Chapter XI

Interaction of Adoption Factors:
Do SMEs Achieve the Desired Benefits from E-Commerce Adoption?

For each of the three locations, the previous chapters have examined the four different aspects of e-commerce adoption (criteria, barriers, benefits, and disadvantages) both as a complete set and also by different categories of SMEs, depending on whether they were members of a business alliance, on the gender of their CEO, and on the CEO’s level of education. The results reported are indicative of the diversity of the SME sector and represent a useful starting point when developing programs or initiatives to promote e-commerce adoption in SMEs. We will examine their implications further in the final chapter. In this chapter, we aim to determine whether four different aspects of e-commerce adoption actually affect one another. Therefore, this chapter will examine the interaction between the criteria, benefits, and disadvantages of e-commerce in those SMEs that have adopted the technology. The following chapter will consider the interaction of barriers and potential drivers in organisations that do not use e-commerce.

While many SMEs are driven to adopt e-commerce for various external and internal reasons, as we have already seen, the question that remains unanswered is whether any of the reasons that drive this adoption have any bearing on the subsequent benefits and disadvantages experienced following the implementation of e-commerce. If an SME adopts...
e-commerce to increase sales, does it actually achieve this goal through e-commerce? Our primary aim in this chapter, therefore, is to examine whether the varying priorities placed on criteria for e-commerce adoption are associated with the positive or negative outcomes of this adoption.

This chapter will present the results of a series of linear regressions, which were applied to e-commerce benefits and disadvantages in order to determine whether their rating was statistically significantly associated with the rating of any of the e-commerce adoption criteria. Linear regression was used as it was shown that many of the criteria were strongly correlated (see Chapter IV). A full list of e-commerce criteria, benefits, and disadvantages used in this chapter can be found in Chapters IV, VI, and VII respectively. Unfortunately, there were few responses to the questions concerning benefits and disadvantages from the U.S. sample, rendering insufficient data to effectively apply any statistical measure. The same analysis will be performed on certain categories of SMEs (following the sub-division of the data) in order to determine whether the interactions between criteria and benefits and criteria and disadvantages differ within these various categories. These results are presented in the final sections of the chapter.

### E-Commerce Criteria and Benefits in Sweden

We found a number of statistically significant associations in the Swedish sample between e-commerce criteria and benefits. Nine of the ten benefits tested showed a significant association with one or more e-commerce adoption drivers. These are shown in Tables 1 to 9, which also indicate the relevant p value, and will now be discussed.

Table 1 shows that three criteria (reduced costs, improvements to internal efficiency, and stronger relations with business partners) are associated with the benefit of lower administration costs. The results show that there is a strong association (significance levels of .000 and .001 respectively) between the criteria “reducing costs” and “improving internal efficiency” and lower administration costs. A less significant association (.033) was found with the criterion “strengthening relations with business partners. In all cases, those that

<table>
<thead>
<tr>
<th>Dependant variable lower administration costs</th>
<th>Beta</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce cost.</td>
<td>.370</td>
<td>.000</td>
</tr>
<tr>
<td>Improve internal efficiency.</td>
<td>.278</td>
<td>.001</td>
</tr>
<tr>
<td>Strengthen relations with business partners.</td>
<td>.204</td>
<td>.003</td>
</tr>
<tr>
<td>R Squared</td>
<td>.427</td>
<td></td>
</tr>
<tr>
<td>Adjusted R squared</td>
<td>.363</td>
<td></td>
</tr>
<tr>
<td>p value for the complete regression table</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Regression table for lower administration costs
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