



# 3<sup>rd</sup> Copenhagen Supply Chain Management Summit 2011

- Nomination to Best MSc. in SCM Master Thesis 2011

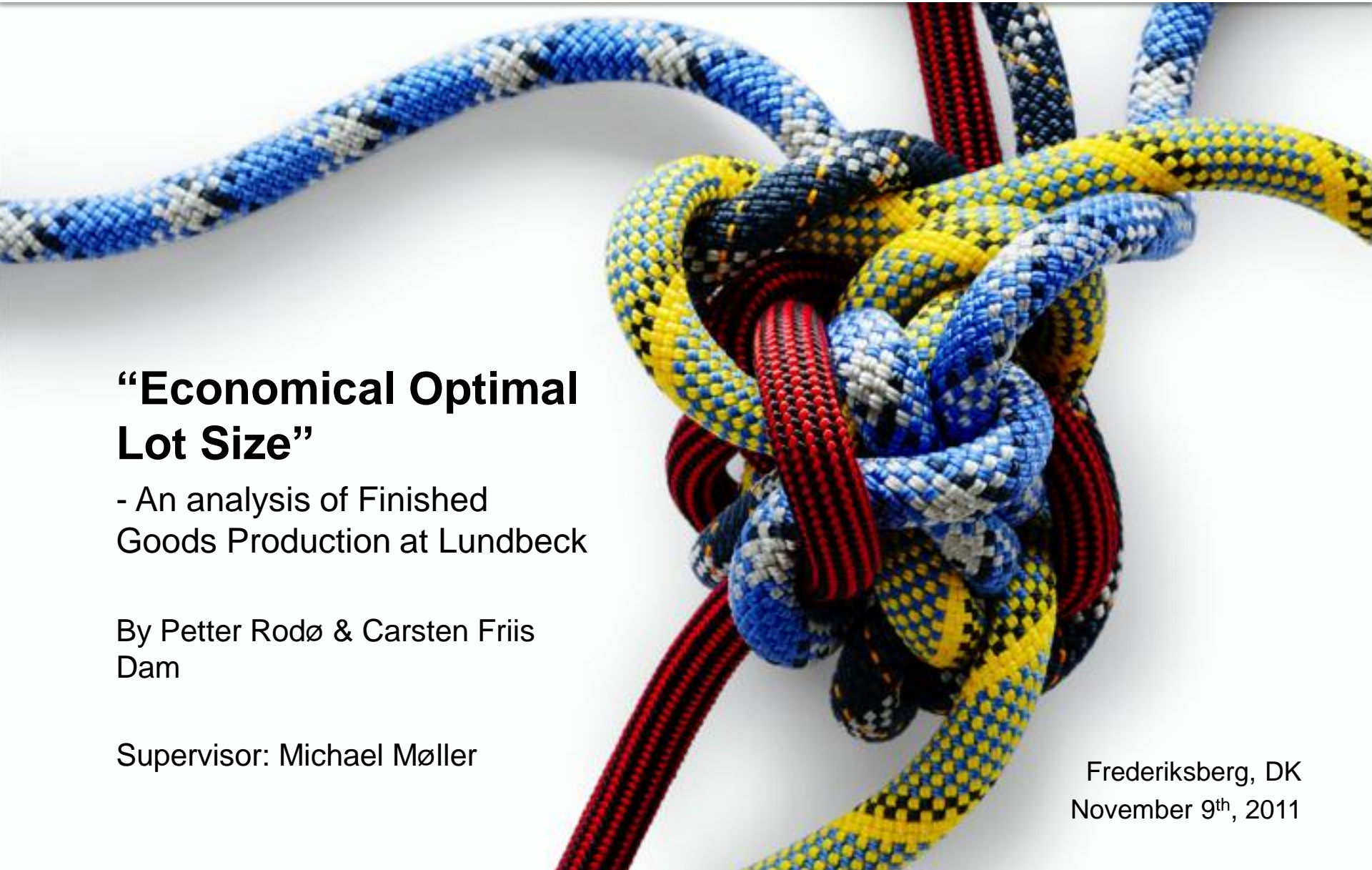
## **“Economical Optimal Lot Size”**

- An analysis of Finished Goods Production at Lundbeck

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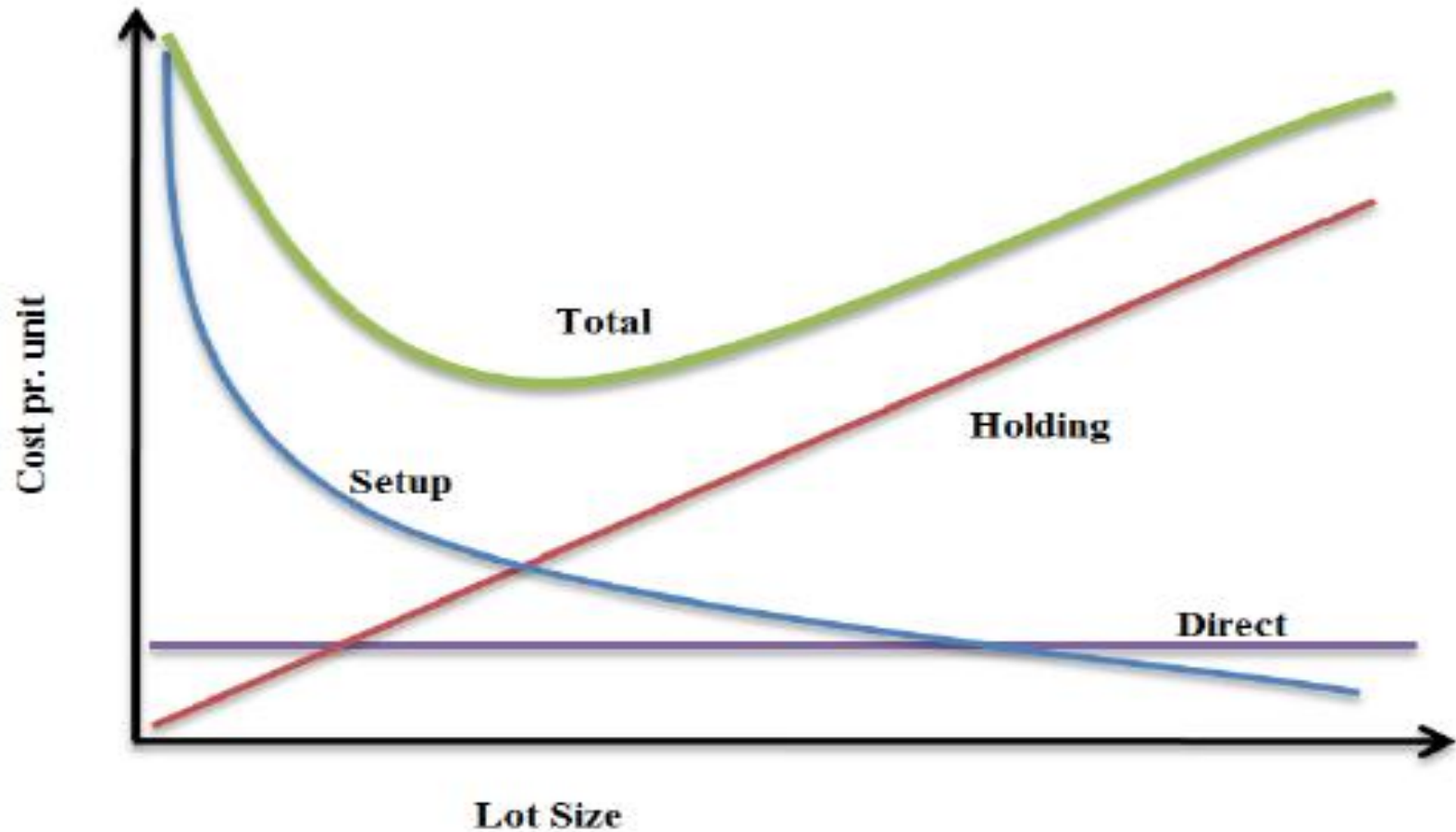
Frederiksberg, DK  
November 9<sup>th</sup>, 2011



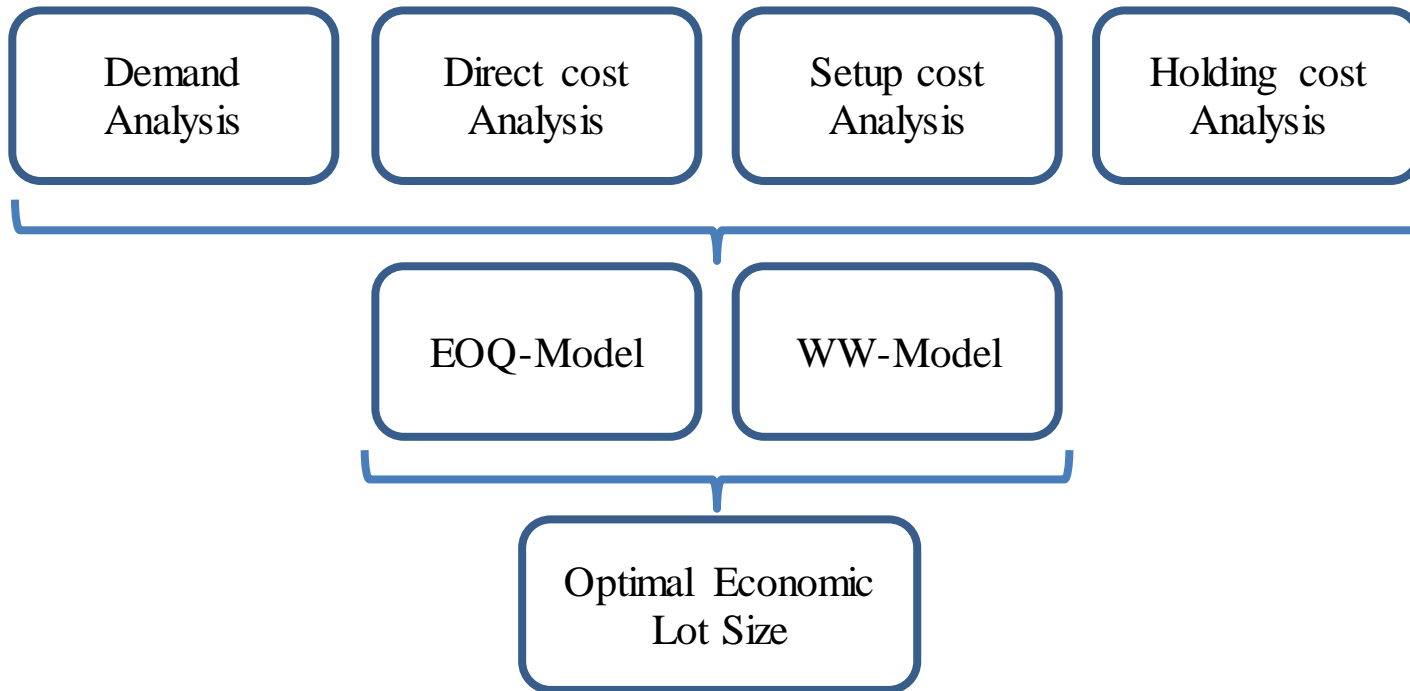
# »» Introduction and Summary

- Why?
  - Chance of broadening our scope of production planning
  - Applying SCM theory at a global player in the pharmaceutical industry.
  - Close cooperation and management commitment to the project
- Summary
  - Developing theoretic framework based on SCM & ELS theory.
  - Trade-off between complexity and usefulness
  - Testing the result of a Static vs. Dynamic model at Lundbeck.
  - Optimization of Lot sizes in finished goods production
  - Tactical decision support tool in Excel

# »» Economical Lot Size



# »»» Analysis framework



# »» Main conclusions

- Substantial saving can be reached by applying a Dynamic model
- Even though demand is stable the dynamic model is superior to a simple EOQ model
- Lot sizes at original policy were on average 41% below the WW optimal.
- The model is applicable not only to the empirical case, but throughout the supply chain
- The financial benefits of the ELS optimization can be improved by higher forecast accuracy
- By the analysis, cost drivers are visualized, which gives the ability to challenge and improve the current procedures

# Why the thesis should achieve the price for best MSc. in SCM Master Thesis 2011

- The thesis provided analysis and improved planning for each product in the scope on a tactical and operational level. Further, financial gains, transparency and usability were key objectives on the practical case. The Supply Chain implications of the new lot sizes was after the analysis considered in order to make the results fit the company strategy in the best possible way.
- Clear structured approach, in order to solve a complex issue where each area of analysis has been separated and analysed in a deductive way.
- Easily applicable method for solving a common and complex practical problem by the use of a broad scope of SCM theories.
- The model is widely applicable, thus it can be used globally by Lundbeck as well as other companies using forecasting. The local optimization is necessary in order to improve planning, and can also be used as a tool to increase visibility.
- SCM is powered by Lot Sizing, as cost optimization and transparency in production planning causes better delivery performance and helped Lundbeck towards becoming the best pharmaceutical supply chain.