

ESSAY CHOICES

Annotated Bibliography on Decision Making Using Systems Modeling

Student's Name

Institution Affiliation

Course

Instructor's Name

Due Date

Annotated Bibliography on Decision Making Using Systems Modeling

Lyons, M. H., Adjali, I., Collings D., & Jensen, K. O. (2003). Complex systems models for strategic decision making. *Adaptive Complex Systems*.

https://www.researchgate.net/publication/235632560_Complex_System_Models_for_Strategic_Decision_Making.pdf

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A review of the article above illustrates the need for complex systems models in the overall decision making of an organization. According to Lyons, Adjali, Collings and Jensen (2003), the complexity of the system models helps an organization make strategies on improving its environment for better corporate decisions. Since the article was published in 2003, it has been reviewed by several scholars who are pleased by the credible information from the author. The authors were focused on explaining how complex adaptive systems help handle the daily business challenges like market demand forecasts, strategy development, and evolution of industrial operations of the company. Other concepts explained in the article include the models that simulate complex systems, strategic decision making through complex systems models, and the modeling context (Lyons, Adjali, Collings & Jensen, 2003). Therefore, the role of system models cannot be ignored in the decision making of an organization. The article is credible because many learners have used its information for research. A future study proposed by the article is on problems encountered as systems modeling influences decision making.

Mordecai, Y., & Dori, D. (2014). Conceptual Modeling of System-Based Decision-Making.

INCOSE International Symposium.

https://www.researchgate.net/publication/270510325_Conceptual_Modeling_of_System-Based_Decision-Making.pdf

According to Mordecai and Dori (2014), technological advancements have facilitated system-based decision making. Systems modeling require to be operated by technicians with knowledge on automation. Cyber-physical systems take a model approach to integrate decisions that will benefit an organization. The local system based decisions helps an organization to grow. Technologically based metamodel streamlines help in decision making because they empower complex systems. Globally, systems modeling is in high demand to help business firms make the right decisions that will increase profits (Mordecai & Dori, 2014). The use of systems modeling enlightens workers to provide an autonomous workforce that will benefit an organization. The article is credible because it was recently published and gained demand among scholars. Qualitative and quantitative data is documented in the article. The main idea spread in the article is that any intelligent system with modeling abilities boosts decision making in an organization. Future studies proposed by the authors of the journal article will be on the challenges of using system modeling in decision making.

Osorio F. (2012). A multi-actor analysis approach in decision making. *A framework to complement ISA-95 guidelines within manufacturing companies* , 1-93.

<https://pdfs.semanticscholar.org/0582/7dafbe42cb7e65e30b140cab7355007215ce.pdf>

A multi-actor systems modeling involves the use of control and enterprise systems that support the systems modeling complexity. A multi-actor system effectively works to make an organization competitive in the international market. Multi-actor approaches that

help in the decision making of an organization include tailoring of the farming system and a food system. According to Osorio (2012), convoluted activities in an organization are handled by the company after complexity systems are organized to override and later be set as an integrated software application. Manufacturing activities of a business company are enhanced by multi-actor systems (Osorio, 2012). Extensive research was conducted before the author wrote the article. Qualitative data was prioritized by the other to help explain concepts like multi-actor systems and modern forms of modeling. The journal article written by Osorio was reviewed by many people, but no one complained of an error in the article. Therefore, interesting comments from readers help confirm the credibility of data and in the article.

Wollmann, D., & Steiner, M. T. (2017). The Strategic Decision-Making as a Complex Adaptive System: A Conceptual Scientific Model.

https://www.researchgate.net/publication/312180222_The_Strategic_Decision-Making_as_a_Complex_Adaptive_System_A_Conceptual_Scientific_Model.pdf

In the article by Wollmann and Steiner (2017), a complex adaptive system modeling is discussed. The complex adaptive system helps an organization to benchmark with other business firms. Information in the article indicates that the complex adaptive system supports systemic thinking. Better ways of producing, using knowledge, and interpreting data on systems modeling is enhanced by the complex adaptive system (Wollmann & Steiner, 2017). Such a system is a form of the invention that is revolutionizing operations of a company and improves its reputation in the international market. The complex adaptive system ensures the right decisions are made that will

contribute to the prosperity of a company. There is no doubt that a complex adaptive system will be implemented in the operations of many companies in the future. The work of Wollmann and Steiner was reviewed severally and confirmed to be credible. In the future, I will rely on the article to conduct more research on the benefits of systems modeling in the decision making of a business organization.

Yurtseven, M. K., & Buchanan, W. W. (2016). Decision Making And Systems Thinking:

Educational Issues. *American Journal of Engineering Education*, 7(1), 19-26.

<https://files.eric.ed.gov/fulltext/EJ1103428.pdf>

The journal article by Yurtseven and Buchanan (2016) indicates that the paradigm of systems modeling influences effective decision making in an organization. Advanced systems modeling causes systems thinking and motivate for the right decision making. Complex decision situations are easily handled by people with knowledge of systems modeling. In the article, authors recognize the concept of complexity, which is important in systems modeling. The argument in the article is that complex systems may be easily modeled and applied in working settings to guide decision making for they have an evolving construct. Complex adaptive systems guide management decisions and ensure there is decentralization and adaptive decision models that will boost the company's prosperity (Yurtseven & Buchanan, 2016). The article is credible because it supports the ideas on systems modeling with general systems theory, which affirms that adequate research was conducted before the writing of the article. Authors of the article provided credible ideas which they supported with examples.

References

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