

## **ABSTRACT**

• Nowadays there are different structures of supply chain management based on collaboration among the companies which belong to the same chain. This work deeply analyzes the advantages and disadvantages of using these structures, in particular, Vendor Managed Inventory(VMI) and Electronic Point of Sales (EPOS) compared to the Traditional Supply Chain.

Moreover, it devises several models of Supply Chain Management, developed using the Dynamic Systems Methodology, where the structures are shaped and simulated by the Vensim© software.

These models are an efficient tool to recreate different management backgrounds, which fit a greater or lesser extent with business objectives (tactical or operational) as proposed.

In that way, analyzing the variations of the Bullwhip effect, as the main causes of instabilities in the demand process management along the supply chain, will be possible.

• **Keywords:** logistics, Bullwhip effect, Systems Dynamics, Supply Chain Management , Vendor Managed Inventory (VMI), Electronic Point of Sales (EPOS).