Export Channel Dynamics: An Empirical Analysis of Changes in the Organization of Foreign Distribution

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September 1999

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Abstract. In this paper we use longitudinal data from a sample of Danish exporters in order to investigate the dynamics of export organization. Building on previous research, we model such decisions as an interplay between various switch inducing (motivators) as well as switch impeding (costs) factors. We extend previous analyses by looking simultaneously at both replacements of foreign intermediaries (within-mode shifts) and integration of the sales function abroad (between-mode shifts).

I. Introduction

Whenever a company wants to start exporting to a foreign market, decisions must be made as to how its sales activities in that market should be carried out and by whom. First, the exporting firm has two main alternatives; either it can perform the sales activities itself (through its home- or foreign-based salespeople), or it can entrust another company – a sales agent or a merchant distributor – to take care of its sales in the foreign market. For the exporting company this is a strategic decision of considerable importance. The exporter must recognize that the two alternatives differ considerably along several dimensions, particularly with respect to the levels of control, resource commitment, and risk. In turn, the revenues as well as the costs of foreign sales will also be affected (Luostarinen and Welch, 1990). Second, if the exporter has chosen to externalize its sales activities in the foreign market, it has to decide whom it will assign as its local representative. Sometimes this choice is an easy one if one local intermediary stands out among the rest in terms of superior marketing capabilities and, moreover, the outstanding intermediary is interested in carrying the lines of the exporting firm. More often, however, the selection process is fraught with uncertainty and fortuitous searching efforts (Munro and Beamish, 1987; Calof, 1993).

Once a decision has been reached and the company starts deploying resources to a particular course of action, the chosen way of operating in the foreign market may over time become increasingly difficult and costly to change (Anderson and Coughlan, 1987). Such decisions are therefore likely to be given thoughtful consideration by top management.

Even though the choices of foreign entry modes and of the identity of the foreign intermediary are likely to be "sticky", they are nevertheless clearly not irreversible (Benito et al., 1999). Some studies indicate that, over time, companies do in fact change the ways their sales activities in foreign markets are organized (e.g. Johanson and Wiedersheim-Paul, 1975; Calof, 1993; Pedersen et al., 1997). Many companies start with export sales through intermediaries (i.e. agents or distributors). Sometimes they decide later on to establish their own foreign sales subsidiaries. The literature on firms' internationalization suggests a number of reasons why such conversions may take place: inter alia, reduced perceived risk of operating abroad, increased sales volume in the foreign market, dissatisfaction with current operations, and a larger company resource base (see e.g. Johanson and Vahlne, 1977; Nicholas, 1986; Calof, 1993; Calof and Beamish, 1995; Madhok, 1997).

In some other instances, companies may want to continue with an intermediary arrangement, such as using an agent, as the way of serving a particular foreign market (Petersen et al., 1998). However, being disappointed with the performance of their current intermediary, and/or having identified other intermediaries with the potential for better performance, firms may consider replacing their current intermediary with another one. Such

changes are not trivial. Even though replacing an intermediary could seem to be somewhat less drastic than actually integrating the sales function in a foreign market, such changes can be costly to make. Contractual restrictions such as severance payment, difficulties in finding new intermediaries, and potential loss of sales add up to making the switch from one intermediary to another into a decision that needs to be carefully analyzed.

How often do companies switch from one intermediary to another or from one operation method to another? What induces such changes, and what impedes them? Only a handful of studies have looked into the dynamics of export organization (Pedersen et al., 1997; Petersen et al., 1998). These questions therefore remain largely unanswered.

In this paper, we use longitudinal data from a sample of Danish exporters in order to investigate the dynamics of export organization. Our approach builds on previous studies by Benito et al. (1999), Pedersen et al. (1997) and Petersen et al. (1998), who modeled such decisions as an interplay between various switch *inducing* (motivators) and switch *impeding* (deterrents/costs) factors. However, whereas previous studies focused either on changes of entry mode (i.e. switching from using agents to establishing own sales subsidiaries) or, alternatively, on replacements of intermediaries, in the present paper we look at both possible options simultaneously. As mentioned earlier, whenever an exporting firm considers changing its current practice in a foreign market, it can do so in two basically different ways; either by integrating the sales function in the foreign market or by replacing its current intermediary. The two alternatives are usually *mutually exclusive*[1], and because it seems reasonable to expect that firms do not, generally, have preconceived opinions about which one they ought to choose, they are also *real* alternatives available to a firm. Hence, a model that includes both options provides a more realistic treatment of the decisions firms may make regarding their organization of foreign distribution. This study therefore represents an improvement over previous analyses.

II. Modeling changes in foreign distribution

How can changes in foreign market servicing methods be modeled? Let us assume that at a given point in time *t*, all of a set of companies exporting to a foreign market used intermediaries as their means of selling to that market. Over time this may change. For example, during a certain time interval, say *t* to $t + \Delta t$, while many companies may have chosen not to make any changes on how they service the market, other companies may have carried out changes. The event y_0 of whether or not a change has been made is defined as,

$$y_0 = \begin{cases} 1 \text{ if a change has been made,} \\ 0 \text{ otherwise.} \end{cases}$$

It should be noted that since a company cannot simultaneously decide both to carry out changes and not to make any changes, these events are mutually exclusive. Hence, $p\,(y_0 = 1) = 1 - p\,(y_0 = 0)$. Of course, even those companies that have not made any changes over a given time interval may decide to change *at a later point*. The issue is simply that their initial state persisted over the time interval under observation. Generally, the probability that the initial state (i.e. the use of an intermediary) "survived" for a period of time *T* is specified as:

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[1] The alternatives are not necessarily mutually exclusive since one can think of, supposedly rare, situations where a firm appoints a new intermediary and, at the same occasion, internalizes some marketing responsibilities, thereby establishing a dual distribution system.

(1) $Pr\,[\,t\,\leq T\leq\,t+\Delta\mathrm{t}\mid T\geq t\,]$

Given that a company does make a change, these can – as noted above – basically be of two types; either the company replaces its current intermediary with another intermediary, or the company switches to in-house sales activities (i.e. vertical integration). Hence, if $y_0 = 1$, a further set of events y_1 must also take place, defined as follows:

$$y_1 = \begin{cases} 1 \text{ if switch to in-house operations,} \\ \\ 0 \text{ if intermediary at time } t \text{ is replaced.} \end{cases}$$

In principle, changes can, if they do take place, happen at any point in time during the interval $[\,t, t + \Delta t\,]$. The hazard rate $h_i(t)$, i.e. the probability that an event y_i will occur at some point given that the event has not previously taken place, is given as,

(2) $h_i(t) = \displaystyle\lim_{\Delta t \to 0} Pr\,[\,t\,\leq T\leq\,t+\Delta\mathrm{t}\mid T\geq t\,]\,/\,\Delta t$ $i = 0, 1$

What factors explain the probability that a company over a period of time will make some change to how it operates in a foreign market? Previous literature, although relatively scarce, has suggested several variables – or covariates – that are likely to have an impact on such decisions. Some of these covariates are *structural*. They relate to unchanging characteristics of the individual cases (for example, the foreign market in question). They can also describe a particular feature of a case at the point t, when it becomes at risk of an event y: for example, the extent to which an exporter was satisfied with its sales in a particular foreign market. In contrast to structural variables whose values do not change over the observation period, other variables relate to phenomena that are likely to *change over time* (time-varying covariates). For example, in a given foreign market demand-related factors such as the size of the market and the purchasing power of consumers in that market will most likely change over the years.

Letting $\boldsymbol{X}_t$ denote the set of structural variables at time t, and $\boldsymbol{Z}_{t + \Delta t}$ the set of time-varying covariates, respectively, a simple model of export channel dynamics can be formulated as:

(3) $h_i(t) = h\,[\,\boldsymbol{X}_t\,,\boldsymbol{Z}_{t + \Delta t}\,]$ $i = 0, 1$

The various covariates are described and discussed in the next section.

III. Determinants of export channel dynamics

Previous studies on various aspects of export channel dynamics have pointed out that changes in the way exporters organize their sales activities in foreign markets largely depend on two sets of factors: switch motivators and switch deterrents (Benito et al., 1999).

The two types of factors work in opposite directions. Motivators are factors that to some extent negatively change the perceived utility of continuing with the current set-up regarding foreign sales, and which therefore should increase the probability of making alterations to the current organization of export sales. In contrast, switch deterrents are a set of factors that make it difficult or costly (these factors have hence also been labeled *switching costs*) to actually carry out such changes.

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Earlier studies of export channel dynamics suggest that important switching motivators are: *i*) the exporter's dissatisfaction with the performance of the current intermediary; *ii*) the exporter's accumulation of market knowledge; *iii*) export market growth; and *iv*) growth of the exporting company. First, a number of studies report that exporters' perception of poor performance of the intermediary over a prolonged period is a fundamental reason for change (e.g. Anderson and Narus, 1990; Calof and Beamish, 1995). Second, the gradual accumulation of market knowledge should work as a switch motivator. Increased market knowledge reduces uncertainty and may make high-commitment investments in a foreign market appear less risky (Johanson and Vahlne, 1977). The accumulation of market knowledge may also prompt an exporting firm to consider replacement of its local representative by a new one. As the exporting firm gets more knowledgeable about the foreign market it may spot other local intermediaries that appear to be more skillful and enthusiastic (Petersen et al, 1999). This is in particular likely if the selection process leading to the appointment of the first intermediary has been a haphazard one. Third, export market growth is an indication of the expected sales volume in the foreign market in question, and it has been shown to be an important discriminating factor in the choice of distribution channels in foreign markets (Klein, Frazier and Roth, 1990). Because a sales subsidiary entails higher fixed costs for the exporter than using an intermediary, it can only be justified if sales volume is sufficiently large (Buckley and Casson, 1981). Finally, as an exporting company grows it will gain more financial and managerial resources. This may work in favor of choosing more high-commitment modes, which can be quite resource demanding both in terms of financial means and managerial capacity (Penrose, 1956; Welch and Luostarinen, 1988).

The various switching motivators point toward a change of the current foreign intermediary, although the firm has two alternative change options: either switching to another foreign intermediary or to an in-house operation. The two alternatives differ with respect to risk, commitment and required resources. Different switching motivators should be expected therefore to determine whether an exporting company just makes a shift of foreign intermediary or whether the operation mode itself is changed. In the former case, one would expect the motivation for changing to be very much related to dissatisfaction with the current intermediary, but not necessarily with other changes in internal and external conditions. In the latter case, the switching motivators should be expected to be a broader range of changes in conditions (including deteriorating satisfaction with the intermediary). Thus, while the companies may choose only to replace their foreign partner in the former case, it seems probable that they would go further and switch even the operation mode itself in the latter case. Accordingly, we expect that exporters' dissatisfaction with their current intermediaries will be positively correlated with switching to another intermediary as well as with switching to an in-house operation.

Hence, we expect replacements of an intermediary not to be correlated with any switching motivators other than dissatisfaction with the intermediary and accumulation of market knowledge. With regard to switching to in-house operations we predict that such switches are influenced by two additional switch motivators: export market growth, and company growth.

In our model, "the flip side of the coin" consist of a range of the switching deterrents, i.e. factors that hinder or make it costly to make changes in the distribution channel. According to Pedersen et al. (1997), important switching deterrents are; *i*) contractual restrictions, *ii*) loss of local sales revenue, *iii*) recruitment and training costs, and *iv*) foreign operation learning costs (see Benito et al. (1999) for an in-depth discussion of switching costs). The impact of switching costs may, again, differ depending on what type of switch a firm makes. On one hand, contractual restrictions as well as potential losses of sales revenue

are clearly relevant to take into account when considering whether a foreign intermediary should be replaced. On the other hand, recruitment and training costs as well as foreign operation learning costs pertain clearly only to establishing a foreign sales subsidiary. As a consequence, such costs should only affect the decision to switch from an intermediary to using an in-house sales-force.

Table 1 summarizes our hypotheses regarding the expected effects of the various switching motivators and switching deterrents on the choice of distribution channel.

Table 1 about here

IV. Methodology and data

In order to test the hypotheses, we use data on foreign distribution channels measured at two different points in time, 1992 and 1997. Also, the analysis is based on data covering actual switches.

Data were collected in two steps. The first step was to collect data about the actual foreign distribution channel on the particular foreign markets, and to map the respondents' perception regarding various issues related to the possibilities and problems of switching operation mode. The collection of these "pre-switch" data was conducted in 1992. The next step was taken in 1997, when data was obtained about the occurrence of switches of foreign operation method. The "post-switch" data basically consist of information on changes, if any, in the distribution channel on the particular markets since 1992 and the exact year in which an eventual switch took place.

Step One: The Pre-Switch Data

Data were collected in a survey of Danish manufacturing companies with export activities. Companies that in 1992 had only quite limited experience with exports (i.e. they exported to neighbouring countries only) or had equity below 15,000 US$, were excluded from the sampling frame. After exclusion of these small and inexperienced exporters, a total population of 1,365 companies appeared. In 1992, the identified export managers, or - as a second choice - managing directors, of all companies in this population received a detailed, mailed questionnaire. Prior to distribution, the questionnaire had been tested in two rounds - with an intermediary revision - on the export managers of two companies. Before answering the thirty questions included in the questionnaire, the companies were asked to select one export market where the export market had been served by an independent intermediary over a continuous period of at least one year. In those cases where several export markets fulfilled the criteria, the respondents were asked to choose the market representing the largest sales potential (see Petersen, 1996, for a more detailed discussion of the selection criteria). Usable replies from 349 companies where received[2].

Step Two: The Post-Switch Data

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[2] The data base of the 349 Danish exporting firms includes basic information (such as total sales, number of employees, and industry), as well as more specific data on the activities on the particular foreign market where the exporter was represented by an independent intermediary. Included were data on the relationship between the Danish exporter and the foreign intermediary (such as the type of contract, remuneration, and termination rules), and a range of questions about the Danish exporter's perception of the foreign market (for example, competition, and sales potential) and the effort of the foreign intermediary.

In 1997, the 349 companies were again contacted for a telephone interview on possible changes since 1992 in the operation mode on the particular foreign market. Most of the interviewed persons were export managers responsible for the activities on the particular market. The aim of the interviews was to check whether the Danish exporter still served in 1997 the foreign market via an independent intermediary, or whether it had changed the entry mode on the particular market. In case they had changed the entry mode, we asked the respondents to list all changes of operation mode on the market from 1992 to 1997. For various reasons we had to exclude 60 companies from the initial sample of 349 companies. The final sample consists therefore of 276 companies[3].

Entry Mode Shifts in the Final Sample from 1992 to 1997
The data provides interesting information about the frequency of switches of operation mode: 182 companies, or two thirds of the companies, were served by the same intermediary in 1997 as they were in 1992. However, the remaining 94 companies had made some kind of change since 1992 in how they served the particular market. Of these, 48 companies had shifted to a new intermediary or established their own sales organization alongside the existing independent intermediary in the foreign market ("dual distribution").

Operation mode switches were implemented by 36 companies. Nearly all of these switches were from an independent intermediary to own sales organization (i.e. sales subsidiary, local sales office, or home-based salesforce), thereby "internalizing" the sales and marketing activities in the foreign market. Moreover, an additional 10 companies indicated that they intended to switch their entry mode in the near future.

All in all, during the last five years 17 per cent of the companies (46 companies) had switched, or were soon to switch, their entry mode in the particular market, and a further 17 per cent of the companies (48 companies) had shifted to a new partner (intermediary) or established dual distribution. The data hence show that changes in entry mode and shifts of foreign partner are far from infrequent occurrences.

Table 2 about here

In the present analysis, we have excluded those companies that had made only minor changes (i.e. no switch of intermediary but established "dual distribution") or had just intentions to do so. As shown in table 2, this gives us a total of 260 companies split into two consistent groups: 182 companies without any shifts, 42 companies have switched foreign intermediary, and 36 companies with a complete switch to an in-house operation. However, due to missing values, 6 cases had to be excluded from the statistical analysis, hence bringing the number of observations down to 254.

Operationalization
While most of the variables are structural variables (X_t) that remain constant during the observed time period, two of the variables should measured as time varying covariates ($Z_{t + \Delta t}$)

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[3] 23 of the Danish exporters had been liquidated or merged into another since 1992, and in 15 cases sales to the particular market had ceased. In 22 cases we had no information about which market the original questionnaire covered, which made it impossible to check changes of market servicing method. The corrected sample was then 289 companies. Among these companies only 7 companies refused to answer, but in 6 other companies we could not get in touch with the right person.

that allow for changing conditions during the observed time period. These two variables are growth of the export market and growth of the exporting company.

Our first set of variables are the various switching motivators (M). The variable "Dissatisfaction with intermediary" was constructed on the basis of three items. The companies were asked three questions: How does the company perceive the success of the intermediary in terms of *i*) market penetration, *ii*) profitability of export, and *iii*) the effort made? All three items were measured on a 7-point Likert scale. The three items were then added to one single variable. Cronbach's coefficient alpha for this variable is 0.83.

Following other studies on firms' internationalization process (Welch and Luostarinen, 1988), the time spent in a particular foreign market was used as a proxy for "accumulation of market knowledge". This variable was measured as the number of years since the company made the first agreement with the particular foreign intermediary. This variable was entered in logarithmic form in order to capture the decreasing rate of knowledge accumulation.

The two variables "growth of market" and "growth of company" were both based on secondary data. The yearly growth rate of GDP in the foreign market was used as a proxy for market growth. Clearly, this is a rough proxy covering the general development in the foreign country, and not the growth in the market of the particular product *per se*. Unfortunately, it was not possible to get a more disaggregated, and hence better, measure of market growth. The growth of the company was measured in terms of employment growth. Both growth variables were measured in each year from 1990 to 1995. A lagged specification (one year lag) was used because it is reasonable to expect a certain time lag until changes in the growth rates affect decisions on foreign operation method.

Out second set of variables comprise the various switch deterrents (D). "Contractual restrictions" were measured straightforward as the period of time the intermediary should be notified in advance in case of termination of the agreement. Whether the foreign intermediary was taking care of after-sales activities was used a as proxy for "loss of sales revenue". Following Heide and John (1988), the argument is that the more service the foreign intermediary is offering the customers, the more the customers are loyal to the intermediary, and as a result, the larger the loss of sales revenue in case of termination.

Like in the Weiss and Anderson's (1992) study, the companies were asked directly about their assessments of the "potential costs of hiring, recruiting and training" their own sales force for the foreign market. The share of total turnover originating from the Danish home market was used as a proxy for (lack of) "international experience".

In addition to the aforementioned variables, we included two control variables (C) in our empirical model: (1) monitoring capabilities and (2) cultural distance to the foreign market in question. The control variables were measured as follows. In order to capture "monitoring problems" respondents were asked to assess the extent to which their companies found it difficult to control the effort of their foreign agents (a 7-point Likert scale was used). The Kogut-Singh index (Kogut and Singh, 1988) was used to measure cultural distance. The Kogut-Singh index is a composite index based on Hofstede's (1983) four cultural dimensions (power distance, uncertainty avoidance, individualism-collectivism, and masculinity-femininity), and gives a metric for the cultural distance between Denmark and the various foreign markets. The operationalization of the explanatory variables is summarized in Table 3.

Table 3 about here

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Model Specification and Estimation Results
Based on our conceptual framework, changes in the organization of foreign distribution are a function of following sets of factors;

(4) $\quad y_i = f[X_t{}^M, X_t{}^D, X_t{}^C, Z^M{}_{t+\Delta}]$ $\qquad i = 0, 1$

where, $X_t{}^M$ is the vector of structural switching motivators, $Z^M{}_{t+\Delta}$ is the set of time-varying switching motivators, $X_t{}^D$ denotes the vector of switching deterrents, and $X_t{}^C$ represents the two control variables.

Because some of our independent variables are time-varying covariates and some of our observations are right-censored, we use Cox's partial likelihood technique to estimate our model (Cox, 1972). This technique was designed for longitudinal data on the occurrence of events where an event is defined as a qualitative change that can be situated in time; in this case, the events y_i are changes in foreign distribution channels. It uses the dependent variable (i.e. the time when the event(s) took place) and information on whether it has been censored to construct the hazard rate $h(t)$, which indicates the probability that an event will occur at a given time, conditioned that the event had not taken place up to that time. Our empirical model is,

(5) $\quad h_i(t) = h_0(t) \exp[\beta X_t{}^M, \beta X_t{}^D, \beta X_t{}^C, \beta Z^M{}_{t+\Delta}]$ $\qquad i = 0, 1$

where $h_0(t)$ is the baseline hazard, and the βs denote the vectors of regression parameters associated with the explanatory variables. The coefficient estimates in this model test whether the independent variables increase or decrease the hazard rate that a particular event will occur (i.e. that a company will make some kind of switch in the distribution channel). The advantage of Cox's partial likelihood technique is that we do not need to specify the form of the underlying hazard distribution. Moreover, in according to our discussion in section II, we are able to run a competing risk model where companies that have already made one switch (either to another intermediary or to an in-house operation) no longer run the risk of another switch. This is particularly relevant in this case where the two methods of switching operation method are mutually exclusive. We estimate these models using PROC PHREG in SAS (1991) which is often referred to as a "proportional hazard regression model".

An alternative statistical technique we could use is the multinominal logit regression model. However, the proportional hazard model has several advantages compared to the multinominal logit model in our case; principally, that we can include time varying covariates and run a competing risk model. Both these features of the hazard model emphasize the dynamic aspects of our model that provide a better reflection of the actual dynamics of channel decisions in foreign markets.

Table 4 shows the results of the model estimations. The first model (column 1), labeled "Any Switch", analyses the factors that influence a switch to either another intermediary or an in-house operation. This model is run mainly for comparison purposes.

Because we hypothesize that the factors that lead to shift of the intermediary differ from those that cause switch to own in-house operation, and because we treat the two events as mutually exclusive, we run a competing risk model which makes a simultaneous estimation of the determinants of both the two possible events. The first run of the competing risk model, labeled "Switch to Another Intermediary" (column 2), reports the determinants of the probability that a company will shift the intermediary, while treating switch to own in-house

operation as censored at occurrence. The second run of the competing risk model, labeled "Switch to In-house Operation" (column 3), looks at the determinants of internalizing the foreign operation, treating shift of intermediary as censored.

The Chi-square coefficient associated with each model expresses the probability that the configuration represented by the whole model could have been obtained randomly. The competing risk model for switch to another intermediary (column 2) has a probability of 0.07, which means that the probability that our prediction will be generated by pure chance is slightly over the five percent. The competing risk model for switch to own in-house operation (column 3) has a better fit, with a probability of less than 0.004 that this model could have been obtained by chance. The model for any switch (column 1) has an excellent fit with a chi-square of 27.8 (10 d.f.). The probability that such a configuration will happen by chance is less than 0.002.

The results of the competing risk models confirm that analyzing separately shift of intermediary and switch to in-house operation improves our ability to explain switches, as the sum of the chi-squares of the competing risk models ($\chi^2_2 + \chi^2_3 = 42.7$) is significantly higher than that of the model for any switch ($\chi^2_1 = 27.8$). The improvement of 14.9 is statistically significant after controlling for the increase in the number of parameters. This is also reflected in the coefficients with some parameters being significant in one run, but not in the other.

Table 4 about here

V. Results and discussion

Apparently, the prediction of mode shifts is to be found in an interplay between, on the one hand, changes of organizational and environmental conditions that act as switching motivators, and, on the other hand, the switching costs associated with a shift. As such, the mode shift decision seems to implicate a cost-benefit analysis. However, the elements of switching motivators and switching deterrents are affecting the choice of either switching to another foreign intermediary or an in-house operation in different ways.

The only switching motivator that affects the choice of switching to another intermediary is dissatisfaction with the current intermediary. The coefficient of 0.35 is highly significant ($p < 0.03$). None of the other switching motivators seems to have any significant effect on the shift of intermediary, including accumulation of market knowledge.

This is in contrast to the switch to own in-house operation where three of the four switching motivators turn out to be significantly and positively correlated. However, the are all moderately significant with coefficients of 0.36 ($p < 0.06$), 0.03 ($p < 0.08$) and 0.08 ($p < 0.09$), respectively.

Among the switching deterrents there is only one significant coefficient for the shift of intermediary; "contractual restrictions" which, as expected, is significant with a negative coefficient of –0.91 ($p < 0.05$). None of the other switching deterrents seem to have any significant influence on the shift of intermediary. Counter to our expectation, anticipated loss of local sales revenue did not significantly impede the exporters' replacement of local intermediaries, but did deter switch of entry mode. A possible explanation is that an important reason for exporters to replace local intermediaries is the poor sales performance of the latter. Having generated only limited sales in the foreign market the potential loss of customers caused by a termination of the intermediary will, accordingly, have insignificant economic consequences. The situation may very well be quite different when the switch is from an

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intermediary to own sales organization: the internalization could then be a result of the large sales volume achieved in the local market. It is unlikely that an exporting firm will venture into an in-house arrangement (such as a sales subsidiary) unless a substantial sales volume has been generated by the local intermediary. Since the establishment of a sales subsidiary incurs considerable fixed costs the exporting firm will be more vulnerable to (and alert about) loss of sales revenue.

For the switch to in-house operation the most important switching deterrent turns out to be "recruitment and training costs", which is highly significant with a negative coefficient of -0.46 ($p < 0.001$), while "loss of sales revenue" is moderate significant with a coefficient of -0.76 ($p < 0.08$). Moreover, cultural distance also seems to affect switches: increased cultural distance decreases the probability to switch to an in-house operation.

VI. Conclusion and suggestions for further research

Overall, this study clearly demonstrates the dynamic nature of the organization of export activities. Using data from a sample of Danish exporting companies, this study finds that within the observed five-year period almost one third of the exporters completed some kind of shift away from using the current independent intermediary. The analysis suggests that the choices of switching to another intermediary and to own in-house operation are driven by different factors. The main reason for the shift of intermediary is the perceived dissatisfaction with the performance of the current intermediary, while the main obstacles for such changes are contractual restrictions like termination clauses in the contract with the current intermediary. These results indicate that the factors influencing the choice of shift of intermediary is rather straightforward, and largely in accordance with previous studies of export channel dynamics.

With regard to the switch from independent intermediary to in-house operation a larger set of factors seems to influence such decisions. The main reasons for making such changes are 1) dissatisfaction with the intermediary's performance, 2) an increased level of foreign experience which in turn makes companies more willing and prepared to make commitments in a foreign market, and 3) high export market growth indicating a larger future sales potential. The main deterrents for making the change to own in-house operations are 1) perceived recruitment and training costs when establishing the foreign operation, and 2) the fear of loss of local sales revenue in case of a switch away from the current intermediary.

Being among the first to investigate foreign distribution channel decisions in a longitudinal perspective, this study has an exploratory character and the results should therefore be regarded as tentative. While several limitations should be noted, the very same limitations open interesting avenues for future research. First, although the reasoning underlying the framework presented here was by and large supported by the empirical analysis, some hypotheses failed to receive statistical support. Somewhat crude measurements may have had some part in this. In particular, GNP and growth in GNP are rather imprecise proxies for market size and market growth, and efforts should be made in future studies to collect data on more disaggregated levels. Also, multi-item measures on multifaceted variables such as accumulation of market knowledge would increase measurement reliability. Second, the findings presented here pertain to the behavior of a particular sample of Danish exporters, and future studies should examine to what extent our findings can be generalized to other empirical settings.

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Table 1. Expected effects of the independent variables on the choice of distribution channel.

Independent variables		Switch to another intermediary	Switch to an in-house operation
Switching Motivators	Dissatisfaction with the current intermediary	+	+
	Accumulation of market knowledge	+	+
	Export market growth	No effect	+
	Growth of the exporting company	No effect	+
Switching Deterrents	Contractual restrictions	-	-
	Loss of local sales revenue	-	-
	Recruitment and training costs	No effect	-
	Foreign operation learning costs	No effect	-

Table 2. Changes of foreign market servicing method from 1992 to 1997.

Categories	No. of cases
a. No major change in foreign distribution since 1992	182
b. Had replaced the intermediary	42
c. Had switched entry mode since 1992	36
Total	260

Table 3. Description of independent variables and data sources.

Variable	Measurement	Data source*
Switching motivators		
1. Diminishing satisfaction	How does the company perceive the succes of the intermediary in terms of *i*) market penetration, *ii*) profitability of export and *iii*) the effort made? (Likert-scale: 1 = very satisfactory, 7 = very dissatisfactory)	Questionnaire
2. Accumulation of market knowledge	Log of number of years since the company made the first agreement with a foreign intermediary in the market	Interview
3. Growth of market	Growth in GDP at constant prices from 1990 to 1995 in the particular market	World Marketing Data and Statistics 1997
4. Growth of company	Growth in employment from 1990 to 1995 (in 100)	CD-Direct's database on Danish companies
Switching costs		
5. Contractual restrictions	The period of time the intermediary should be notified in advance in case of termination of the agreement	Questionnaire
6. Loss of sales revenue	Is the foreign intermediary taking care of after-sales activities? (dummy: 0 = yes, 1 = no)	Questionnaire
7. Recruitment and training costs	What would be the costs if the company had to recrute and train its own sales force for the particular market? (Likert-scale: 1 = expecting minimal costs, 7 = expecting huge costs)	Questionnaire/ Interview
8. International experience	The share of total turnover sold on the Danish home market	CD-Direct's database on Danish companies
Control variables		
9. Monitoring problems	How difficult is it to monitor the effort of the intermediary? (Likert-scale: 1 = rather simple, 7 = very difficult)	Questionnaire
10. Cultural distance	Kogut-Singh index	Own calculations based on questionnaire data

Note: * The questionnaire data were collected in 1992 and the (telephone) interviews were conducted in 1997.

Table 4. Overall model results: Cox-models.

Independent variables	(1) Any switch	(2) Switch to another intermediary	(3) Switch to an in-house operation
Dissatisfaction with the current intermediary	0.36***	0.35**	0.36*
Accumulation of market knowledge	0.03**	0.02	0.03*
Export market growth	0.05	0.01	0.08*
Growth of the exporting company	-0.03	-0.22	0.04
Contractual restrictions	-0.91**	-0.91**	-0.76
Loss of local sales revenue	-0.16	0.61	-0.76*
Recruitment and training costs	-0.22**	0.02	-0.46***
Foreign operation learning costs	-0.01	-0.01	-0.01
Monitoring capability	0.18*	0.18	0.19
Cultural distance	-0.13	-0.06	-0.21*
No. of observations	254	254	254
Percent censored	78.7	89.0	89.8
-2 log L (Chi-square)	27.8*** (10 d.f.)	16.9* (10 d.f.)	25.8*** (10 d.f.)

Note: ***, **, and *, denote significance at 1%, 5%, and 10% levels, respectively (two-tailed tests).