Module Description

Market Analysis and Forecasting

General Information

Number of ECTS Credits

3

Abbreviation

TSM_MarkFor

Version

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Responsible of module

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Language

	Lausanne	Bern	Zurich
Instruction	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☒ E
Documentation	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☒ E
Examination	☐ E ☐ F	☐ D ☐ E ☐ F	☒ D ☒ E

Module category

☐ Fundamental theoretical principles
☒ Technical/scientific specialization module
☐ Context module

Lessons

☒ 2 lecture periods and 1 tutorial period per week
☐ 2 lecture periods per week

Brief course description of module objectives and content

A proper understanding of the system, the current state and probable future development of a market is key to any successful business development. The module Market Analysis and Forecasting provides the foundations of analysis of complex socio-economic systems. It puts students in place to autonomously plan, design and execute their own qualitative and quantitative analysis. Development of well-founded forecasts and scenarios completes the understanding of customer needs, markets and the socio-economic environment. Tools for the definition and the analysis of company reactions to potential future market scenarios will complete the module, allowing for transformation of market inputs into strategic choices.

Aims, content, methods

Learning objectives and acquired competencies

Students have the knowledge and the ability to understand and analyze a market as a complex socio-economic system. They are able to identify the most relevant factors determining the market behavior, to identify the causal relation between these factors and to describe socio-economic systems by means of qualitative modelling. Students understand and apply key concepts of the theory of complex systems such as observability, controllability, time variance or invariance, randomness or determinacy of factors, linear or nonlinear, static or dynamic behavior and their impacts on the overall system behavior. Students apply qualitative and quantitative methods for model validation, including basic behavior analysis and statistics. In practical examples they learn to analyze, predict and steer such systems. Finally students are able to present the analysis results in terms of descriptive scenarios using different visualization techniques.

Contents of module with emphasis on teaching content

The module includes the following topics:

1. Market modelling
   - Understanding the market as a complex, socio-economic system
   - Outlook: system modelling in a broader context
   - Identification of key factors determining the dynamic, time variant and stochastic behavior of a market
   - Systemic market analysis
   - Experiencing complex market behavior, steering complex systems
   - From qualitative to quantitative models
   - Model validation
   - Developing scenarios describing the market future

- Prospects and limits of modelling

2. Case studies that cover topics in market analysis such as
   - customer segmentation,
   - churn analysis,
   - customer lifetime value,
   - customer conversion (i.e., cross- and up-selling),
   - demand forecasting.

   The use and benefits of each of these topics will be explained, methods for solving the analysis tasks will be presented in an accessible and non-technical manner. The focus will be on the validity and generalizability of the results/conclusions and how they will be included in decision making.

Teaching and learning methods

The module is taught by theory inputs and case studies. Data analysis is taught by use of a software tool.

Prerequisites, previous knowledge, entrance competencies

Good knowledge of English.

Bachelor degree in Business Administration and Engineering.

Literature

[1] Sorger, S. (2013). Marketing Analytics. Strategic Models and Metrics (Rev. 1.1). Self-publisher. www.stephansorger.com. ISBN 978-1481900300.

[2] Bryman, A. & Bell, E. (2015). Business Research Methods (4th edition). Oxford: Oxford University Press.

[3] Warren, K. (2008). Strategic Management Dynamics. Wiley.

Assessment

Certification requirements for final examinations (conditions for attestation)

Participation in in-class exercises.

Written module examination

Duration of exam:	120 minutes
Permissible aids:	Open book (weight 100%)