

## **Structure And Behavior in System Dynamics: A Case Study in Logistic**

**Arzu EREN ŞENARAS**

Uludağ University

Faculty of Economics and Administrative Sciences

Bursa, Turkey

[orcid.org/0000-0002-3862-4551](https://orcid.org/0000-0002-3862-4551)

[arzueren@uludag.edu.tr](mailto:arzueren@uludag.edu.tr)

### **Abstract**

System dynamics approach is a method used to understand how the system changes over time. The elements and variables that constitute a system that changes in time are expressed as the system behavior. The aim is to understand the basic behavior system of the variables, to discover the factors that cause this mode of behavior and to improve the system behavior. Thus, it could be argued that system dynamics is a method to explain how the systems change with time. The most basic forms of behavior are exponential growth, goal seeking and oscillation. In this study a logistic system was modeled using Vensim Package Program. This model includes two stocks and three flows. Developed system dynamic model provides to analyze the values of product stock, order in transit and received order for 100 weeks.

**Keywords:** System Dynamics, Exponential Growth, Goal Seeking And Oscillation. Logistic System.