

THE ROLE OF EXPERIENCE AND PERCEIVED UNCERTAINTY
IN OPERATION MODE CHOICE
-
CASE OF FINNISH FIRMS IN ASIA

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Abstract

The purpose of the paper is to identify uncertainty and experience types relevant in operation mode choice context, explore which experience and uncertainty types are negatively related and how do they influence operation mode choice. A structural model was developed and tested by a sample of 60 Finnish cases having licensing, joint venture or wholly owned subsidiary operations in Asia. The PLS estimation technique, was used to explore the proposed model. The results of the study suggest that the role of experience in influencing the level of perceived uncertainty varies based on the type of experience and type of uncertainty. In addition, perceived socio-cultural, demand and behavioural uncertainty had a role in operation mode choice

Keywords: Experience, perceived uncertainty, operation mode choice, Asia

1. Introduction

A great number of potential factors influencing operation mode choice have been studied. However, what is interesting to find out is the limited number of studies focusing on the influence of uncertainty on operation mode choice. (with few exceptions see Klein, Frazier & Roth 1990; Erramilli & D'Souza 1995; Sutcliffe & Zaheer 1998; Brouther, Brouthers & Werner 2000, 2002; Luo 2001). This is surprising because firms are today experiencing more and more uncertainty. However, in spite of the perceived uncertainty, most of the firms cannot avoid entering into international markets, but are forced to find ways to cope with it. One way to cope with uncertainty could be the choice of an appropriate operation mode.

In those studies in which the influence of uncertainty on operation mode choice has been studied the definitions of uncertainty have varied from 1) unpredictability (see e.g. Sutcliffe & Zaheer 1998; Kulkarni 2001), 2) changes (see e.g. Klein et al. 1990; Erramilli & D'Souza 1995; Robertson & Gatignon 1998; Kulkarni 2001) and 3)

diversity, (see e.g. Klein et al 1990) to 4) difficulty of observing and measuring the adherence and performance of transacting partners (see e.g. Madhok 1993).

Because there are so many differences in the way uncertainty has been understood, it gives support to the argument made by several scholars (eg. Klein et al. 1990; Brouthers et al. 2000) that uncertainty is actually a multidimensional concept, in which different dimensions may have opposing effects or no effect at all on operation mode choice. This leads to the conclusion that there is a need for identifying the different dimensions and elements of the uncertainty concept in order to analyse their influence on the operation mode choice. Although some progress has been achieved in developing the concept of uncertainty into more multidimensional direction (see Miller 1992, 1993), most studies have focused entirely on environmental uncertainty and have not simultaneously taken into account uncertainty related to behavioural aspects. Also the developments have not been used in operation mode choice context (with few exceptions see Sutcliffe & Zaheer 1998; Brouthers et al. 2000, 2002).

Although there is quite limited number of studies focusing specifically on the relationship between uncertainty and operation mode choice, there are more studies in which the level of perceived uncertainty has been used to explain the influence of some other factor on operation mode choice. Especially the theoretical argument explaining the relationship between experience and operation mode choice is often based on the level of uncertainty (see e.g Klein et al. 1990; Das & Teng 1996; Driscoll & Paliwoda 1997; Robertson & Gatignon 1998; Delios & Beamish 1999; Arora & Fosfuri 2000). The general argument has been that increase in experience will lead to choosing a more

integrated operation mode, as a result of decreased level of uncertainty. Thus, the view found in internationalisation approach (see Johanson & Vahlne 1977) has been applied. However, although the basic question in the internationalisation approach was whether an internationalisation pattern could be an effect of perceived uncertainty (Nordström 1991:21) and uncertainty was understood to represent unpredictability, it was studied through the concept of psychic distance.

Thus, it has been assumed that perceived uncertainty increases with psychic distance. Psychic distance, on the other hand, was defined as “factors preventing or disturbing the flows of information between firm and market” (Johanson & Wiedersheim-Paul 1975:308) and measured by level of development, difference in education, business language, cultural difference, everyday language and the extent of existing links between the home country and the foreign market (Nordström 1991). Using this type of psychic distance measure contradicts the basic assumption of perception. National level factual indicators hardly measure perceptions of uncertainty. The empirical testing of psychic distance has also been criticised based on the limited number of empirical studies and the sophistication of measurement instrument (O’grady & Lane 1996; Stottinger & Schlegelmilch 1998; Evans, Treagold & Mavondo 2000). Thus, the influence of perceived uncertainty has not been really explored in internationalisation approach studies. In addition, because the focus in operation mode choice studies have been on understanding the direct relationship between experience and an operation mode choice instead of the possible indirect influence through the level of uncertainty, in these studies the relationship between experience and uncertainty has not really been empirically tested, either.

Therefore, it is suggested that instead of studying only the direct relationship between experience and operation mode choice, it would be worthwhile to explore the relationship between experience - uncertainty - operation mode choice. This would let us know if uncertainty really influences choosing a foreign operation mode and how does experience affect the level of perceived uncertainty.

We can agree on the general assumption presented in internationalisation approach and in prior operation mode choice studies of negative relationship between experience and uncertainty. However, we argue that the assumption is too general, because it does not take into account the multi-dimensional nature of experience and uncertainty concepts. Therefore, it is suggested that different experience and uncertainty types relevant to operation mode choice decision should be identified. That would probably prove that certain experience types may decrease certain uncertainty type, but it may not have any influence to some other uncertainty types. The multi-dimensional natures of experience and uncertainty are considered to be important also in operation mode choice context. Depending on the experience and uncertainty type in question, different operation modes may be chosen.

The purpose of the paper is, first of all, to identify different uncertainty and experience types relevant to operation mode choice, which will be discussed in the first section of the paper. Secondly we aim to explore which experience and uncertainty types are negatively related and how the different uncertainty and experience types influence an operation mode choice. Based on the literature review, hypotheses and a structural model are developed. Thereafter, the method and measures employed in the study are

highlighted, 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. Uncertainty and experience types

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 four target country level components. *1) Political and legal uncertainty* focuses on the unpredictability of the political power structure and the unpredictability of future laws and regulations related to the operation of foreign firms. *2) Socio-cultural uncertainty* represents the unpredictability of the future state of social environment, *3) competition uncertainty* reflects the unpredictability of future state of competition in the business area of the entering firm and *4) demand uncertainty* the unpredictability of the future demand for the product of entering firm. *5) 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. *Experience Types*

Two main types of experience have been studied in operation mode choice context. These are general international experience (see e.g. Erramilli 1991; Agarwal and Ramaswami 1992; Contractor and Kundu 1998) and market-specific experience, usually called target country experience (Bell 1996; Arora and Fosfuri 2000; Luo 2001). Although we agree that *general international experience* and target country experience can play an important role in reducing the uncertainty level, there may be some other experience types, which may also have decreasing influence on some of the uncertainty types and are therefore worthwhile to include to the study. We divide the target country experience into *target country business experience* and *target country institutional experience*. Target country business experience is focused on the actual experience accumulated from the business activities in the target country. Target country institutional experience, on the other hand, is focused on target country institutions and on the experiential knowledge accumulated from prior contacts with politicians, government officials and other influential actors in the target country.

Explicit recognition of *international co-operation level experience* (see e.g. Davidson and McFetridge 1985; Robertson and Gatignon 1998; Das and Teng 1996) also offers a valuable addition to the group of different types of experiences. It is accumulated from

prior experience in different relationships between individual firms in different countries. Thus, general international experience, target country business experience, target country institutional experience and international co-operation experience, represent the different experience types in this study.

3. Experience types and their impact on perceived uncertainty

General international experience

In this study, it is assumed that an increase in the geographical scope of countries also increases the firm's general international experience. Being present in foreign markets puts the firm in a position in which it also has to face international competition. Competitors can be from the target country or they can be from other countries. Being forced to compete in international markets gives the firm a possibility to get to know its main competitors producing the same product or a substitute and thus also their way of doing business. Some of these competitors may already be present in the target country, and knowing their way of doing business will probably give some kind of certainty how these firms are also behaving in the target country. The entering firm can also with some certainty assess the likelihood of other international competitors entering the same target country. Thus, although the entering firm may not be familiar with the domestic competitors in the target country before entry, it probably has an idea about the future state of competition related to international players, based on the firm's experience achieved from other foreign markets. Therefore, we suggest that

H1: *General international experience will have a negative relationship with perceived competition uncertainty in the target country.*

Target country business experience

Target country business experience accumulated from doing business in the target country is assumed to have influence on several uncertainty components in the target country. By doing business we mean prior experience achieved through exporting, licensing other co-operative modes, JVs and subsidiary operations. Doing business on the market makes it possible to learn through personal experience eg. about the culture, customs, possible conflicts between people in power and the ordinary people. It also creates better understanding of the general atmosphere or attitude toward the firm and its products than in the case of merely relying on objective type of knowledge. It enables the firm to learn more about both the domestic competitors and international competitors who are present on the market and thus helps in evaluating the possible future state of competition. Thus, we suggest that,

H2a: *Target country business experience will have a negative relationship with perceived socio-cultural uncertainty in the target country.*

H2b: *Target country business experience will have a negative relationship with perceived competition uncertainty in the target country.*

H2c: *Target country business experience will have a negative relationship with perceived demand uncertainty in the target country.*

Target country institutional experience

However, doing business in the target market does not mean that a firm would have created a good working relationship or more important, good communication channels to politicians, government officials and other interest group members, in other words having target country institutional experience. These contacts are considered to be

especially important in relation to perceived political and legal uncertainty. Being regularly in touch with politicians in the target country provides the possibility to receive inside information about what is going on behind the curtains. Information may contain hints about future changes in the political power structure or, what is even more important, hints about the possible changes in laws and regulations, which may influence the operations of the firm. Thus, we suggest that,

H3: *Target country institutional experience will have a negative relationship with the perceived level of political and legal uncertainty in the target country.*

International co-operation experience

A factor often related to the possible mitigation of behavioural uncertainty is trust, which on the other hand is believed to be accumulated from repeated alliances among the same partners (see eg. Parkhe 1993; Gulati 1995; Chi & McGuire. 1996; Das & Teng 1996). Thus, in order to reduce behavioural uncertainty, prior co-operation should exist between the potential partner and the entering firm. However, it is suggested that it is not necessary to have prior co-operation with the same partner. It is considered to be more important to have prior international co-operation experience with any international firm. Thus, we suggest that

H4: *International co-operation experience will have a negative relationship with perceived behavioural uncertainty.*

4. Perceived uncertainty types and their impact on operation mode choice

In the following, specific hypotheses about the relationship between different uncertainty components and operation mode choice are presented. The hypotheses are based on TC logic and, thus, an operation mode minimising transaction costs is considered to be the most efficient one. Transaction costs included in the study are communication / information, negotiation and co-ordination costs representing the costs related to adaptation efficiency and monitoring costs, which are considered to be relevant for control efficiency.

Political-legal and socio-cultural uncertainty

In order to reduce political and legal uncertainty or socio-cultural uncertainty receiving information about the potential changes in time becomes essential. However, this requires being present on the market. Thus, related to information collection JV and WOS offer the best possibilities to do that and from these JV clearly outperforms WOS because of the existence of a local partner, which may already have well-developed relations to decision makers or have the knowledge of possible problems in the social environment (Beamish & Banks 1987). However, if the potential changes in regulations were so dramatic that they would require eg. changes in the ownership arrangements, co-operative adaptation capabilities or administrative control style, which are present in WOS and JV, do not offer any help. Rather, on the contrary, they would just cause bureaucratic costs, which could not be covered by potential low co-operative or control costs. Also prior studies support that at least in the case of high political uncertainty

firms prefer to choose a less integrated operation mode (see eg. Kim & Hwang 1992; Contractor & Kundu 1998). Therefore we suggest that

H5: *The higher the perceived political and legal uncertainty, the more probable it is that a firm chooses a less integrated operation mode.*

H6: *The higher the perceived socio-cultural uncertainty, the more probable it is that a firm chooses a less integrated operation mode.*

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 operation mode efficiency in the phase of competitive uncertainty is argued to be caused mainly by co-ordination abilities and 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 operation 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 and the arguments presented earlier and therefore we suggest that

H7: *The higher the perceived competition uncertainty, the more probable it is that a firm chooses a more integrated operation mode.*

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. 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. However, comparing the efficiency of JV and WOS, it is believed that WOSs are

more efficient, because information is considered to be collected quickly, which also helps in making the decisions and changes to the products. Therefore we suggest that

H8: *The higher the perceived demand uncertainty, the more probable it is that a firm chooses a more integrated operation mode.*

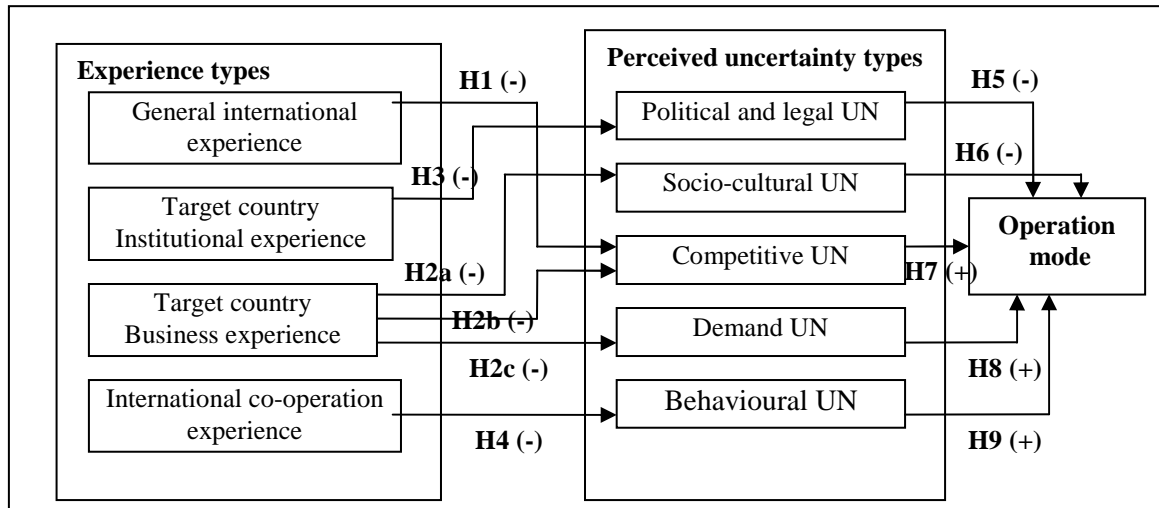
Behavioural uncertainty

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 et al. 1994). Therefore we suggest that

H9: *The higher the perceived behavioural uncertainty, the more probable it is that a firm chooses a more integrated operation mode.*

In figure 1, the conceptual model of the relationships between experience-uncertainty-operation mode choice can be seen.

Figure 1. The conceptual model.



5. 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 operation 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 (10×5), 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.

Measures and variables

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

General international experience was measured by the geographical spread of the firm's international activities and thus the measurement by Erramilli (1991) is applied. However, the scale of the measure (1= no international operations prior to entry,... 5= operations in every continent) was adapted to represent more appropriately the scope of international experience from the Finnish firm's point of view. ***Target country business experience*** was measured by counting the total number of years of each operation the firm had in the target country prior to the studied case. This type of summed measurement has also been applied in a few operation mode choice studies (see e.g. Delios and Beamish 1999; Padmanabhan and Cho 1999). ***Target country institutional experience*** was measured by using three reflective items. The managers were asked to specify the number of contacts the firm had prior to the entry with target country politicians, government officials and other influential people working in politics and in legal institutions. The scale ranged from 1 = no contacts to 5 = contacts with over ten people. ***International co-operation experience*** was measured by the number of prior international co-operation agreements.

The four target country level uncertainty types were measured on a five-point scale in which the choices ranged 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. Five reflective items, degree of predictability of changes in legislation, national laws affecting international business, legal regulations affecting the business sector, tariffs of imported goods and other potential costs and enforcement of existing laws, were used to measure the *perceived political and legal uncertainty* (Miller 1993; Werner et al 1996). The items predictability of the threat of an armed conflict, riots, demonstrations and terrorist movements in the target country represented the *perceived socio-cultural uncertainty* (Miller 1992). *Perceived competitive uncertainty* was evaluated by using five 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 and the behaviour of domestic competitors 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.

6. Results

Description of the sample

In this chapter the sample (n=60), from which the results are derived is described. The description focuses on the following factors: 1) size of the firms, 2) industry sector, 3) operation mode used and 4) target country.

The size of the firm was measured by the number of personnel and turnover at the time of entry. Table 1 presents the distribution of the number of employees, rounded to the closest 10, among the firms. The mean number of employees was 1859 and median 644. The minimum number of employees was 7 and the maximum as high as 11 000. Thus the variation was notable.

Table 1. Distribution of the number of employees at the time of the entry.

Number of employees	Frequency	Percent	Cumulative percent		
7-99	13	21,66	21,66		
100-299	8	13,33	34,99		
300-499	6	10,0	44,99		
500-999	8	13,33	58,32		
1000-1999	10	16,67	74,99		
2000-2999	4	6,67	81,66		
3000-5999	4	6,67	88,33		
6000-8999	4	6,67	95,00		
9000-11000	3	5,00	100,00		
Mean	Median	Std. Dev.	Min	Max	N
1859,37	644	2794,265	7	11 000	60

Table 2 presents the distribution of turnovers at the time of entry. The mean turnover was 308 MEUR. However, this is biased because there are a few firms with very large turnovers. As it can be seen in the table, about 40% of the firms have a turnover of less than 50 MEUR, about 32% have a turnover between 100 and 600 and about 17% of the firms have a turnover above 600 MEUR. Thus, the median figure 83 MEUR better illustrates the usual turnover.

Table 2. Distribution of the firm's turnover at the time of the entry.

Turnover at the time of entry (MEUR)	Frequency	Percent	Cumulative percent		
0,1-9,99	8	13,33	13,33		
10-19,99	8	13,33	26,66		
20-49,99	8	13,33	39,99		
50-99,99	7	11,67	51,66		
100-199,99	8	13,33	64,99		
200-399,99	5	8,34	73,33		
400-599,99	6	10,00	83,33		
600-1099,99	4	6,67	90,00		
1100-1999,99	4	6,67	96,67		
2000-2521	2	3,33	100,00		
Mean	Median	Std. Dev.	Min	Max	N
308,02	83	529,59	0,1	2521	60

Table 3 presents the distribution of industry of the sample firms. The industry classification is based on two-digit ISIC rev.4 industry categorisation. As can be seen, almost 37% of the firms were operating in the sector of manufacture of machinery and equipment. The sectors of computer, electronic and optical products and paper and paper products represented 17% and 10% share of the sample firms respectively. Thus, the share of the three most common sectors was almost 64%. Other industry sectors ranged from chemical, construction, engineering, forest and heating to laboratory, pharmaceuticals and refrigeration products. Thus, the industry sector among the sample firms varied remarkably.

Table 3. The industry distribution of the sample firms.

Industry	Frequency	Percent
Manufacture of wood and of products of wood and cork	2	3,3
Manufacture of paper and paper products	6	10,0
Manufacture of chemicals and chemical products	3	5,0
Manufacture of pharmaceuticals, medicina, chemical and botanical products	1	1,7
Manufacture of fabricated metal products	3	5,0
Manufacture of computer, electronic and optical products	10	16,7
Manufacture of electrical equipment	7	11,7
Manufacture of machinery and equipment	22	36,7
Manufacture of motor vehicles, trailers and semi-trailers	1	1,7
Manufacture of furniture	1	1,7
Civil engineering	1	1,7
Specialised construction activities	1	1,7
Architecture and engineering services	1	1,7
Other professional, scientific and technical activities	1	1,7
Total	60	100,00

Note: The percentage may not add up to 100% due to rounding.

The distributions of operation modes and target countries are presented in Table 4. The entry was conducted by using licensing in 13 cases, by joint ventures in 24 cases and by wholly-owned subsidiaries in 23 cases. There were nine target countries, from which China was the most often entered country with 26 entries, followed by India and Japan, both with seven entries and Indonesia, South Korea and Thailand all with five entries. The remaining target countries were Malaysia, Philippines and Singapore each with 1-2 entries.

Table 4. Distribution of operation modes and target countries.

Target country	Licensing	Joint venture	Wholly owned subsidiary	Total (Percent)
	5	2	0	7 (11,7%)
India				
Indonesia	2	3	0	5 (8,3%)
South-Korea	2	2	1	5 (8,3%)
Japan	3	1	3	7 (11,7%)
Thailand	0	3	2	5 (8,3%)
China	1	11	14	26 (43,3%)
Malaysia	0	1	1	2 (3,3%)
Philippine	0	0	1	1 (1,7%)
Singapore	0	1	1	2 (3,3%)
Total (Percent)	13 (21,7%)	24 (40%)	23 (38,3%)	60 (100%)

Note: The percentage may not add up to 100% due to rounding.

Some differences in the target areas can be found when the three operation modes are compared. In the case of licensing, almost 40% of the operations were focused on India and in the case of joint ventures and wholly-owned subsidiary 44% and over 60% respectively, were conducted in China.

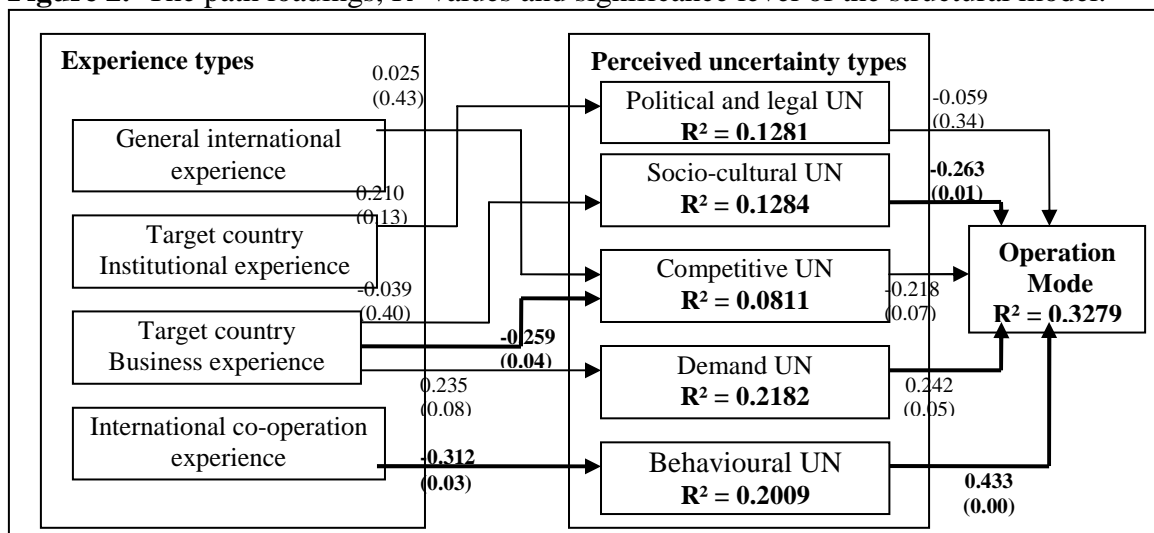
The research model

In the following, the measurement model is 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 1998a; Gefen et al 2000).

First, the quality of the measurement model was assessed. The indicator loadings, cross-loadings and composite reliability (ρ_c) are on acceptable level. AVE values are all above 0.60 and thus above 0.5., which is recommended in order to demonstrate reliability. 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.

The path loadings, R^2 and significance values are presented in figure 2. As can be seen in the figure, five out of six dependent variables have R^2 value over 0.1. Four out of five structural equations for perceived uncertainties demonstrate predictive relevance R^2 values ranging from 0.128 to 0.218. However, competition uncertainty R^2 value is only 0.0811 and thus the predictive power for that structural equation can be questioned. Structural equation related to operation mode represent the highest R^2 value (0.3279) meaning that the research model can explain 32,8% of the variance in that dependent model. In addition, the redundancy index for all dependent constructs is above 0 and thus there is predictive relevance.

Figure 2. The path loadings, R^2 values and significance level of the structural model.



The significance levels of structural relationships will be evaluated next. The relationships are considered to be statistically significant when $p \leq 0.05$. There are 11 structural relationships in the research model. Only five of them are statistically significant, thus, 45% of the structural relationships are statistically significant.

From the four suggested experience types only two had significant influence on perceived uncertainty. Thus target country business experience had a significant negative relationship with competitive uncertainty (H2b) and international co-operation experience had a significant negative relationship with behavioural uncertainty (H4).

There were five hypothesis related to the influence of uncertainty on operation mode choice. However, only H6, H8 and H9 were supported and thus socio-cultural uncertainty had a significant negative relationship with an operation mode choice and demand and behavioural uncertainty seemed to influence positively on operation mode choice.

7. Discussion and conclusions

The purpose of the study was to identify different uncertainty and experience types relevant to operation mode choice decision and to test which experience and uncertainty types are negatively related and how the different uncertainty types influence an operation mode choice for Finnish firms operations in Asian countries.

Based on the results, target country business experience decreased the level of competition uncertainty and international co-operation experience decreased the level of perceived behavioural uncertainty. This implies that prior presence in the target country enables the firm to learn more about competitors and their behaviour in the target country and thus helps in evaluating the possible future state of competition. In addition,

the presence of prior international co-operation decreases the expected opportunistic behaviour of potential future partners.

Why then, weren't other experience types significant as they were expected to be? The insignificant influence of general international experience on the level of competition perceived uncertainty may be the result of the fact, that most of the competitors in the target country are domestic firms, which haven't been present in other foreign markets and thus the entering firm is not familiar with their way of doing business. The results may also imply that this general type of experience is not enough to reduce the target country level uncertainties, but rather more specific type of experience is needed. The insignificant relation between target country institutional experience and political and legal uncertainty, on the other hand, may mean that merely the number of contacts with politicians, government officials and other influential people working in politics and legal institutions is not enough to receive inside information about future changes in political power structure or possible changes in laws and regulations. Rather, maybe more emphases should be put on the quality of the relationship and the regularity of contacts in order to have decreasing influence on perceived political and legal uncertainty.

However, the results gave some indication that the relationship between experience and uncertainty is more complicated than it has been generally assumed. Thus, the results imply that some experience types reduce the level of some uncertainty types, but do not influence some other uncertainty types. The results of the study contribute by increasing the ability to explain why experience may or may not affect an operation mode choice.

From the uncertainty types, socio-cultural, demand and behavioral uncertainty had an influence on the operation mode choice. Socio-cultural uncertainty did increase the use of less integrated operation mode, but demand and behavioural uncertainty increased the use of more integrated operation mode. Thus the results of the study are in line with prior studies (see e.g. Brouthers and Brouthers 2003; Brouthers et. al. 2002; Robertson and Gatignon 1998) related to the demand and behavioural uncertainty. However, the study differed from prior studies (Brouthers and Brouthers 2002; Aulakh and Kotabe 1997) in not finding support for the influence of political uncertainty. Nevertheless, the results support the idea, that uncertainty shouldn't be studied as one dimensional construct, because the different dimensions may have opposite influence on an operation mode choice.

8. Limitations and suggestions for further research

The main limitation of the study was the small sample size ($n=60$), which means that generalizing the results to wider populations is a little problematic. In addition, the sample was confined to Finnish firms' entries in nine Asian countries, which may also cause problems to the generalizability of the findings. The sample was also quite heterogeneous as the size of the firms varied from smalls 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 caused also 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 allow studying the direct and indirect relationships between the experience types, different types of uncertainties and operation mode variables. This would make it possible to examine if some other factors than the ones suggested in the theoretical discussion affect the level of specific perceived uncertainty type or do the factors influence directly to the operation mode choice rather than through the perceived uncertainty. In addition, there would be a greater variety of target countries which will also probably increase the variety of perceived uncertainty levels.

It would also be interesting to compare the influence of uncertainty on entry mode choice 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 if there are differences across different industries. It may well be that in different industrial sectors, the uncertainty components which are considered critical for an operation mode choice, may vary. Thus, it would be interesting to see the present study to be replicated for different industries.

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