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**IMPLICATIONS OF ENTRY MODE CHOICE**

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**EFFICIENCY OR NOT?**

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## Abstract

The purpose of the paper is to explore the efficiency implications of entry modes in the context of perceived uncertainty. Three structural models were developed and tested by a sample of 60 Finnish cases having licensing, joint venture or wholly owned subsidiary operations in Asia using PLS estimation technique. The results of the study suggest that entry mode choice as such has a limited role in coping with uncertainty.

*Keywords:* Efficiency, perceived uncertainty, entry mode choice, Asia

## 1. Introduction

International entry modes have been extensively studied. The studies can be roughly divided into two areas: 1) those concentrating on the factors influencing the firm decision of operation mode choice and 2) those mainly interested in performance implications of different operation modes. Most of the studies have focused on the first area and as a result number of affecting factors has been identified. Much less attention has been drawn on the performance implications of different entry modes. Thus in spite of the extensive research conducted in entry mode field, important gaps exist on issues related to the performance implications of entry mode choices (Datta, Herrmann & Rasheed 2002; Canabal & White 2008).

Based on the results from the prior studies it is difficult, perhaps even impossible, to make unambiguous conclusions about potential performance differences of different entry modes. It is difficult because the results are inconsistent. In some studies there are significant performance differences between entry modes while in other studies no difference is found (see e.g. Chan 1995; Aulakh & Kotabe 1997; Makino & Beamish 1998; Shaver 1998; Shrader 2001).

There may be several reasons for the inconsistent results. First of all, in most of the studies, it has assumed that certain entry modes would outperform the others no matter of the context. The exception for the general view was e.g. a study by Anand and Delios (1997), in which it was noticed that depending on the sector in which the firm was operating, the influence of entry mode on performance differed. It was found that in the retail sector, acquisitions performed better than greenfields, but the opposite outcome was found in the wholesale sector. Thus different entry modes may perform well in different situations. Shaver (1998) argued that “empirical models that do not account for self-selection and regress performance measures on strategy choice variables are potentially misspecified and their conclusions incorrect”. By this it is meant that a certain entry mode may outperform some other entry mode in a specific context, but may do worse in some other

context. Thus, he argues that entry mode choice affects survival, but the effect is not universal. Brouthers, Brouthers and Werner. (1999, 2000), Shrader (2001) and Brouthers (2002) came to the same conclusion. In all of these studies, it was argued that the firms that choose a foreign entry mode according to the framework suggested in the study, would perform better than the firms whose mode choice could not be predicted by the model. The studies give support to the idea that in order to really understand the relationship between entry mode and performance, the context factors also need to be taken into account.

The theoretical frameworks used in the studies differ and so do their arguments and explanations for potential performance differences. Thus, the focus is on different issues. For example in TCA the focus is on cost minimisation, but in the organisational development approach the focus is on capability development. Although both cost minimisation and capability development may have an effect on performance, they influence through different mechanisms. In addition, the used measurements should be coherent with the theoretical arguments the research is based on. This means that if e.g. transaction cost approach is used as a framework then the performance measures should reflect the efficiency to adapt, monitor and safeguard. Nevertheless, this has not been the case in most of the entry mode – performance studies.

Thus, it is argued that there is a need to explore the performance implications of different entry modes in a certain context and focus on the performance measures which are coherent with the theoretical arguments the research is based on.

Entering and operating in international markets force a firm to encounter markets which vary in their intensity of competition, cultural characteristics, institutional environments, technological development and in other respects. These differences may lead to an increase in uncertainty because firms are unaware of what is going to happen in these markets in the future. However, firms cannot avoid entering into international markets, but are forced to find ways to cope with uncertainty. A great number of possibilities exist to cope with uncertainty ranging from financial arrangements to different strategic responses. Entry mode choice was considered as one of the methods of coping with uncertainty (Mascarenhas 1982; Miller 1992). From the managerial point of view the interesting question related to entry mode choice is that whether the operation modes differ in their ability to cope with uncertainty efficiently. Therefore, increasing the understanding of the relationship between uncertainty, entry mode choice and efficiency demands more attention.

Thus, the overall research question of the study is: ***Does an entry mode that aligns with managers perception of uncertainty provide better efficiency?*** The conceptual framework of the study is based on transaction cost approach. In the following section, the theoretical framework is developed. Thereafter discussion of methods and measurements is conducted followed by discussing the results of the structural model analyses. Subsequently, conclusions are drawn. The paper ends with discussion of the limitations of the study and recommendations for future research.

## **2. Theoretical framework**

### *2.1. Uncertainty types*

Uncertainty is clearly a complex concept, in which multiple dimensions can be found and should be taken into account. However, in prior studies multidimensionality has been understood to represent either the different dimensions of the environment like volatility and complexity or the different components of environment like macro-economic and political factors of the environment. In this paper we focus both on perceived primary uncertainty and behavioural uncertainty. Primary uncertainty is understood to represent the unpredictability of the future state of a specific component (Williamson 1985:571). Components of primary uncertainty chosen for the study are focused on two target country level components. ***Competition uncertainty*** reflects the unpredictability of future state of competition in the business area of the entering firm and ***demand uncertainty*** the unpredictability of the future demand for the product of entering firm. ***Perceived behavioural uncertainty*** on the other hand is related only to the potential partners in target country level and is thus understood to represent the unpredictability of opportunistic behaviour of a potential partner. (Miller 1992; Werner, Brouthers & Brouthers 1996).

### *2.2. Adaptation and control capabilities of entry modes*

TCA stresses the role of adaptability and control as important methods in coping with uncertainty (Williamson 1991:280). Therefore, a more detailed discussion about adaptation and control on a general level is first conducted. In entry mode choice studies the use of the adaptation concept has been rare and the focus has been more often on flexibility. The two concepts have often been used interchangeably, but here it is argued that they represent quite different aspects and therefore it is considered to be important to recognise the difference between flexibility and adaptation. Especially in strategic management literature flexibility has often been understood as a possibility to withdraw

from markets with least possible costs and therefore it has been strongly linked to the level of resource commitment (see eg. Anderson & Gatignon 1986; Hill, Hwang & Kim 1990; Driscoll & Paliwoda 1997; Aulakh & Kotabe 1997). Resource commitment on the other hand has been, in addition to the degree of control, one of the most often used factors to classify entry modes. Thus licensing, JV and WOS represent the increasing level of resource commitment, but at the same time the decreasing level of flexibility. However, although it is acknowledged that an entry mode requiring the least amount of resources may be a valuable tool for minimising risks by the possibility to exit more easily from foreign markets, the focus in this study is to explore the possibilities of different entry modes to adapt to changing circumstances without leaving the market or changing the operation mode and therefore the focus is on adaptability.

The other important method to cope with uncertainty, control, has often been connected with performance or the success of operations. However, Geringer and Hebert (1989) criticised prior studies for their narrow focus on studying the influence of only one specific control dimension rather than taking all dimensions into account. Through exploring the role of control on the performance and the success of international joint ventures, they identified the following three control dimensions: focus of control, extent of control and control mechanisms. In spite of the existence of three control dimensions, entry modes have often been classified according to the degree of control. The degree of control, on the other hand, has been linked with the degree of ownership and therefore the ability to control has been considered to be highest in WOS, medium in JV and lowest in licensing. However, the recognition that in addition to ownership level also other control mechanisms may influence the degree of control, raises questions about the importance of classifying entry modes according to the degree of control. The degree of control in the same entry mode may also vary depending on the focus of control.

Therefore, classifying entry modes according to the degree of control is considered to be too complex to be able to do it unambiguously. In addition, the degree of control is not believed to be the most important dimension in coping with uncertainty. The main difference between different entry modes in relation to uncertainty is argued to be based on control mechanism, because they create the framework through which both control and adaptation is conducted. Thus, control mechanisms and adaptation are considered to be related in a way that certain mechanisms facilitate specific adaptation styles (Williamson 1991).

Linking some of the mechanisms to specific entry modes may not be easy, because combinations of formal and informal mechanisms (Schaan 1983; Bartlett 1986; Aulakh & Gencturk 2000) may be used in the same operation mode. In addition, trying to differentiate eg. licensing and WOS based on formal and informal control mechanism is not going to work, because in general both are believed to be dominated by formal mechanisms. Therefore the classification of control mechanisms or control instruments by Williamson (1991:280) into contractual safeguard and administrative control might be a more appropriate way to classify entry modes. Williamson sees that the use of administrative control is weak in market governance, intermediate in hybrids and strong in hierarchy. In hybrids, however, the control instrument is considered to be a mixture of contractual safeguards and administrative apparatus. Williamson also divides adaptation instruments into two groups. The two opposite adaptation styles are autonomous and co-operative adaptation. What is meant by autonomous adaptation (A) is a situation in which each party can respond independently to changes in order to maximise their utility and profits. Co-operative adaptation (C), on the other hand, refers to a situation in which parties have a long-term bilateral dependency relation with each other, which requires co-ordinated responses to unanticipated disturbances from the parties. Autonomous adaptation is seen strongest in market governance and co-operative adaptation is seen strongest in hierarchy (Williamson 1991: 280–281).

Based on the discussion above it is strongly believed that in order to be able to hypothesise about the ability of different entry modes to cope with uncertainty, an appropriate way to classify operation modes should be based on both the control mechanisms and adaptation styles as suggested by Williamson (1991). Therefore, applying the classification of governance modes by Williamson in the entry mode choice context gives the classification seen in Table 1 as a result.

Licensing in its pure form represents strong reliance on contractual safeguards, meaning that the relationship between licensor and licensee is based on written agreement, in which also the penalties in the case of breach of contract are specified. Partners are considered to be independent and free to adapt to changing circumstances in whatever way they prefer without consulting with the partner and thus autonomous adaptations are considered to be high. Wholly owned subsidiaries represent the hierarchical control and adaptation system and, therefore, administrative control systems are considered to be high. Administrative controls like monitoring and career rewards and penalties are then used. In WOS parties also generally must and do resolve their differences internally, which requires high co-operative adaptation.

**Table 1.** Classification of operation modes according to control mechanisms and adaptation styles (adapted from Williamson 1991).

However, differences in the intensity of hierarchical relationships in WOS do exist. Menard (1996, 1997) eg. recognised four types of internal relationships: quasi market, autonomous group, simple hierarchy and complex hierarchy. The classification is based on the degree of human asset specificity and frequency and the types represent an increasing order of hierarchy. Therefore, including all the possible internal organisation types in entry mode choice context in a single category obviously is a simplification of more complex phenomena. However, it is believed that the classification is reliable when the level of hierarchical controls and adaptation styles of WOSs are compared to the level of JVs and licensing. JVs on the other hand can be considered as the most complex entry mode, because identification of control instrument or adaptation style dominant in JVs can not be so clearly specified as in the case of licensing and WOS. Rather JV can be seen to represent both types of control instruments and adaptation styles.

### *2.3. Efficiency*

In this section we are interested in exploring efficiency in the context of perceived uncertainty. Efficiency is understood to be achieved by minimising transaction costs (Williamson 1975, 1985) and, therefore, a discussion related to different types of transaction costs is conducted. Finally, transaction costs relevant to efficiency are identified and chosen for the study.

In the earlier versions of the transaction cost approach, transaction costs were not articulated clearly enough (Rindfleisch & Heide 1997:46). The main emphasis seemed to be on the differentiation between ex-ante and ex-post costs. Williamson (1985:20–22) explained the ex-ante costs to be caused from drafting, negotiating and safeguarding an agreement. Ex-post costs, on the other hand, were understood to include maladaptation costs, haggling costs, set-up and running costs associated with the governance structures and bonding costs of effecting secure commitments. Later, based on their findings from prior studies Rindfleisch and Heide (1997) presented three types of transaction costs, which they believed would increase the understanding of costs. These are costs, which are caused through safeguarding, adaptation and performance evaluation, which all cause both direct costs and opportunity costs. A cost of crafting safeguards refers to direct costs, which are invested in order to discourage potential opportunistic behaviour, and a failure to invest in productive assets

was considered to be the opportunity costs of safeguarding. Adaptation to environmental changes, on the other hand, was believed to cause direct communication, negotiation and co-ordination costs and opportunity costs were realised through the failure to adapt, also called as maladaptation. Screening and selection costs together with measurement costs represented the direct costs of performance evaluation and failure to identify appropriate partners and productivity losses through effort adjustments were considered to be the opportunity costs.

Contractor (1990) classified transaction costs into three groups, which differed somewhat from the classification of Rindfleisch and Heide (1997). Costs of negotiating and transferring the information and capability to the other firm and training their personnel formed the first group, opportunity costs of abdicating the market in favour of the licensee or JV corporation comprised the second group, and finally the third group of costs were incurred by the threat of creating a competitor in markets. However, sometimes different terms have been used to represent the same kind of costs. Thus eg. the often used bargaining cost, which is associated with negotiations between transacting parties, represents about the same as negotiation costs. In addition, monitoring costs, which are related to the guarantee of fulfilment of contractual obligations, can be regarded the same as measurement costs (Dahlström & Nygård 1999). Hennart (1989, 2000) on the other hand stressed the importance to also take into account the internal organisation costs, often called bureaucratic costs, in addition to the market transaction costs. Motivating employees to fully contribute to the firm's goals and collecting information and transmitting it faithfully to superiors is understood to cause internal organisation costs.

A great number of different types of transaction and internal organisation costs were thus identified. In the context of uncertainty we base our discussion of the relative efficiency of different operation modes on the differences in information, adaptation, direct safeguarding and opportunity safeguarding costs (see Table 2). These costs are believed to capture the essential differences of operation modes arising from their differing adaptive and control styles.

**Table 2.** Selected types of costs and their definitions.



## 2.4. Development of the hypothesis

### *Efficiency implications in the context of perceived demand uncertainty*

The results of the role of demand uncertainty in operation mode choice have been contradictory (see Madhok 1993; Kim and Hwang 1992; Robertson & Gatignon 1998; Brouthers 2002). However, in order to decrease the demand uncertainty, learning about customers and their perceptions is needed, which on the other hand requires collecting information (Williamson 1985). Information collection is believed to be easiest and fastest in case of JVs, in which a local partner may already have the information or at least they can receive it more easily than a foreign firm can (Beamish & Banks 1987). Collecting this information in a licensing agreement is considered to be difficult, because it would require being at the market. A WOS on the other hand is present in the local markets, but because of not knowing the markets as well as perhaps the local partner in a JV, the information collection is more difficult. However, comparing the efficiency of JV and WOS, it is believed that WOSs are more efficient, because information is considered to be collected quickly. In addition to information collection the co-ordinated adaptation style also becomes essential in coping with demand uncertainty. Unexpected changes require quick responses, which is assured in WOS. (see conceptual framework in figure 1). Therefore we suggest that

**H1a:** *The higher the perceived demand uncertainty, the more probable it is that a firm chooses a more integrated operation mode*

**H1b:** *The higher the perceived demand uncertainty, the more probable it is that a choice of more integrated operation mode increases the information efficiency*

**H1c:** *The higher the perceived demand uncertainty, the more probable it is that a choice of more integrated operation mode increases the adaptation efficiency*

**Figure 1.** Efficiency implications in the context of perceived demand uncertainty (Model 1).

### *Efficiency implications in the context of perceived competition uncertainty*

In the case of perceived competition uncertainty attempts are made to collect information about potential competitors and their behaviour increasing the information and communication costs (Miller 1992; Sutcliffe & Zaheer 1998 Brouthers et al. 2000). The difference in entry mode efficiency in the phase of competitive uncertainty is argued to be caused mainly by information and adaptation costs. Unexpected changes in the actions of competitors require quick and co-ordinated

adaptations of the foreign firm. In a licensing agreement co-ordination is expected to be the most difficult, in fact the entering firm has almost no possibilities to change its operations and therefore co-ordination costs are increasing. In the case of JVs, both co-ordinated and automatic adaptation styles are present, but because of the need to negotiate with both the JV managers and the local partner before being able to make any decisions, negotiations take more time and thus increase the costs. WOSs on the other hand have a clearly co-ordinated adaptation style based on clear authority relations and changes in strategies and making new decisions are believed to be done in a smoothly fashion and thus with the lowest costs.

Prior empirical studies do not offer support for positive relationship between competitive uncertainty and entry mode choice (Sutcliffe and Zaheer 1998; Brouthers et al.2002). However, the empirical studies focused on the operation mode choice and did not test how the choice influences efficiency. The following hypothesis is based on efficiency assumption (see figure 2) and the arguments presented earlier and therefore we suggest that

***H2a: The higher the perceived competitive uncertainty, the more probable it is that a firm chooses a more integrated operation mode***

***H2b: The higher the perceived competition uncertainty, the more probable it is that a choice of more integrated operation mode increases the information efficiency***

***H2c: The higher the perceived competition uncertainty, the more probable it is that a choice of more integrated operation mode increases the adaptation efficiency***

**Figure 2.** Efficiency implications in the context of perceived competitive uncertainty (Model 2).

*Efficiency implications in the context of perceived behavioural uncertainty*

In the case of low perceived behavioural uncertainty there is no need for elaborated contractual safeguards allowing contracts to be specified more loosely because of the expectation that ex-ante gaps will be dealt with ex-post in a fair manner (Chiles & McMackin 1996). Therefore it is expected that communication and renegotiations are conducted smoothly and information is transferred easily. Without the need for administrative control the costs in the context of low perceived behavioural uncertainty are believed to be lowest in licensing, medium in JV and highest

in WOS. However, with high perceived uncertainty in order to control the potential opportunistic behaviour a great amount of contractual safeguards, which are costly, should be conducted in licensing agreements. Also the monitoring of the partner behaviour involves an increasing amount of costs. However, in WOS authority control mechanisms are present, making it possible to control and give orders with less cost than in licensing (Robertson & Gatignon 1998). JVs on the other hand represent an increasing amount of control costs, because the number of relationships to be controlled is greater than in WOS (Woodcock, Beamish & Makino 1994). Therefore we suggest that

***H3a:** The higher the perceived behavioural uncertainty, the more probable it is that a firm chooses a more integrated operation mode*

***H3b:** The higher the perceived behavioural uncertainty, the more probable it is that a choice of more integrated operation mode increases opportunity safeguarding efficiency*

***H3c:** The higher the perceived behavioural uncertainty, the more probable it is that a choice of more integrated operation mode increases direct safeguarding efficiency*

**Figure 3.** Efficiency implications in the context of perceived behavioural uncertainty (Model 3).

### **3.Methodology**

The target population of the study consists of Finnish firms having licensing, joint venture or wholly owned subsidiary operations in Asia operating in different sectors. The total number of firms based on the FINPRO data-base was (111) and the number of cases was (305). Data was collected through a mail survey. The criterion used to define a suitable respondent was the following: the person should have been involved both in the original entry mode decision and the operation after the entry. That was considered critical in order to get reliable information. Information received through phone calls decreased the amount of potential cases to 119. The total number of returned questionnaires was 60.

Structural equation approach can be applied by using different methods. The most often used method is covariance-based structural equation modelling (CBSEM), on which also well-known

software such as LISREL and AMOS are based. One of the alternative techniques is a method of partial least square (PLS), developed by Wold's. (Fornell and Bookstein 1982:440). The choice of appropriate method depends on the assumptions about data, theory, and the ties between unobservable variables and indicators (Chin and Newsted 1999).

In this study PLS approach is chosen over CBSEM. The small sample size ( $n=60$ ) restricts the use of covariance-based method. Small samples in CBSEM can lead to poor parameter estimates and model test statistics. In addition, there is potential for Type II error, whereby a poor model can still falsely achieve adequate model fit. In PLS the minimal sample size requirement is ten times the greater of the following: 1) the latent variable with the largest number of formative indicators or 2) the dependent latent variable with the largest number of independent latent variables influencing it (Chin 1998:311). In the study, the largest number of independent latent variables on one dependent latent variable is 5. Thus, the sample size requirement for the structural model under investigation is 50 ( $10 \times 5$ ), which is fulfilled and supports the use of PLS method in the study. Another data related reason to choose PLS method, is the danger that the data may not follow multivariate normal distribution assumption, which is required in covariance-based method. PLS path modeling software of SmartPLS 2.0 (M3) was utilized in the analysis.

### *Measures and constructs*

Overall, three types of measures were used: reflective and formative multi-item measures and single item measure. The following three types of *entry modes* were included in the study: licensing, joint venture and wholly owned subsidiary. Entry mode is treated as continuous variable, representing the level of integration.

The two target country level uncertainty types were measured on a five-point scale in which the choices ranged from from 1 = difficult to predict to 5 = easy to predict. All the items were reverse-coded in order to indicate the level of increasing uncertainty. ***Perceived competitive uncertainty*** was evaluated by using six reflective items, adopted from Miller (1993) and Werner et al. (1996). These were the predictability of changes in competitor's prices, markets, strategies at the, entry of new firms, the behaviour of domestic and foreign competitors at the time of entry. Four reflective items were used to measure ***perceived demand uncertainty*** at the time of the entry. The managers were asked to evaluate the degree of predictability of client preferences, product demand, the availability of substitute products and complementary products (Miller 1993). ***Perceived***

*behavioural uncertainty* was measured by five-point Likert-scale, where the choices ranged from 1 = strongly disagree to 5 = strongly agree. Altogether four reflective items were used to measure the construct. The measures were adapted from Joshi and Stump (1991) and Dahlström and Nygaard (1999). The first two items asked if the firm was afraid that the potential partner would make use of a situation to further their own interests at the entering firm's expense or would not fulfill their promises and obligations. The remaining two items asked the managers to evaluate whether the potential partner would try to hide relevant information and become a potential competitor in the future.

*Information and adaptation efficiency* was evaluated for both demand and competitive environmental uncertainty component and, thus, altogether two information efficiency constructs and two adaptation efficiency constructs were formed. Each of the information efficiency construct was measured using three similar formative items and each of the adaptation efficiency construct was measured using three similar formative items. The only difference between the items in demand and competitive information and adaptation efficiency constructs is that the statements / questions were modified to represent the specific environment in question. The information efficiency was measured by three items indicating whether the information about specific environmental component was received in time, was relevant and understandable. Three items focusing on the time spent on renegotiations, the difficulty of coming to an agreement of adapting operations and the reaction time to environmental changes were used to measure the adaptation efficiency. The items were measured using a five-point Likert-scale, which ranged from 1 = strongly disagree to 5 = strongly agree. The third item in the information efficiency and the first and second in the adaptation efficiency were reverse-coded so that they would represent the increasing level of efficiencies.

Opportunity safeguarding construct was measured by four and direct safeguarding efficiency by two reflective items on a five-point Likert-scale. The first item of opportunity safeguarding efficiency measures if the partner or subsidiary has taken an advantage of a situation to further their own interests (rc). These are followed by items, which ask whether the partner hasn't fulfilled their promises and obligation (rc), has hidden relevant information(rc) and whether the partner has fulfilled their obligations and commitments. Direct safeguarding efficiency is measured by the time spent (rc) and the workforce used to supervise the partner or subsidiary (rc).

#### 4. Results and discussion

In the following, the measurement models are assessed first, followed by the assessment of the structural model to ensure that the construct measures are reliable and valid before conclusions about the relationship between constructs are being made. (Hulland 1999). It has been recommended that the assessment of the measurement model can be conducted by looking at 1) indicator loadings, 2) composite reliability, 3) indicator cross-loadings, 4) AVE (Average Variance Extracted) analysis and 5) weights. (Chin 1998:320-321; Hulland 1999; Gefen and Straub 2005) and that the assessment of the structural model should be conducted by 1) looking at  $R^2$  for dependent latent variables, 2) path loadings, 3) significance levels, 3) predictive relevance (Chin 1998; Gefen et al. 2000).

First, the quality of the measurement model was assessed. In the model of efficiency implications in the context of demand uncertainty, the indicator of complementary products (AVCOMPR2) was deleted because of the low indicator loading (0.323305) and AVE (0.41). In addition, in the model of efficiency implications in the context of competitive uncertainty an indicator of competitors' strategies (CHSTRAT2) was deleted because of low and negative loading (-0,278539). The indicator loadings, composite reliability (pc), AVE and indicator cross-loadings are on acceptable level in the modified models and in the model of efficiency implications in the context of behavioral uncertainty. Thus, based on the above assessment the measurement model of the research model is suggested to demonstrate good construct validity and has the required qualities and the estimation of structural model can be conducted.

**Table 3.** Quality of the measurement model 1.

**Table 4.** Quality of the measurement model 2.

**Table 5.** Quality of the measurement model 3.

The path loadings,  $R^2$  and significance values are presented in figures 4-6.

As can be seen in the figure 4 only H1a is supported with high significant level, thus demand uncertainty support the choice of more integrated entry mode. The relationship between entry mode

and information efficiency is negative at the significance level of 0.25. and between entry mode and adaptation efficient the relationship is positive and significant at the level of 0.15. On the other hand, the direct relationship between demand uncertainty and information efficiency and demand uncertainty and adaptation efficiency is still negative and highly significant. The results seem to imply that, even though the level of significance is quite low for the impact of entry mode on adaptation efficiency it gives some indication that in the context of perceived demand uncertainty, the choice of more integrated entry mode may increase the adaptation efficiency, but it may have no implications to the information efficiency. Thus entry mode may partly mediate the relationship between perceived uncertainty and adaptation efficiency.

**Figure 4.** The path loadings,  $R^2$  and significance values of model 1.

Based on the results related to the model exploring the efficiency implications of entry mode in the perceived uncertainty context, none of the hypotheses is supported. However, at the significance level of 0.14 higher perceived competitive uncertainty seem to support the choice of more integrated entry mode. Nevertheless, entry mode does not seem to have a mediating effect to information and adaptation efficiency. (See figure 5 for more detailed information).

**Figure 5.** The path loadings,  $R^2$  and significance values of model 2.

In the model of efficiency implications of entry mode in the context of perceived behavioural uncertainty there is a negative and significant (0.05) relationship between entry mode and direct safeguarding efficiency, implying that the more integrated entry mode reduce the direct safeguarding efficiency. This is contrary to the expectations. In addition, at the significance level of 0.065 perceived behavioural uncertainty directly reduces the direct safeguarding efficiency.

**Figure 6.** The path loadings,  $R^2$  and significance values of model 3.

## 5. Conclusions

The aim of the study was to explore whether an entry mode that aligns with managers perception of uncertainty provide better efficiency and, thus, an attempt was made to contribute to a research area, which specifically acknowledges that the relationship between operation mode and performance depends on the context factors (see e.g. Brouthers and Nakos 2004; Brouthers 2002; Shaver 1998; Brouthers et. al. 1998). The difference of the study compared to others, was that the focus was on information, adaptation and safeguarding efficiencies instead of performance. In addition, the study differed from others by including only perceived uncertainty components to represent the context factors. Although the other studies, which

included a wide variety of influencing factors to their models, may be more comprehensive and offer a broader view of the relationship between context- entry mode -performance, still there is a need for more detailed analyses of specific capabilities of entry mode. Thus, the uniqueness of the study was to identify if there were any differences in the efficiency of entry modes in the context of uncertainty components. The results imply that a more integrated entry mode may offer higher adaptation efficiency in the context of perceived demand uncertainty and thus entry mode may be partly mediating the relationship. In the context of perceived competitive uncertainty, entry mode did not seem to have any role in coping with that type of uncertainty. It was also found that a more integrated entry mode decreases the direct safeguarding efficiency. However, there was not a significant relationship between perceived behavioural uncertainty and entry mode choice and therefore no clear implications can be made of the efficiency implications in the context of behavioural uncertainty. The limited lack of support for the efficiency implications of entry modes may, however, be caused by the non-linear relationship between entry mode and efficiencies. Thus, the relationship between entry mode and efficiencies in the context of different uncertainties still requires more research.

For managers, making the optimal operation mode choice is a difficult and challenging decision. There is a large number of factors, which need to be taken into account. The findings of the study, however, may help the managers to be aware of the trade-offs that may be related to the efficiencies of operation modes in different levels and types of uncertainties. Thus, if managers consider it important to be able to cope with uncertainties with the least possible transaction costs, a careful evaluation of different uncertainty types in the target country is recommended. The evaluation may help in identifying the most critical uncertainty component for the firm in question and thus the findings of the study may give some preliminary advice, which operation mode should be chosen in order to be able to adapt or control in the most efficient way.

## **6. Limitations and suggestions for further research**

The theoretical approach utilized in the study has some limitations. The applicability of the framework is limited to entry mode choices based on efficiency criterion. In addition, the framework applies a narrow view about efficiency. Efficiency is understood to be achieved when transaction costs are minimized. As the focus is on the efficiency to cope with uncertainty, only the adaptation and control related efficiencies of different entry modes are considered and thus other efficiency aspects are not taken into account. Thus using TCA as the framework applies a narrow view to explain entry mode choice and efficiency.

Additionally, the focus on perceived uncertainty prior to entry mode choice sets limits to the study. Although certain type and level of uncertainty is perceived prior to making the operation mode choice, it does not mean that the situation is perceived in a similar way after the entry. This means that the situation may be totally different than it was perceived beforehand. Thus, entry mode choice based on the perceived uncertainty prior to entry may not lead to efficiency. Therefore, in order to increase the understanding of



efficiency implications of entry modes in the context of perceived uncertainty, perceptions of uncertainty after the entry should be taken into account.

The main empirical limitation of the study was the small sample size (n=60). The limited sample size means that generalising the results to wider populations is problematic. In addition, the sample was confined to Finnish firms' entries in nine Asian countries, which may also cause problems for the generalisability of the findings. In addition, the study relied on one informant per case only. This may cause bias in the data, as it is based on one person's views only. The sample also was quite heterogeneous as the sizes of the firms varied from small to very large firms, and the industry sectors varied from service firms to high-tech firms. This may have caused some of the insignificant results of the study. The measurement of the constructs may have also caused some problems. Although most of the measures were adopted from prior research, some of them needed to be developed for the study. Thus, the reliability of some of the constructs may be questioned.

As the present study suffered from a small sample size, it would be worthwhile to increase the number of Finnish firms to study the same research problem. This would give more reliable information about the direct and indirect relationships between the variables and the possibilities to control the influence of firm size, industry and target country. In addition, there would be a greater variety of target countries which would also probably increase the variety of perceived uncertainty levels. Comparison of Finnish firms entering and operating in mature and emerging markets would also be worthwhile to study. It would also be interesting to compare the influence of uncertainty on entry mode choice and efficiency of Finnish firms with other Nordic firms and firms from Central and Eastern Europe.

As the sample firms were quite heterogeneous in nature, it would be useful to study whether there are differences across different industries. It may well be that in different industrial sectors, the uncertainty components which are considered critical for an entry mode choice, may vary. Thus, it would be interesting to see the present study to be replicated for different industries. As the present study focused only on the choice and efficiency differences between licensing, joint venture and wholly-owned subsidiary, it would be interesting to include other entry modes to the analyses.

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## Tables

**Table 1.** Classification of operation modes according to control mechanisms and adaptation styles (adapted from Williamson 1991).

Operation mode	Contractual safeguard	Administrative control	Autonomous adaptation	Co-operative adaptation
Licensing	High	Low	High	Low
Joint venture	Medium	Medium	Medium	Medium
Wholly owned subsidiary	Low	High	Low	High

**Table 2.** Selected types of costs and their definitions.

Types of costs	Definition
Information costs	Arising from collecting information and communication new information
Adaptation costs	Arising from renegotiating agreements and co-ordinating activities to reflect new circumstances
Safeguarding costs (direct)	Arising from investments made in order to discourage potential opportunistic behavior
Safeguarding costs (opportunity)	Arising from failure discourage opportunistic behaviour

**Table 3.** Quality of the measurement model 1.

CONSTRUCT / INDICATOR	DEMUN (loadings) pc=0,783553 AVE=0,548284	INFEFF (weights)	ADAPEFF (weights)
CLIENT2	0,678629		
PRODUCT2	0,814319		
AVSUBPR2	0,721941		
TIMEDE		-0,210628 (0,602008)	
RELDE		0,555636 (1,848300)	
UNDDE		0,744269 (2,373426)	
NEGDE			0,760923 (1,865212)
AGRDE			0,213070 (0,565163)
REACDE			0,549964 (2,051617)

**Table 4.** Quality of the measurement model 2.

CONSTRUCT / INDICATOR	COMUN (loadings) pc= 0,999994 AVE=0,999972	INFEFF (weights)	ADAPEFF (weights)
CHPRICE2	0,999987		
CHMARKE2	0,999991		
ENTRY	0,999988		
DOMCOM2	0,999983		
FORCOM	0,999980		

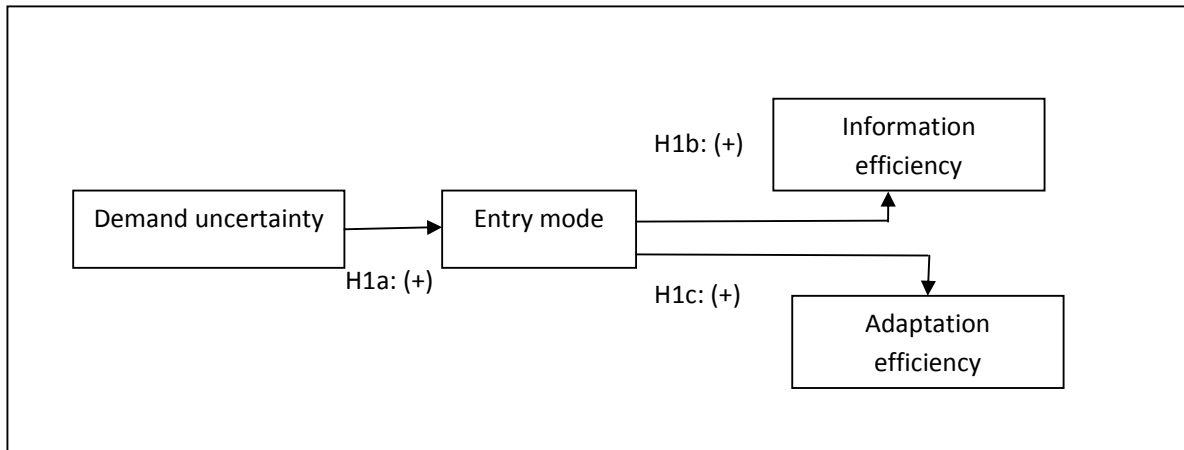
<b>TIMECO</b>		<b>-0,872374</b> (1,401677)	
<b>RELCO</b>		<b>1,247295</b> (1,749326)	
<b>UNDCO</b>		<b>0,366654</b> (0,607681)	
<b>NEGCO</b>			<b>1,278693</b> 1,751466
<b>AGRCO</b>			<b>-0,752844</b> 1,016424
<b>REACCO</b>			<b>-0,204769</b> 0,426134

**Table 5.** Quality of the measurement model 3.

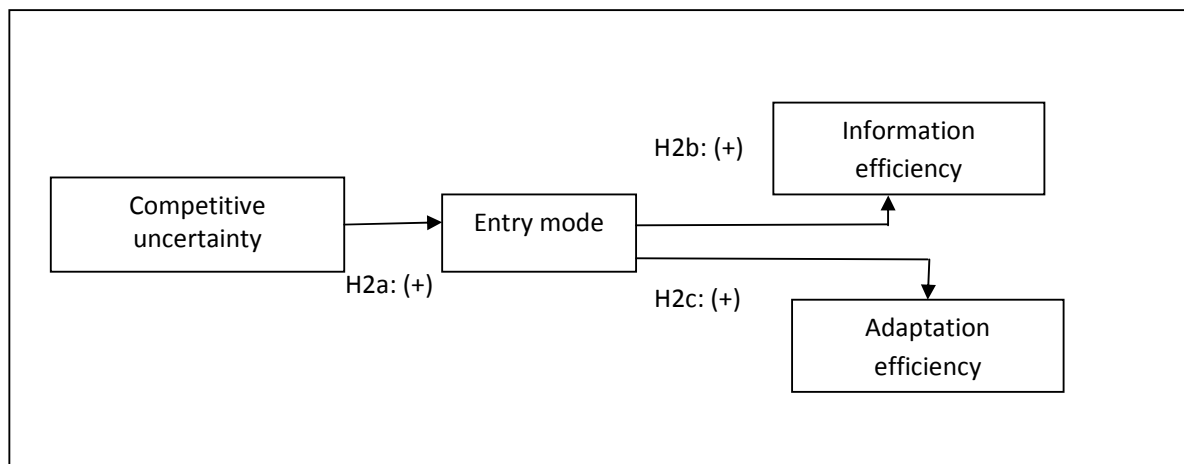
<b>CONSTRUCT / INDICATOR</b>	<b>BEHUN</b> <b>pc</b> = 0,999994 <b>AVE</b> =0,999977	<b>SAFEGEFF(O)</b> <b>pc</b> = 0,886852 <b>AVE</b> =0,662447	<b>SAFEGEFF(D)</b> <b>pc</b> = 0,901823 <b>AVE</b> =0,821306
<b>OWNINT</b>	<b>0,999988</b>	-0,143852	-0,118834
<b>PROBL</b>	<b>0,999989</b>	-0,143285	-0,116983
<b>HIDINF</b>	<b>0,999989</b>	-0,144875	-0,118345
<b>COMPET</b>	<b>0,999988</b>	-0,143659	-0,118426
<b>OWNINT2</b>	-0,113563	<b>0,796685</b>	0,336330
<b>PROMOB2</b>	-0,114746	<b>0,857470</b>	0,451189
<b>HISINFOF</b>	-0,095043	<b>0,772451</b>	0,427807
<b>OBLCOM2</b>	-0,135587	<b>0,826527</b>	0,466190
<b>TIME2</b>	-0,109289	0,432286	<b>0,930228</b>
<b>PERSONS2</b>	-0,104958	0,507584	<b>0,881638</b>

The path loadings, R<sup>2</sup> and significance values are presented in figures 4-6.

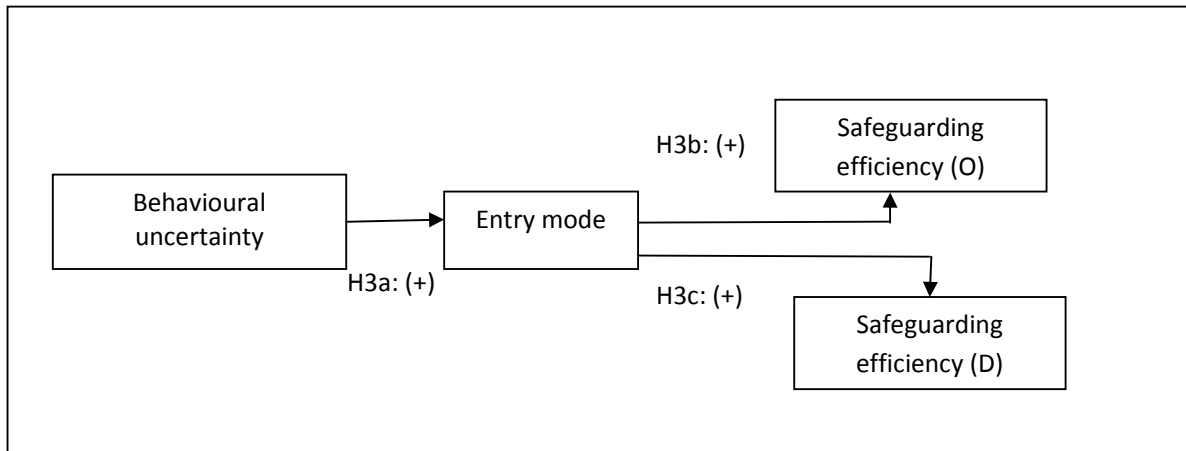
## Figures



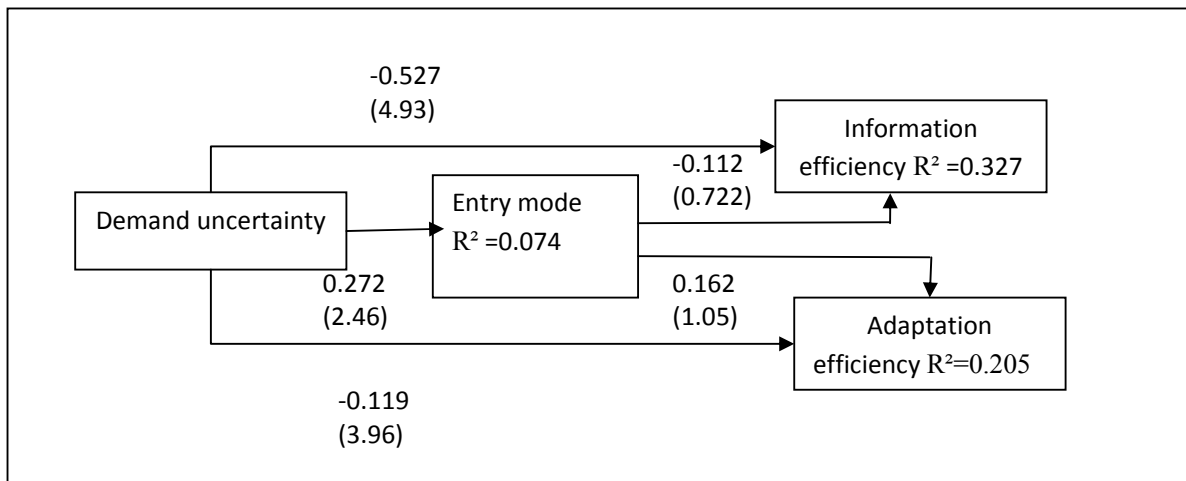
**Figure 1.** Efficiency implications in the context of perceived demand uncertainty (Model 1).



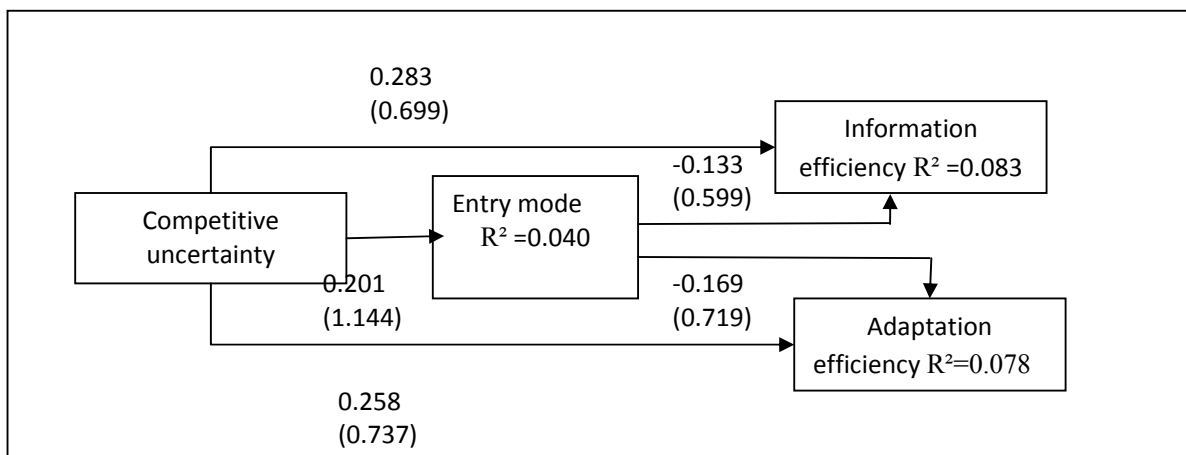
**Figure 2.** Efficiency implications in the context of perceived competitive uncertainty (Model 2).



**Figure 3.** Efficiency implications in the context of perceived behavioural uncertainty (Model 3).

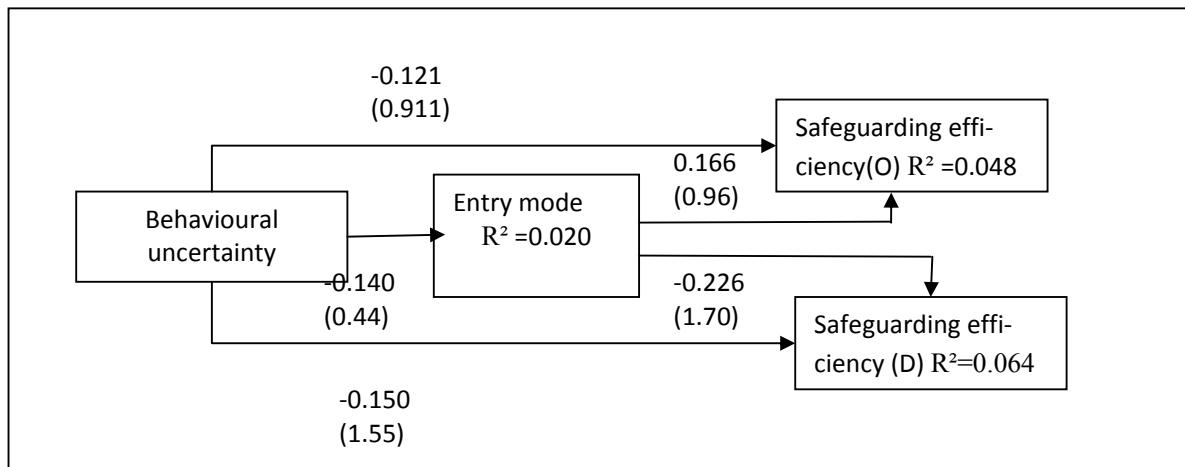


**Figure 4.** The path loadings,  $R^2$  and significance values of model 1.



**Figure 5.** The path loadings,  $R^2$  and significance values of model 2.





**Figure 6.** The path loadings,  $R^2$  and significance values of model 3.