital is preponderant in the economy. This is because the scalability of employees is lower and they can more easily be replaced by technologies that evolve exponentially over time. This way the momentum increases exponentially at the macroeconomic level as well. Solow was the pioneer behind the idea of growth through capital accumulation by correlating the savings function with the investment behaviour of individuals. Reference to the GDP formula can be made from equation 5.1 in this chapter.

7. The Global Industry Classification Standard has classified the sectors as follows [30]: energy, materials, industrials, consumer discretionary, consumer staples, health care, financials, information technology, telecommunication services and utilities.

development of modern economies, which have as the most important sector the Financial and the Derivatives sectors, because they fuel all other sectors. These two sectors represent the blood stream for all other sectors and they need to be highlighted accordingly.

12. This was the initial path followed when selecting the companies. The fact that these companies are from different sectors and have different markets in which they trade creates diversification. This method of selecting the companies also offers insight into the idea of autonomous systems that are created by using a simple selection process. The idea of simulating an economy offers an optimal path for creating economic growth by emulating real economies.

17. In calculating the growth of an economy or of one of its sectors there are no theories or mathematical models that underline a certain value above which identifies a booming period, however it is acknowledged that when a certain sector or an entire economy is running at a pace well above the average or a trend for more than one year then it can be considered to be booming.

References

1. Bodislav, D. A., Pascu, L., Pascu, B., Ratezanu, I., Badea, G. (2015). Emulating Business Intelligence filtered with Big Data Analysis. The Private—Public Sector Transfer. *Proceedings of IBIMA 25th International Conference 2015*, 8th of May, Netherlands, 1471–1481

Article Google Scholar

6. Strickland, E. (2013). The gene machine and me. *IEEE Spectrum, 3*, 26–32.

Google Scholar

7. Michael, K., & Michael, M. (2011). The social and behavioural implications of location-based services. *Journal Location-Based Services, 5*(3–4), 121–137.

Article Google Scholar

8. Sestini, F. (2012). Collective awareness platforms: Engines for sustainability and ethics. *IEEE Technology and Society Magazine, 31*(4), 54–62.

Article Google Scholar

13. Bran, F., Bodislav, D. A., Radulescu, C. V., & Ioan, I. (2014). Corporate Governance Intervention for a Sustainable Socio-Economic Model. *Revista de Cercetare si Interventie Sociala, 46*, 216–226.

Google Scholar

14. Cairncross, F. (2001). *The death of distance: How the communications revolution is changing our lives* (revised ed.). Cambridge: Harvard Business School Press.

Google Scholar

15. Bodislav, D. A. (2011). The Birth of the Regulated Company in the

19. Becker, G. (2003). *The Human Capital* (2 ed.). Bucharest: C.H. Beck Publishing.

Google Scholar

20. Hirschmann, A. (1991). *The Rhetoric of reaction: Perversity, Futility, Jeopardy*. Cambridge: Harvard University Press.

Google Scholar

21. Branson, R., Bodislav, D. A., Stoynova, P. (2010, August 8). If I could do it all over again. *The Wall-Street Journal*, A4

Google Scholar

26. Bodislav, D. A. (2015). Transferring business intelligence and big data analysis from corporation to governments as a hybrid leading indicator. *Theoretical and Applied Economics*, *22*, no. 1(602), 257264

Google Scholar

27. Boyer, J., Frank, B., Green, B., Harris, T., & Van De Vanter, K. (2011). *Business Intelligence Strategy—a Practical Guide for Achieving BI Excellence*. Ketchum: MC Press.

Google Scholar

28. Bodislav, D. A. (2015). Decision Automation and the Feasibility of the Resulted Solution at Macroeconomic Level. *National Conference of the*

33. Zacks. (2015). *Zacks Investment Management Value Investor*. http://www.zacks.com/valueinvestor/?adid=TOP_ONLINE_NAV. Date accessed 1 May 2015.

34. Zacks. (2015). *Zacks Investment Management Insider Trader*. http://www.zacks.com/insidertrader/. Accessed on 1 May 2015.

35. Bodislav, D. A. (2013). *The optimal corporative model for sustainable economic growth for an emergent country* (1 ed.). Bucharest: ASE Publishing.

Google Scholar

36. GSO. (2015). *Goldman Sachs Outlook*. http://www.goldmansachs.com/our-

41. WB. (2015). World Bank database. http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators, Date accessed 15 June 2015

42. ECB. (2015). European Central Bank, *Economic Bulletin*. http://bnro.ro/Buletinul-economic-al-BCE-3222.aspx. Accessed on 5 September 2015

43. IMF. (2015). International Monetary Fund. *Financial Derivatives*. http://www.imf.org/external/np/sta/fd/. Accessed on 15 September 2015.

44. NASDAQ OMX. (2015). http://business.nasdaq.com. Accessed on 1 September

Bucharest University of Economic Studies, București, 010374, Romania

Bodislav Dumitru-Alexandru PhD

Corresponding author

Correspondence to Bodislav Dumitru-Alexandru PhD .

Editor information

Editors and Affiliations

ACANTO Holding, Hannover, Germany

Christian L. Dunis

University of Liverpool, Liverpool, United Kingdom

Peter W. Middleton

https://doi.org/10.1057/978-1-137-48880-0_5

23 November 2016

Palgrave Macmillan, London

Print ISBN

978-1-137-48879-4

Online ISBN

978-1-137-48880-0

eBook Packages

Economics and Finance

Economics and Finance (R0)

Publish with us

Policies and ethics

Search