Agenda

- Introduction
- CRM Performance Measurement
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- CRM Performance Measurement – New Criteria
- Analytic Network Process (ANP)
- CRM Performance Comparison - using ANP
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- Outlook for the e-Commerce Market
- Q&As
The aim of this presentation is to compare the performances of e-commerce companies based on CRM, by using a multiple criteria decision making (MCDM) approach.

Analytical network process (ANP) is a MCDM methodology which can take the inner and outer dependencies among multiple criteria into consideration.
Performance Measurement - Definition

• Performance is defined as the potential for future success of actions in order to reach the objectives and targets (Lebas, 1995).

• Performance measurement can be defined as a part of a management process that is realized periodically in order to determine the success or quality of a particular process or activity (Oztaysi, 2009).

• Performance measurement is a combination of companies’ characteristics that are numerically expressed (Folan, Browne, & Jagdev, 2007). In another perspective, performance measurement is process of choosing different attributes and generating a combined evaluation based on these attributes.
Performance Measurement - Objectives

- By performance measurement, companies can ‘look ahead’, ‘look back’ and ‘motivate’ and ‘compensate’ people.
- **Performance at the top management level:** ‘Look ahead’ and ‘look back’ aim at measuring the economic performance and past accomplishments of the company as a whole.
- **Performance at the individual level:** ‘Motivate’ and ‘compensate’, at the individual level, motivate and drive the compensation of individual people within the company.
CRM Performance Measurement – Traditional Criteria

- Performance measurement in CRM can be analyzed in four groups:
  1. Indirect measures and operational indicators
  2. Self assessment
  3. Benchmarking with best practices
  4. CRM Scorecards
1. Indirect measures and operational indicators
   - Indirect measures aim at evaluating CRM performance by indicators such as customer equity and brand equity.
   - Operational indicators on the other hand identify information about the efficiency of the customer related operations.

2. Self assessment
   - There are tools/scales that are generated by statistical methods
   - These studies aim at measuring relationship quality, behavioral dimensions or holistic CRM.
3. Benchmarking with best practices
   • The method has defined nine assessment areas which are: Information technology, people, process, customer management, analysis, proposition customer management, measurement, customer experience and competitors.
   • This method is a measurement tool which is based on comparison of companies’ performance with the best practices in the same performance assessment area.

4. CRM Scorecards
   • The most important steps in CRM scorecard applications
CRM Performance Measurement – New Criteria

The dimensions used in CRM performance measurement:

- What is the performance level of CRM outputs observed in the company?
- Are we aligned with the CRM goals?
- What are the customers’ attitudes towards the company?
- How good are we in executing the CRM processes?
CRM Performance Measurement – New Criteria

- Dimensions and Criteria

<table>
<thead>
<tr>
<th>Dimension</th>
<th>CRM outputs (Goals)</th>
<th>Customer</th>
<th>CRM process</th>
<th>Organizational alignment</th>
</tr>
</thead>
</table>
| Criteria  | Customer retention (CR)  
Customer acquisition (CA)  
Share of Wallet (SoW) | Customer value (CV)  
Customer satisfaction (CS)  
Customer loyalty (CL) | Customer targeting (CT)  
Enquiry management (EM)  
Customer knowledge generation (CKG)  
Campaign management (CM)  
Managing problems (MP)  
Product logistics (PL) | Intellectual alignment (IA)  
Social alignment (SA)  
Technological alignment (TA) |
CRM Performance Measurement – New Criteria

Dimension 1: CRM Outputs

CRM aims to improve economic performance of companies by affecting customer retention, customer acquisition and Share of Wallet.

- **Customer retention (CR):** represents the achievement of the company in keeping the existing customers.

- **Customer acquisition (CA):** indicates success of the company in acquiring profitable new customers. Targeting profitable customers, integration offerings across channels and improved pricing are most important drivers of CRM activities.

- **Share of Wallet (SoW):** represents how the customers divide their purchases across the competing companies by up-selling and cross-selling activities.
CRM Performance Measurement – New Criteria

Dimension 2: Customer

The customers dimension is defined by three criteria; customer value, customer satisfaction and customer loyalty.

- **Customer value (CV):** customers’ perceived benefit from a product or service benefit from the product or service.

- **Customer satisfaction (CS):** customer’s general evaluation about his/her experience with the product or service. Customer satisfaction is an important criteria for the performance of CRM.

- **Customer loyalty (CL):** the customers’ behavioral and attitudinal bond with the company.
CRM Performance Measurement – New Criteria

Dimension 3: CRM Processes

- Customer targeting (CT)
- Enquiry management (EM)
- Customer knowledge generation (CKG) to improve the competitiveness
- Campaign management (CM)
- Managing problems (MP)
- Product logistics (PL) is a vital component of e-commerce
Dimension 4: Organizational Alignment

- **Intellectual alignment (IA):** defines the alignment of company’s strategy and management with the CRM initiatives.

- **Social alignment (SA):** is composed of organizational culture, interaction with shareholders and domain knowledge.

- **Technological alignment (TA):** the alignment of CRM software with the current business needs and IT capabilities of the company.
Analytical Network Process (ANP)

What is ANP?

• A methodology that allows groups or individuals to deal with the interconnections (dependence and feedback) between factors of complex structure in decision making process
• A Multi Criteria Decision Making method for complicated and unstructured problems
• An approach that uses a network model having clusters of elements (criteria and alternatives)
• The purpose of ANP is to determine the priorities of the elements in the network and in particular the alternatives of the decision.
Analytical Network Process (ANP)

Why is ANP preferred over AHP?

- **Analytical Hierarchy Process (AHP):** In a hierarchy, alternatives affect (depend on) the criteria, criteria affect goal of firms.
- **Analytical Network Process (ANP):** Network model with dependence and feedback improves the priorities derived from judgments and makes prediction much more accurate.
- **CRM:** In complex decisions, dependence and feedback play a vital role.

- ANP is used for comparing the CRM performances of the considered e-commerce firms.
Analytical Network Process (ANP)

Network

Arc from cluster $C_4$ to $C_2$ indicates outer dependence of the elements in $C_2$ on the elements of $C_4$. Elements in $C_2$ affect elements in $C_4$.

Loop in a cluster indicates inner dependence of the elements in that cluster. Elements affect other elements of the same cluster.
Analytical Network Process (ANP) - Example

Cola Industry

A. DISTRIBUTION
- A1. Stores
- A2. Machines
- A3. Restaurants

B. ADVERTISEMENT
- B1. Frequency
- B2. Current impact
- B3. Historical impact

C. PRODUCT
- C1. Global reach
- C2. Quality of depth
- C3. Quantity of depth
- C4. Taste acceptance
- C5. Reputation

ALTERNATIVES
- 1. Pepsi Cola
- 2. Coca Cola
- 3. Cola Turka
Comparison of CRM Performance in e-commerce market using ANP

4 Dimensions measured by ANP: Network structure of the CRM performance evaluation problem.
A sensitivity analysis is conducted to monitor the robustness of the ranking among the alternative websites to changes in the criteria weights and different interdependency situations.

The order of the alternatives based on limiting matrix values normalized by clusters with respect to different weight configurations.

As it is seen in the above figure, E-C2 is the e-commerce company with the best CRM performance in the current situation. In this case the organizational alignment (ORGAL) is the most effective cluster (total weight: 0.285). This makes E-C2 the best alternative, while E-C1 and E-C3 share the second place.
Conclusion

✓ Assessing CRM performance of a company requires considering interdependent factors. Therefore CRM performance evaluation is a MCDM problem which has to take inner and outer dependencies into account.

✓ ANP is an excellent methodology which can deal with such issues by considering dependencies between nodes and clusters of criteria.

✓ To monitor the dynamics in CRM performances of companies, this model can be reused periodically.
E-Commerce Market Sales - Global

Global E-Commerce Sales to Reach $1.2 Trillion This Year
Estimated global e-commerce sales and online buyer penetration in 2013

- North America: $419.53bn, 12.6% growth, 72.9% penetration
- Western Europe: $251.47bn, 14.0% growth, 72.3% penetration
- Central & Eastern Europe: $48.99bn, 20.9% growth, 41.6% penetration
- Latin America: $45.00bn, 22.1% growth, 33.0% penetration
- Middle East & Africa: $27.00bn, 31.0% growth, 31.3% penetration
- Asia-Pacific: $388.75bn, 23.1% growth, 44.6% penetration

Actuals in 2013 → Growth - 19.4%

Source: Goldman Sachs

ESTIMATES IN 2013

Global Sales (Billion $)

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
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<tbody>
<tr>
<td>Sales</td>
<td>572.5</td>
<td>680.6</td>
<td>820.5</td>
<td>963</td>
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</table>
E-Commerce Market - Germany

Top 10 E-Commerce Companies in Germany 2012

<table>
<thead>
<tr>
<th>Company</th>
<th>Country of origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Amazon EU S.a.r.l.</td>
<td>USA</td>
</tr>
<tr>
<td><a href="http://www.amazon.de">www.amazon.de</a></td>
<td></td>
</tr>
<tr>
<td>2. Otto (GmbH &amp; Co KG)</td>
<td>Germany</td>
</tr>
<tr>
<td><a href="http://www.otto.de">www.otto.de</a></td>
<td></td>
</tr>
<tr>
<td>3. NOTEBOOKSILLIGER.DE AG</td>
<td>Germany</td>
</tr>
<tr>
<td><a href="http://www.notebooksilliger.de">www.notebooksilliger.de</a></td>
<td></td>
</tr>
<tr>
<td>4. Zalando AG</td>
<td>Germany</td>
</tr>
<tr>
<td><a href="http://www.zalando.de">www.zalando.de</a></td>
<td></td>
</tr>
<tr>
<td>5. Verlagsgruppe Weltbild GmbH</td>
<td>Germany</td>
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<tr>
<td><a href="http://www.weltbild.de">www.weltbild.de</a></td>
<td></td>
</tr>
<tr>
<td>6. Conrad Electronics SE</td>
<td>Germany</td>
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<td><a href="http://www.conrad.de">www.conrad.de</a></td>
<td></td>
</tr>
<tr>
<td>7. Tchibo GmbH</td>
<td>Germany</td>
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<td><a href="http://www.tchibo.de">www.tchibo.de</a></td>
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</tr>
<tr>
<td>8. bonprix Handelsgesellschaft mbH</td>
<td>Germany</td>
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<td><a href="http://www.bonprix.de">www.bonprix.de</a></td>
<td></td>
</tr>
<tr>
<td>9. Cyberport GmbH</td>
<td>Germany</td>
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<tr>
<td><a href="http://www.cyberport.de">www.cyberport.de</a></td>
<td></td>
</tr>
<tr>
<td>10. Esprit Retail B.V. &amp; Co. KG</td>
<td>USA</td>
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<td><a href="http://www.esprit.de">www.esprit.de</a></td>
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Source: Germany Trade and Invest - Gesellschaft für Außenwirtschaft und Standortmarketing mbH
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References

Thank You!