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Business Intelligence for Decision Making in Economics

| Chapter | First Online: 23 November 2016

| pp 125–158 | [Cite this chapter](#)



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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

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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.

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Notes

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

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how they influence global economic growth and their relationship with consumption and investment/savings.

6. Robert Solow's theory of economic growth includes the idea that growth is 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

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be near zero and the only transparent and open market with near zero costs is the NASDAQ OMX platform.

11. 'Volatile status of a modern economy' as we understand it means the actual 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

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16. Although the acronym is BRIC (Brazil, Russian Federation, India and China), because of the advancement of South Korea it is considered that this country could enter in the select club of powerful emerging 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.

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

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DOI	Published	Publisher Name
https://doi.org/10.1057/978-1-137-48880-0_5	23 November 2016	Palgrave Macmillan, London

Print ISBN	Online ISBN	eBook Packages
978-1-137-48879-4	978-1-137-48880-0	Economics and Finance
		Economics and Finance (R0)

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