
(doi: 10.1108/S1745-886220220000016010)

This is the Author Accepted Manuscript.

There may be differences between this version and the published version. You are advised to consult the publisher’s version if you wish to cite from it.

http://eprints.gla.ac.uk/268519/

Deposited on: 4 April 2022
Learning processes during re-internationalization: a case study of Chinese SMEs

Honglan Yu, Margaret Fletcher, Trevor Buck

Honglan Yu, University of Huddersfield
H.Yu2@hud.ac.uk
Margaret Fletcher, University of Glasgow
Margaret.Fletcher@glasgow.ac.uk
Trevor Buck, University of Glasgow
Trevor.Buck@glasgow.ac.uk

Authors’ Biographies:

Dr Honglan Yu is a lecturer in Management at the Huddersfield Business School, University of Huddersfield, UK. His research focuses on organizational learning, re-internationalization and international failures. He is a recipient of the Lazaridis Institute Best Paper Award for International Entrepreneurship in the 46th European International Business Academy (EIBA) conference, 2020.


Professor Trevor Buck:

Trevor Buck is Research Professor at the Adam Smith Business School, University of Glasgow. His research has appeared in the Academy of Management Journal and in top IB journals such as Journal of International Business Studies (six times). His current research interests include platform business models, platform reviews as signals, executive pay and firm strategies in extremely uncertain environments.
ABSTRACT:
Understanding how and why firms behave differently during re-internationalization has increasingly been at a premium in international business research. We conducted a case study of eleven Chinese international SMEs and explored how they learned and recovered from involuntary de-internationalization. From case data, the “complete” re-internationalizers learned the lessons of foreign market exits more proactively than “partial” re-internationalizers. The complete re-internationalizers adopted internal and external sources of knowledge acquisition, “middle-up-down” information distribution and ambivalent information interpretation, while the partial re-internationalizers relied on internal sources of knowledge, “top-down” or “bottom-up” information distribution and univalent information interpretation. Our study contributes by identifying the crucial role of learning processes to complete re-internationalization, which is absent in existing re-internationalization research.

KEYWORDS:
1. Re-internationalization
2. SMEs
3. Organizational learning
4. Knowledge acquisition
5. Information distribution
6. Information interpretation
1. Introduction

How to recover from international exits, i.e. re-internationalization, is of great public and academic concern. To address this, our study presents evidence on recent “re-internationalizers”, i.e. firms having achieved complete or partial success in re-entering foreign markets previously lost (Javalgi, Deligonul, Dixit, & Cavusgil, 2011; Vissak & Francioni, 2013; Vissak & Masso, 2015). Whilst we acknowledge that de-internationalization can be an intentional strategic reorientation (Welch & Welch, 2009), in this study we focus on investigating firms which experienced involuntary withdrawals from foreign markets, and then re-internationalized. We define “complete” re-internationalizers as firms achieving 100% or more of their pre-slowdown export volume, while “partial” re-internationalizers recover but fail to reach their previous export volume. The identified research gap is perceived as the neglect in the literature on learning and the re-internationalization process, as opposed to single re-entry events, and we therefore address the research question: how do firms learn during re-internationalization? We draw on the internationalization process (Vahlne & Johanson, 2017) and organizational learning (Huber, 1991) literatures to investigate how complete and partial re-internationalizing SMEs in China learn and recover.

The internationalization process literature has gradually extended our understanding from slow and incremental (e.g. Vahlne & Johanson, 1977, 2009, 2017) to fast and diversified internationalization (Madsen & Servais, 1997; Oviatt & McDougall, 1994, 2005) and to more diverse internationalization patterns at the post-entry stage (Johanson & Kalinic, 2016; Prashantham & Young, 2011; Welch & Paavilainen-Mäntymäki, 2014). These include born-again globals (Bell, McNaughton, & Young, 2001), de-internationalization (Mudambi & Zahra, 2007; Welch & Wiedersheim-Paul, 1980; Vissak & Masso, 2015), re-internationalization (Welch & Welch, 2009; Surdu, Mellahi, & Glaister, 2019; Surdu, Mellahi, Glaister, & Nardella, 2018), serial and nonlinear internationalization (Vissak & Francioni, 2013) and intermittent exporting (Bernini, Du, & Love, 2016). Re-internationalization research, as one important stream, has increasingly emerged as a topic of academic and managerial interest. Although the antecedents of export recovery have been explored over a long period (Axinn & Matthyssens, 2002; Hadjikhani, 1996; Hadjikhani, Hadjikhani, & Thilenius, 2014; Javalgi, et al., 2011; Swoboda, Olejnik,
& Morschett, 2011; Vissak & Francioni, 2013; Welch & Welch, 2009), recent studies have focused exclusively on how knowledge and learning influence the single-period decision to re-internationalize (Aguzzoli, Lengler, Sousa, & Benito, 2021; Yayla, Yeniyurt, CanUslay, & Cavusgil, 2018), re-entry timing (Surdu, et al., 2018; Surdu & Narula, 2020) or time-out period (Chen, Sousa, & He, 2019), commitment decisions (Surdu, et al., 2019) and whether firms learn upon re-entry (Aguzzoli, et al., 2021). Prior research has not addressed how firms learn during the entire re-internationalization process.

Learning and knowledge can be viewed as central theoretical components for examining internationalization patterns in general (De Clercq, Sapienza, Yavuz, & Zhou, 2012; Ipek, 2019; Kogut & Zander, 1993; Tuomisalo & Leppaaho, 2019; Vissak, et al., 2020), and recent studies have provided a deeper understanding of how different sources of knowledge influence the internationalization process (Casillas & Acedo, 2013; Casillas & Moreno-Menéndez, 2014; Casillas, Barbero, & Sapienza, 2015; Chetty, Johanson, & Martin, 2014; Fletcher & Harris, 2012; Pellegrino & McNaughton, 2017; Vissak, Francioni, & Freeman, 2020). Most of these studies have adopted Huber’s (1991) learning framework, involving congenital, experiential and vicarious learning, plus grafting and searching, but have regarded knowledge acquisition as a broad learning process. However, while other learning processes, namely information distribution (Barmeyer, Mayrhofer, & Würfl, 2019; Fletcher & Prashantham, 2011; Kasper, Lehrer, Muhlbacher, & Muller, 2013) and information interpretation (Casillas, et al., 2015; Vissak, et al., 2020) have been argued to affect the internationalization process in general, there has been no specific application to re-internationalization. This study seeks to explain holistically how firms learn from export slowdowns as specific examples of international setbacks or failures (Tuomisalo & Leppaaho, 2019), thus expanding our understanding of re-internationalization beyond knowledge acquisition. We do not study firms who fail to achieve any recovery from export decline but focus instead on firms that re-internationalize either completely or partially, to establish whether these firms learn differentially.

Our research uses a multiple-case study of eleven international Chinese SMEs that all experienced de-internationalization, to facilitate a detailed examination of their subsequent re-internationalization, and examines differences in their learning processes. We extend the internationalization literature by
explaining the relationship between learning processes and the degree of re-internationalization. Complete re-internationalizers exploited internal as well as external sources of knowledge, employed middle-up-down information distribution and early, ambivalent information interpretation. Pre-internationalizers relied on internal knowledge acquisition, top-down or bottom-up information distribution, and univalent or late ambivalent information interpretation.

2. Re-internationalization research

Re-internationalization is defined as the process of re-entering foreign markets after involuntary withdrawal and de-internationalization (Javalgi, et al., 2011; Vissak & Francioni, 2013; Vissak & Masso, 2015; Welch & Welch, 2009; Dominguez & Mayrhofer, 2017). Complete and partial re-internationalizers are differentiated by the degree to which they restore exporting after de-internationalization. Following Vissak and Masso (2015), complete re-internationalizers are firms which have fully restored their previous export volume and re-entered all previous foreign markets (reaching at least 100% of their previous export volume); whereas partial re-internationalizers restored their exporting to some extent, but did not re-enter all previous foreign markets or achieve full exporting intensity (i.e. reaching less than 100% of previous peak export volume). It is further reported that partial tends to be more frequent than complete re-internationalization (Vissak & Masso, 2015) but questions regarding how and why they behave differently during re-internationalization have not been addressed.

Recent studies of re-internationalization do investigate different patterns of re-internationalization: e.g. complete and partial re-internationalization (Vissak & Masso, 2015), how market experience and the quality of host institutions affect the timing of re-entry (Surdu, et al., 2018) and re-entry commitment (Surdu, et al., 2019), how the time-out period after de-internationalization affects re-entry probability and performance after re-entry (Chen, et al., 2019); other studies have considered how knowledge, networks and decision-making logics affect foreign market re-entries (Vissak, et al., 2020), and how previous international experience affects whether firms learn in re-entry (Aguzzoli, et al., 2021). These re-internationalization studies do refer indirectly to learning but in the context of antecedents of the re-entry process, such as international heritage, international time-outs and re-entry
decisions (Welch & Welch, 2009). The most recent empirical paper does consider learning in the re-entry process but it addresses how previous international experience affects whether firms learn upon re-entry (Aguzzoli, et al., 2021). A research gap remains, with no prior focus on the entire re-internationalization process, distinguishing between complete and partial re-internationalizing firms.

3. Learning processes during re-internationalization

The organizational learning literature facilitates the study of re-internationalization in terms of the learning process about different international markets that firms re-enter (Vissak, et al., 2020). In this research, we use Huber’s (1991) organizational learning framework to investigate re-internationalization in order to contribute to the extant IB literature. This framework has already provided a perspective on internationalization in general, involving antecedents, processes and outcomes (De Clercq, et al., 2012; Fletcher & Harris, 2012; Kogut & Zander, 1993; Pellegrino & McNaughton, 2015; Vissak, et al., 2020; Welch & Welch, 2009) but with no consideration to date of how firms learn in the re-internationalization process.

Huber’s (1991) six knowledge acquisition processes (vicarious, congenital and experiential learning, grafting, noticing and searching) have been widely investigated in the IB literature, but rarely information distribution and interpretation (Casillas & Moreno-Menéndez, 2014; Chetty, et al., 2014; Pellegrino & McNaughton, 2015, 2017), despite being mentioned as important concepts in internationalization and re-internationalization (De Clercq, et al., 2012; Ipek, 2019; Vissak, et al., 2020; Welch & Welch, 2009; Vahlne & Johanson, 2017). Information distribution refers to “the process by which knowledge from various sources is shared”, said to determine the speed and breadth of learning (Huber, 1991, p.90). On the other hand, information interpretation refers to the process by which distributed knowledge is given understandings, decisions or actions, which determines the “elaborateness” and “thoroughness” of learning (Huber, 1991, p.90). As a result, taking information distribution and interpretation into account may provide a more comprehensive understanding of how a firm learns (De Clercq, et al., 2012; Ling-yee, 2006).
Information distribution in IB research has drawn from sender-receiver and social learning theories. For example, Karsper, et al. (2013) identify three information distribution processes: top-down, bottom-up and middle-up-down, and the properties of these three information distribution processes are shown by Table 1. However, they have not been applied to re-internationalization research.

\[ \text{\textit{\textbf{TABLE 1 HERE}}} \]

In relation to information interpretation, the literature has identified two processes: univalent and ambivalent interpretation, both involving how an organization makes sense of information collectively. Univalent interpretation refers to the process whereby a firm, with strong directional goals, interprets complex issues as being either clearly positive or negative for its business, normally leading to a narrow but workable response (Hahn, Preuss, Pinkse, & Figge, 2014; Plambeck & Weber, 2009, 2010). In contrast, with ambivalent interpretation, a firm has a holistic view, interprets complex issues as being potentially both positive and negative for its business and normally pursues a set of comprehensive and adaptable responses (Plambeck & Weber, 2009). As with information distribution, these two information interpretation processes have not been applied to the re-internationalization literature.

In summary, we apply organizational learning theory (including knowledge acquisition, information distribution and interpretation processes) to the context of re-internationalization, to examine how firms learn during re-internationalization (Ipek, 2019; Tuomisalo & Leppaaho, 2019).

4. Methodology

We investigate how Chinese SMEs learn during re-internationalization by adopting an inductive approach, whereby prior literature suggests concepts but not relationships, as in a deductive study (Fletcher, Zhao, Plakoyiannaki, & Buck, 2018). To answer the research question, we aimed to find out what new knowledge firms needed, how they acquired, distributed and interpreted it, why they did in certain ways, as well as how learning evolved over time. We needed to study the relevance of a comprehensive framework of learning processes which had not been applied in re-internationalization
research before, through fine-grained data analysis. A qualitative, multiple case study design was identified as the most suitable method (George & Bennett, 2004; Krogh, Rossu-Lamastra, & Haefliger, 2012; Yin, 2018) where we were able to track learning processes over time. Multiple cases facilitate early theorizing of a phenomenon at a nascent stage (Edmondson & McManus, 2007; Fletcher, et al., 2018), permit replication logic (Eisenhardt & Graebner, 2007) and dependability from empirical observations to theory (Gibbert & Ruigrok, 2010; Lincoln & Guba, 1985). Fig. 1 shows the key steps within the research process.

4.1 Research setting and case selection

Re-internationalization in Chinese SMEs is a phenomenon attracting increasing interest from academic researchers, with China’s export slowdown (Woetzel, et al., 2019). China is one of the fastest growing economies and the largest international trading country in the world (Chen, et al., 2019), where SMEs comprise the majority of Chinese exporters, and where understanding their re-internationalization becomes increasingly important to policymakers (OECD, 2019).

Firms were selected through theoretical sampling (Eisenhardt, 1989; Patton, 2015), adopting Vissak & Masso’s (2015) definition of complete and partial re-internationalization to identify and select theoretically relevant samples to meet the research aim (Lincoln & Guba, 1985; Patton, 2015). A decrease of at least 25% in exporting intensity was used to define an export slowdown (Vissak & Masso, 2015), and we selected firms which retained some international involvement during this period of de-internationalization (Knight & Cavusgil, 2004). Complete re-internationalizers reached 100% or more of their previous export volume after an export slowdown, while partial re-internationalizers recovered but failed to reach their pre-slowdown export volume.

In order to select suitable cases, two datasets were combined as a sampling frame. The first dataset was the “Directory of China’s Foreign Trade,” issued by the CCPIT (the China Council for the
Promotion of International Trade). This directory includes more than 100,000 firms and provided the name and contact details of each firm and industrial sector (Ji & Dimitratos, 2013). To complement the first dataset, the researchers added another dataset - the “Listed Chinese SMEs Dataset” (Ying & Mike, 2010; Ren, et al., 2015) that disclosed all the information needed for sampling, i.e. export ratios, international operations, industry sectors and contact details. Suitable cases selected from this dataset offered additional secondary sources of data that could be used in data analysis and triangulation.

In the next sampling stage, only SMEs (on the Chinese definition, i.e. with fewer than one thousand employees) were retained, leaving 1,535 cases. Next, 507 firms that had consistently less than a 25 percent exporting intensity throughout their history were eliminated. Finally, historical exporting data was collected and collated with the selected criterion for exporting decline (25% minimum), resulting in 124 cases. In the second phase of case selection, a further theoretical sampling logic was used to aid analytical generalization to the theory (Eisenhardt & Graebner, 2007). Consequently, 80 complete and 44 partial re-internationalizers (see above) were identified. These 124 SMEs constituted a relatively comprehensive population of companies that had experienced the re-internationalization phenomenon.

All firms were contacted through email or personal contacts. Finally, eleven cases agreed to participate in the research (see Table 3), categorized as six complete and five partial re-internationalization cases (as shown in Appendix A). The firms were representative of the studied phenomenon in terms of industry sector (high-tech manufacturing), firm age (more than 10 years old), firm size (SMEs), geographical location and export decline severity. Key sample information is shown in Table 2.

\[\text{TABLE 2 HERE}\]

4.2 Data collection

This research was conducted in a post hoc manner. Data was collected by the researchers over two years (2017-18) mainly through interviews and archival data covering internationalization patterns 2001-
2017. We raised similar questions in a regular manner over the two-year period of data collection to ensure the accuracy of retrospective accounts and identify emerging themes.

Archival data, including annual reports and secondary reports from financial intermediaries, was analyzed to prepare for interview and to triangulate the reliability of interviews (Eisenhardt, 1989; Yin, 2018). In turn, interview transcripts were collated with secondary data for triangulation.

Semi-structured interviews were conducted with key informants involved in the de-internationalization and re-internationalization processes, i.e. CEOs, founders, senior managers, and external bank managers responsible for the risk assessment of firms who could reflect on their thoughts, activities and decisions (Kuma, et al., 1993; Zou & Ghauri, 2008). Multiple informants within each case were invited for a group interview to mitigate information biases and retrospective errors (Miller, et al., 1997). In total, 47 face-to-face interviews of 1 to 1.5-hour duration each and eleven 1-hour group interviews were carried out. Informal contact was maintained with key informants to ask for further explanations regarding any emerging questions.

4.3 Data analysis

Data about events, actions and processes during re-internationalization were analyzed by following narrative, visual mapping and temporal bracketing strategies, which ensured appropriate levels of accuracy, simplicity and generality (Langley, 1999).

First, information from transcripts, annual reports, news, firm histories and other relevant official websites were integrated into a retrospective history and a visual timeline of the re-internationalization process for each case (Bunz, Casulli, Jones, & Bausch, 2017). This visual mapping strategy is useful in the early stages of research for reducing a large amount of data to a simultaneous representation of theoretical dimensions and changes over time (Langley, 1999; Miles, Cardinal, & Glick, 2014). Second, a temporal bracketing strategy was applied to divide retrospective narratives and re-internationalization process maps into comparable phases to handle eclectic data including events, activities, interpretations and feelings (Langley, 1999). Two temporally sequential phases inductively emerged from the data: early and late re-internationalization. Early re-internationalization referred to the first two years after a
firm decided to re-enter prior foreign markets. Late re-internationalization referred to the period after early re-internationalization until the end of data collection at the end of 2018. Third, process data were further analyzed combining exploratory open coding (within each case) and cross-case, cross-phase explanatory pattern matching (Corbin & Strauss, 2015; Miles, et al., 2014). In exploratory open coding, we used the data structure method of Gioia, Corley, & Hamilton (2012) to abstract codes into subcategories and aggregated dimensions. Events, activities, actions and managerial reflections during the re-internationalization process were inductively coded, abstracted and then collated with previous studies reiteratively (Ghauri & Gronhaug, 2010). Data analysis is summarized in Fig. 2. Finally, learning processes were compared across temporal phases within each case and across cases of complete and partial re-internationalization to identify explanatory patterns (Miles, et al., 2014).

4.4 Research trustworthiness

This research followed four criteria (Lincoln & Guba, 1985) to establish trustworthiness: credibility, transferability, dependability, and confirmability. To establish credibility, a prolonged engagement with sample firms and triangulation from multiple data sources were conducted (Sinkovic, Penz, & Ghauri., 2008). One author maintained engagement with the sample firms through observations and informal online chat after formal interviews. We collected primary data from different top management team (TMT) members, bank credit managers who were investigating the sample firms using similar questions, group interviews and various sources of secondary data to ensure data triangulation. These multiple sources of data are used to clarify any mismatches, build a comprehensive narrative, reduce biases from individual retrospective accounts (Huber & Power, 1985). Transferability and the analytical generalizability of findings to theory was facilitated by thick description of what learning processes were in cases and how they changed across phases of re-internationalization (Yin, 2018). Supplemented by triangulation from multiple data sources, we provide a detailed description of our theoretical
sampling criteria, data coding structure, and quotations from interviewees to substantiate the chain of
evidence to further enhance dependability (Lincoln & Guba, 1985). Independent researcher observation
and embedding analysis within the existing literature were conducted to reduce research biases and
enhance confirmability (Lincoln & Guba, 1985; Sinkovics, et al., 2008).

5. Findings

This section presents the findings on how learning processes change during re-internationalization by
comparing complete and partial re-internationalizers during early and late re-internationalization
phases. Based on the above definitions, firms A, B, C, D, E and F were grouped as complete re-
internationalizers and firms G, H, I, J and K were grouped as partial re-internationalizers. Background
details of each case are shown in Table 3, including the nature of firms’ initial international experience,
antecedents for de-internationalization and types of de-and re-internationalization. We examine the
differences between complete and partial re-internationalizers in knowledge acquisition, information
distribution and information interpretation processes.

----------------------
TABLE 3 HERE
----------------------

5.1 Changes in knowledge acquisition

For both complete and partial re-internationalizers, experiential learning was the most common
knowledge acquisition process used during the early re-internationalization phase. CEOs and managers
from these two groups of firms emphasized that internal direct experience contributed to context-
specific understandings, difficult to obtain from external sources of learning.

However, there was a difference with regard to the diversity of direct experience acquired by
complete and partial re-internationalizers. Complete re-internationalizers acquired technological know-
how and international operation expertise in various ways, such as regular visits to foreign markets and
strategic partners by the TMT and all relevant employees. In contrast, partial re-internationalizers only
acquired direct experience from foreign market visits by a few top managers who were in charge of
international business. This difference extended to what managers in the two groups of firms learned from their previous foreign market withdrawals. The complete re-internationalizers learned that they had to be more careful when embracing new ideas from varied sources, to explore any emerging opportunities and different understandings (or information) from various sources in their withdrawn markets. They encouraged experience-sharing and presentations by their employees (A, B, C, D, E), accumulated formal logs or reports and informal storing sharing from managers (A, B, D, E) and learned from strategic partners about cross-border product co-development (B, C) and foreign market supply chain management (F). All partial re-internationalizers learned to focus on what they considered to be their most important source of knowledge, i.e. the experiences of their TMT.

Both complete and partial re-internationalizers used externally-focused searching during early re-internationalization in order to acquire market and technological knowledge. For example, the trade press and government official policy guides were the most common sources used by both these groups of firms to scan current technology standards, the international competition environment, and host and home country policy support. Complete re-internationalizers also searched technical product specifications from published reports or books and product/service localized redesign (A, E) and post M&A integration (B, C, D) from commissioned or commercial consultancy research reports. Firm B used big data and data-mined technologies from historical secondary reports to explore and predict trends in foreign markets. Firm F searched the trade press and policy guides to find out contacts with foreign business partners, export financing regulations and technical standards. Two partial re-internationalizers acquired technical product specifications from the trade press (J) and foreign investment procedures from policy guides published by foreign governments (K).

"It is important to learn from these secondary reports. [...] The secondary information tends to be more important when we are applying big data analytics and data mining to probe what is really going to happen", CEO Case B.

There was a difference between the two groups regarding internal searching. Three complete re-internationalizers (A, B and E) acquired technological knowledge and internationalization knowledge
from internal searching whereas all partial re-internationalizers failed to undertake this activity. A, B and E continuously established their expert consultation forum, marketing information system and management information platform from early re-internationalization as they wanted to explore and acquire internal information which they were not aware that they possessed. For example, the CEO of firm A reflected:

“Technological expertise sometimes may be acquired from marketing staff as they may know how to change the design to suit a local market and how to differentiate from competitors”, CEO Case A.

However, partial re-internationalizers held an opposite view towards internal searching. In their opinion, there is no need to deliberately re-learn from their employees. For example, the CEO of firm K stated that:

“We (managers) may have more experience and a more comprehensive understanding on a strategic issue than employees and knowledge already resident within the firm does not have to be deliberately acquired”, CEO Case K.

The other learning difference across complete and partial re-internationalizers involves the use of vicarious learning and grafting. The complete re-internationalizers obtained information about what other firms nearby were doing or observed competitors to acquire new insights into how either domestic or foreign markets change, whereas partial re-internationalizers did not. For instance, Firm A observed competitors in industry exhibition events, industry fairs and conferences in order to catch up with updated product designs. Firm B kept alert to competitors’ and distributors’ strategic movements to acquire re-internationalization know-how, especially how to localize their product and how to coordinate supply chains across countries. Firms C and D both worked closely with their strategic partners to acquire market entry internationalization knowledge and with distributors concerning foreign market knowledge. Firm F learned how to coordinate and structure internationally to keep pace with the fast changes in foreign markets through imitating its strategic partners and competitors.
Complete re-internationalizers engaged more with grafting-on external human resources within their firms in the early re-internationalization phase. For example, they added new directors (A, B and C), non-executive directors (A and E), new middle managers (C, D, E and F) and new staff (A, B, C, D, E and F), while partial re-internationalizers did not use grafting. Grafting was used to acquire market, technological and internationalization knowledge. The CEOs from complete re-internationalizers (A, B and E) reported that grafting could inject new ideas and new understandings immediately. Although grafting was viewed as a costly decision to attract external human resources. High fixed salaries for new managers were avoided by all complete re-internationalizers by offering long-term incentives plans, restricted stock and stock options, so that rewards depended upon performance.

Complete re-internationalizers adopted vicarious learning and grafting during early re-internationalization because they needed more external indirect experience to develop an early alertness to emerging opportunities and underlying problems when re-entering abandoned markets. As indicated by the CEO of Case A, a timely inflow of new insights from external perspectives, a comprehensive view of the current status of the firm and comparisons with other firms resulted in a state of managerial alertness and responsiveness to both underlying problems and external changes. External information from vicarious learning and grafting (contrary to managers’ prior beliefs from past international experience of foreign exits or blinkered mindsets), enhanced managers’ perception of the complexity of the re-internationalization process. In their late re-internationalization, most complete re-internationalizers added more sources of vicarious learning and grafting, such as observing or imitating customers, competitors, agencies and participants in industrial conferences. They also continuously grafted external human resources at different levels of management. However, these changes have not been at the expense of reduced efforts regarding internal sources of knowledge, since the TMTs wanted to keep themselves at a high level of alertness and responsiveness to both underlying internal issues and external changes.

In comparison, partial re-internationalizers followed a similar but relatively delayed pattern of response because they gradually realized that direct experience was not sufficient and cost-effective to update themselves with external changes. They started to recognize the importance of vicarious learning
and internal searching. For example, they tried to observe other companies, partners and external consultants to obtain market and internationalization knowledge. Meanwhile, firms H, J and K searched out new insights and ideas from trade press and official information from industry associations. Case H shared the same reasoning with complete re-internationalizers for the changes. Partial re-internationalizers did not consider the use of grafting for new knowledge acquisition during the process of re-internationalization as the TMTs still regarded it as being too costly to implement.

5.2 Changes in information distribution

The data on information distribution revealed three processes of distributing new information within the firms. All complete re-internationalizers adopted “middle-up-down” distribution during their re-internationalization. This is a collective mode of distributing knowledge where top managers, middle managers and employees all share knowledge mutually through collaborative efforts and dialogue interaction, with middle managers assuming a hub role, distributing and exchanging new information up and down the organization (Nonaka, 1994; Kasper, et al., 2014). By way of contrast, three partial re-internationalizers (G, I, K) used top-down distribution in early re-internationalization but Firm G later changed to bottom-up distribution, which was also adopted by the other two partial re-internationalizers (H, J) through their re-internationalization.

Compete re-internationalizers facilitated sharing strategies, foreign market dynamics, policies and associated meanings from TMTs to employees and organizing new idea generation and feedbacks from employees inside and outside their departments to TMTs simultaneously. Functional departments (firms A, D and E) or task-specific teams (firms B, C and F) positioned themselves as hubs at a middle management level for knowledge-sharing and organized information flows between TMTs and employees. Most complete re-internationalizers combined both formal and informal approaches to distributing information. All of them shared experiences and information through formal, planned and systematic practices, such as regular meetings, success or failure story presentations, reports and
documents and staff training programs. At the same time, their employees were involved in
information distribution through a cross-functional workplace structure (A, B, C, D, E, F), monthly job
rotation (B, C, D), virtual “work with manager” live sessions twice a week (B), flat organizational
structure (A, D, E), open plan offices (A, B), job shadowing (E), lounges at the intersection of
departments (B, D, E, F), informal knowledge fairs, digital communities such as WeChat groups (A, B,
C, D, E, F) and casual gatherings (A, B, C).

Complete re-internationalizers also reported that they suffered a tension between how to learn
efficiently and how to learn effectively. Firms have to act fast based on comprehensive understandings
of foreign market changes.

“There are many new opportunities during the re-internationalization process but they often close
very quickly due to the intense competition. So, we need to be fast to make an accurate decision”, CEO
Case B.

Four complete re-internationalizers (firms A, B, D, F) did adopt top-down or bottom-up distribution
at the beginning of re-internationalization but they quickly changed because they found that middle-up-
down distribution worked best to achieve fast learning and comprehensiveness. Top managers from
Cases A, B and D felt too stressed to cope with the heavy load of new information when they used a
top-down approach at the very beginning of their re-internationalization. At the same time, they had
fewer opportunities to manage opinions and develop a full understanding when they had to making
decisions. As a result, they recognized that the top-down approach made them unable to make well-
formed decisions due to their limited knowledge exchange, as reported by CEOs from firms A, B and
D. Firm F considered changing to a bottom-up distribution process but gave up the idea because
employees were less prepared to proactively engage in autonomous knowledge-sharing.

The CEO of Firm F regarded the process as “neither efficient nor effective”. In his reflection, a
middle-up-down approach may make both managers and employees more aware of their knowledge,
its deficiencies and, more importantly, who they don’t know, so they can develop new insights more
efficiently and effectively, with less personal bias.
In comparison, two partial re-internationalizers (firms I, K) adopted a top-down distribution of knowledge whereby the TMT controlled and directed what and how knowledge was to be circulated in formal and planned activities. For example, the three firms shared new information through documentation, reports, regular conferences and post-decision reviews. As reported by the CEO of Case I, the formalized and centralized mode of distribution was effective in their internationalization as the firm had to react quickly to new opportunities and new markets. The CEO of Case K stated that it was time-consuming and meaningless to wait for employees’ contributions of new information because such information was often not useful.

Two partial re-internationalization firms (H and J) used the bottom-up distribution of knowledge, which was also used by firm G in late re-internationalization. These two firms applied a self-organizing principle of knowledge-sharing within the firm from employees to top management. All employees were agents of knowledge distribution while the TMT acted as sponsors. New information was spontaneously shared through the personal network of staff. Firms H and J mainly relied on informal distribution channels: digital collaborative communities (H, J), informal knowledge fairs (H) and mentoring (H and J).

These changes were driven by the managerial need for well-informed decisions, as reported by the CEO of Case H. Firm G changed to a bottom-up approach in its late re-internationalization phase because the TMT realized the importance of internal searching and started to learn from employees. The CEO of Case G also emphasized that centralized information distribution restricted managers’ insights when making a decision although a decision can be made efficiently.

5.3 Changes in information interpretation

Our case studies revealed two different processes whereby firms made sense from information: univalent and ambivalent interpretation (Hahn, et al., 2014; Plambeck & Weber, 2009, 2010). Univalent
interpretation aims to give information with a single, commonly understood interpretation that has become focused through the application of a few rounds of information filtering to reduce any ambiguity of interpretation, and leading to a few workable actions. Ambivalent interpretation may be applied in many ways to information from different sources that has wider implications for action. Although all re-internationalizers agreed that they have to be more cautious during re-internationalization, their differences in interpretation demonstrated two distinct ways of being cautious: partial re-internationalizers tended to be more focused on univalent interpretation, fulfilling single objectives and solving particular problems but complete re-internationalizers tended to interpret more comprehensively to cope with future possibilities.

In the case of partial re-internationalizers, univalent, rigid interpretation was the most common information interpretation process used during early re-internationalization. Partial re-internationalizers emphasized clear, unambiguous definitions of whether information was relevant or not, leading to pragmatic assembling, matching and aligning activities. They aimed to make focused and workable decisions during re-internationalization, and developed pragmatic rules after information assembling through written reports and documents. Information from diverse sources was selected and assembled on the basis of strong supporting evidence, clear justifications and feasible action plans in order to make information clearer, eliminating alternative interpretations. For example, firm H ruled that suggestions (about a localized product design for Middle East) would only be considered if they were based on hard data, so they could bring immediate economic impacts. This meant that filters were used to save time in knowledge acquisition and information distribution (CEO, firm H). A need for feasible action plans and short-term realizable outcomes were also emphasized as the main filters of different voices from inside and outside by all the other firms. Similar to firm H, other partial re-internationalizers applied strict and pragmatic rules in filtering interpretations from managers and staff, e.g. how would an idea help to achieve the firm’s main strategic objective (firm G), how suggestions could solve a central problem (firm G, I, K) and how advice could bring immediate benefits to the company (firms I, J and K). These rules acted as filters to rule out unfocused interpretation. For firm J, the TMT took position papers about digital management systems into consideration if it could save on international operation
costs immediately and cost less for maintenance (CEO, firm J). Firms G and K were more cautious about new proposed management structures and new distribution partners which could reduce distribution costs. When deciding whether to enter Canada, Latin America and Africa, firms G, H and J only focused on entry mode suggestions with short-term realizable economic outcomes in order to reduce risks. This is what they learnt from their previous exits, i.e. they had to be more cautious in investing resources.

Information subject to univalent interpretation was then compared with similar events in the past to check whether it was compatible with past experience, existing strategic goals and organizational routines, to give it more focus. Information which was believed to be effective in the past was selected. For example, the CEO of firm K did not consider any further joint ventures in Middle East, but invested more on foreign direct investment in developed countries, because of joint venture failures in these countries before withdrawal. Information was finally distilled into a few workable and aligned actions through a few rounds of discussing within the TMT, evaluating costs and returns and aligning with a final decision. Similarly, firm G considered its entry mode choices within the TMT, evaluated their probability of gain and loss according to direct feedback from earlier ventures and existing financial objectives. All the other partial re-internationalizers followed similar procedures and efforts to focus different opinions and plans on single, first-best options. In doing so, the TMTs believed that univalent interpretation could contribute quickly to a single decision and associated fast actions that could help seize opportunities in international markets without wasting time on processing irrelevant interpretations.

For complete re-internationalizers, however, the most common information interpretation process was ambivalent, flexible interpretation. All of the complete re-internationalizers assembled information from reports, knowledge fairs and collaborative platforms prudently without obeying any pragmatic rules for interpretation, encouraging multiple understandings and insights. For example, firm A organized open online discussions about localized product designs for re-entry into European countries without imposing information assembly rules. When firm D was considering modes for re-entering North America and European markets, the management team ran a virtual discussion room on their
internal information platform to collect anonymous opinions about possible entry modes and suggested potential collaborators.

“If we still focus too much on short-term realizable economic outcomes or workable plans, we will lose the opportunity to learn what we (the management team) don’t know but our staff know”, CEO Case D.

The information was further contrasted with past similar events, existing strategic goals and organizational routines to re-define situation and set future expectations. According to firm A, the process of comparison was aimed at developing a comprehensive understanding of the current situation regarding re-internationalization. Instead of asking for a single solution, other firms (B, E) also encouraged alternative interpretations from different organization levels and perspectives, suggestions which could be contrary to existing strategic objectives (firms C, D, F).

New information was finally reconstructed into multiple courses of action through several rounds of discussion across departments and the exploration of multiple alternatives. The reconstructing process was mainly based on explorative statements about the possible outcomes of a decision at a specific point or an undefined point in the future. For example, firm A organized multiple rounds of cross-functional discussion with marketing, R&D and finance departments about alternative localized product designs for European markets. Then the TMT and middle managers explored when and where all these plans were applicable and accommodated alternative plans to make preparation for any emergencies in different foreign markets, such as North America. The other complete re-internationalizers followed similar procedures and endeavours to convert divergent opinions and plans into multiple actions. In doing so, the TMTs believed that ambivalent interpretations contributed to a willingness to anticipate the unexpected in international markets without wasting time on a further round of diagnosis and planning.

However, three partial re-internationalizers (firm G, H and J) converted to ambivalent interpretation over the study period. CEOs from firms G, H reported that they were cautious during the re-internationalization process as they had recognized the complexity of earlier internationalization, since
foreign markets could change rapidly and unexpectedly. They required different interpretations (related to foreign markets, localized products, and international management) in order to conceive back-up solutions. According to the CEO of Case J, ambivalent interpretation alerted managers to external changes and strengthened their appreciation of complexity during re-internationalization. Moreover, different interpretations enhanced the understanding of withdrawal, re-entry and multiple strategic alternatives, which inspired confidence in achieving complete re-internationalization, as reported by the CEO of Case J. The CEO from firm G also concluded that ambivalent interpretation placed more emphasis on long-term rather than short-term actions.

6. Discussion

Although previous research has emphasized that re-internationalization is a learning process (Aguzzoli, et al., 2021; Surdu & Narula, 2020; Vissak, et al., 2020), how firms learn during the re-internationalization process has not been explored in the literature. This research has addressed the gap by comparing knowledge acquisition, information distribution and interpretation processes between complete and partial re-internationalizing SMEs in China from early to late re-internationalization. This research is the first to integrate the re-internationalization process literature with an organizational learning framework (Huber, 1991), the first detailed investigation of complete and partial re-internationalizers and claims to advance theory with five propositions, below.

The extant literature suggests that the conclusions drawn from international experience may differ among exiting firms (Welch & Welch, 2009). While Madsen and Desai (2010) and Tan and Sousa (2019) argue that experience of failure and exit could increase the probability of success, recent studies find that failure experience may not lead to subsequent success (Meschi & Metais, 2015; Aguzzoli, et al., 2021). Aguzzoli, et al. (2021) stressed that learning from failure can avoid managerial overconfidence and learning myopia, which prevents re-internationalizing firms from having a full understanding of the re-entry process.
Instead of investigating the consequences of learning from failure, this research contends that what was learned from past foreign exit experience differentiates complete from partial re-internationalizers. Our findings show no evidence of over-confidence and its role in partial re-internationalization. However, our complete and partial re-internationalizers do show that managerial attribution towards exporting failure affects what they will conclude from such an experience and how they will learn to promote the re-internationalization process. Past foreign exit experience can either encourage or frustrate the contribution of learning to re-internationalization, depending on whether the TMT attributes the failure to “we knew too little” or “we knew too much”. Such differences are manifest in learning processes (see Table 4) which then influence the completeness of re-internationalization.

-------------------

**TABLE 4 HERE**

-------------------

We make five propositions about learning processes in re-internationalization. Firstly, this research extends existing re-internationalization research by showing the differences of knowledge acquisition sources used by complete and partial re-internationalizers during their re-internationalization. Complete re-internationalizers acquired market, technological and internationalization knowledge from both external and internal sources throughout their re-internationalization phases, while partial re-internationalizers relied only on internal, experiential learning in early re-internationalization (Fletcher & Harris, 2012; Fletcher, Harris, & Rickey, 2013). This observation from complete re-internationalizers contributes to the literature by finding that both internal and external sources of knowledge contribute to the completeness of re-internationalization (Pellegrino & McNaughton, 2015, 2017; Vissak, et al., 2020; Welch & Welch, 2009). Partial re-internationalizers with a restricted use of internal knowledge sources in our study showed a “failure myopia” (Levinthal & March, 1993, p.101). They were less motivated to acquire new external knowledge, resulting in a limited learning focus and erroneous decisions, and lacked the motivation to search for new external knowledge because it was difficult to learn from contradictory internal and external knowledge during re-internationalization (Welch & Welch, 2009). Experience can be turned into learning but requires self-reflection and reflexivity to avoid misinterpretations of crucial aspects of previous activities (Meschi & Metais, 2015). Relying only
on learning from experience can be “self-limiting” and reduce incentives to investigate new sources of information (Levinthal & March, 1993, p.97). In addition, acquiring backward-looking knowledge, mainly from internal sources, can delay the feedback from results (Starbuck & Milliken, 1988; Gavetti & Levinthal, 2000). This feedback delay could further develop misunderstandings that may arise from unrelated actions, which are influenced by personal attitudes and attribution distortions (Huber, 1982; Weiss, 1980; Levitt & March, 1988; Levinthal & March, 1993). As a result, we infer that firms using both internal and external sources of knowledge are more likely to have a fuller grasp of the re-internationalization process and achieve a more complete exporting recovery.

**Proposition 1.** *Complete re-internationalized firms are more likely than partial re-internationalized firms to have used both internal and external sources of knowledge than partial re-internationalized firms.*

Secondly, our study contributes to re-internationalization literature by showing the importance of using both internal and external sources of knowledge in an early manner to completely re-internationalize. During their late re-internationalization phase, some partial re-internationalizers emphasized both internal and external sources of knowledge like complete re-internationalizers. This observation indicates when knowledge acquisition sources change may be an explanatory factor to the completeness of re-internationalization. On the one hand, early attempts to use diverse sources of knowledge may contribute to complete re-internationalization. This brings an early awareness and perception of potential mistakes which were influenced by previous experience. On the other hand, a reliance on experiential learning consumes time as trial-and-error proceeds, so firms may miss emerging opportunities in foreign markets. The time-consuming nature of experiential learning may further undermine the proactiveness of re-internationalization.

**Proposition 2.** *Complete re-internationalized firms change are more likely than partial re-internationalized firms to change to both internal and external sources of knowledge in an early manner.*
Thirdly, our research contributes to prior re-internationalization literature by highlighting the importance of grafting for complete re-internationalization. Complete re-internationalizers used grafting to acquire market, technological and internationalization knowledge, but partial ones did not. Grafting seems to be a key factor that contributes to complete re-internationalization because it contributes quickly to maintaining managers’ international orientation. Thus, a change in management may lead to a change in the international strategic orientation of a firm (Welch & Welch, 2009). Moreover, during the process of re-internationalization, it was a challenge for firms to learn and make use of new knowledge within time constraints and given uncertainty about the changing international environment (Pellergrino & McNaughton, 2015). While existing international learning research points out that grafting, a potentially expensive source of external knowledge, may be more likely used by firms with sufficient resources (Pellergrino & McNaughton, 2015; Pellergrino & McNaughton, 2017), we suggest that small firms can obtain indirect experience from grafting. This leads to our second proposition.

**Proposition 3.** Complete re-internationalized firms are more likely than partial re-internationalized firms to graft on market, technological and internationalization knowledge.

Fourthly, this research moved beyond prior work and concludes that middle-up-down information distribution has a crucial influence on achieving complete re-internationalization. Our data reflects three distinct processes of information distribution: top-down, middle-up-down and bottom-up information distribution. Although these three processes are not new to the existing knowledge management literature, complete and partial re-internationalizers showed different information distribution processes, which are new findings. Specifically, complete re-internationalizers used middle-up-down information distribution, i.e. a collective mode of collecting and distributing knowledge where top managers task middle managers with the forming a hub, and with other employees all share knowledge mutually through collaborative efforts and dyadic interaction. Partial re-internationalizers persisted with top-down or bottom-up distribution throughout their re-internationalization phases, with an emphasis on quickly acquired knowledge, adopted top-down knowledge distribution but suffered a lack of learning accuracy. Whereas a bottom-up system of information distribution may improve the accuracy of
learning at the expense of speed. A well-informed decision may take time and rely on how well the self-organizing principle works to ensure that knowledge is shared (Kasper, et al., 2013; Michailova & Minbaeva, 2012; Williams & Lee, 2011).

In contrast, firms with a middle-up-down information distribution were more likely to achieve complete re-internationalization. Re-internationalization required a serious contemplation and a quick exploration of unexpected opportunities in a changing environment. In other words, re-internationalizers need to be flexible and responsive to explore innovations from unexpected opportunities (Chetty, et al., 2015; Welch & Welch, 2009; Vissak, et al., 2020) and to identify strategically relevant knowledge quickly, and directly (Kasper, et al., 2013). A middle-up-down information distribution combined the speed and accuracy of learning. First, cooperative and multilateral information sharing ensured simultaneous knowledge exchange and validations at different levels of an organization from diverse perspectives (Nonaka, 1994; Nonaka & von Krogh, 2009). Consequently, top management had a better chance of developing a comprehensive and validated view of how to re-enter and manage foreign markets. Second, middle-up-down information distribution eased managerial information overload and increased the speed of information flow within the firm, which helped firms to react faster to changes when re-entering markets (Huber, 1991; Kasper, et al., 2013; Vissak, et al., 2020). Third, complete re-internationalizers adopted a social learning perspective on information distribution, which focuses on multilateral knowledge distributing efforts (Kasper, et al., 2013; Noorderhaven & Harzing, 2009), thus facilitating learning from internal searching and particularly what they fail to recognize that they know (Fletcher & Harris, 2012; Huber, 1991). The research suggests that decentralized, middle-up-down firms may be better adjusted to suit a changing international environment than decentralized bottom-up ones (Vahlne & Johanson, 2017). As a result, our fourth proposition is that SMEs with middle-up-down information distribution are more likely to achieve complete re-internationalization.

**Proposition 4.** Complete re-internationalized firms are more likely than partial internationalized firms to apply middle-up-down information distribution.
Finally, this study proposes that re-internationalization depends not only on how acquired knowledge is acquired and distributed but also how is interpreted by firms. We advance two distinct information processes in the international learning literature: ambivalent and univalent interpretation. These two processes are differentiated by three information interpretation activities emerged from the case data: information assembling, comparing and reconstructing activities. Complete re-internationalizers applied ambivalent interpretation throughout their re-internationalization. In contrast, partial re-internationalizers exhibited only univalent interpretation during early re-internationalization and three firms changed to from univalent to ambivalent interpretation during late re-internationalization. This comparison suggests that complete re-internationalization was associated with ambivalent information interpretation. Ambivalent interpretation used by complete re-internationalizers in an early manner, activated a broad set of inquiries, an awareness of the incompleteness of existing understanding and an impulse to search for multiple alternative solutions to a strategic problem. Therefore, successful re-internationalizing firms were more likely to conceive innovation solutions beyond their established routines and may be more adaptable towards unexpected opportunities or environment changes.

Proposition 5. Complete re-internationalized firms are more likely than partial re-internationalized firms to apply ambivalent information interpretation in an early manner.

7. Conclusions

Drawing on organizational learning theory, this article elaborates how complete and partial re-internationalizers learn to re-internationalize. The results show that past experience of foreign market exits may not positively influence proactive learning from external sources during re-internationalization in all contexts (Johanson & Vahlne, 2017; Teagarden, Von Glinow, & Mellahi, 2018; Surdu, et al., 2019; Surdu, et al., 2018). Our research suggests that failure may offer few learning benefits, depending on managerial perceptions of past failure experiences. This finding extends our understanding of learning from failure and of “how knowledge once learned is subsequently applied” during internationalization (Vahlne & Johanson, 2020, p.6). We present a detailed analysis of how
firms learn differently during their re-internationalization in terms of knowledge acquisition, distribution and interpretation. For a better understanding of the firm’s internationalization process, it is necessary to see not only what and where an international firm learns but also how this knowledge is interpreted and shared. The study further reveals that firms which acquire information diversely, distribute knowledge both quickly and effectively and interpret knowledge ambivalently during early re-internationalization, can achieve complete re-internationalization.

Our research suggests a number of implications for practitioners, at a time of deep global recession as a result of Covid-19, trade wars and Brexit, especially for SMEs experiencing export slowdown. Firms aiming for complete re-internationalization may need to devote efforts to internal and external sources of knowledge during their re-internationalization, with the suggestion that grafting on new resources can be a cost-effective way to rapidly acquire new knowledge. Furthermore, managers may consider regularly reviewing whether their modes of information distribution and interpretation need to adapt for re-internationalization. Middle-up-down information transfer and ambivalent information interpretation could be tried as attempts to recover from involuntary de-internationalization, as they can contribute to a comprehensive understanding of how to re-internationalize rather than single and rigid vision.

This research has limitations. The sample was focused on SMEs that re-internationalized completely or partially, without any failed, would-be re-internationalizers, and the retrospective nature of the interviews introduced a risk that the data could be inaccurate and/or subject to bias. Future research may combine real-time observation with retrospective histories to address this limitation. Propositions developed in this study could be exposed to empirical reality in the form of broader samples from different industries and countries. Furthermore, it would be interesting to study how information distribution and interpretation processes affect re-internationalization in a wider temporal research context, i.e. longitudinal process research from pre-internationalization to re-internationalization. It may also be worthwhile to examine the effect of organizational memory on the internationalization process, since this research does not consider the implications of organizational memory (Huber, 1991).
References:


Table 1. Three processes of information distribution within an organization

<table>
<thead>
<tr>
<th>Information distribution process</th>
<th>Distribution locus</th>
<th>Distribution activities</th>
</tr>
</thead>
</table>
| Top-down                        | • New information is distributed in a unilateral, centralized and hierarchical way from top managers to employees.  
• A selective dyadic way of distributing knowledge: top managers take the responsibility for information distribution and decide what and how information is distributed. | • Firms mainly use codified and formal distribution activities for distributing knowledge accompanied by a few personalized and informal activities.  
• Examples: official video recordings, after-action reviews, formal reports etc. |
| Bottom-up                       | • New information is distributed in a unilateral, decentralized and self-organizing way from employees to top managers.  
• A selective dyadic way of distributing knowledge: employees take responsibility for information distribution and decide what and how information is distributed. | • Firms mainly use personalized and informal activities for distributing knowledge accompanied with a few codified and formal activities.  
• Examples: knowledge fairs, job shadowing, mentoring, self-organized communities of practices. |
| Middle-up-down                  | • New information is distributed in a multidirectional and cooperative way between top managers, middle managers and employees.  
• A collective way of distributing knowledge: top managers, middle managers and employees all share knowledge mutually through collaborative efforts and dialogue interaction. | • Firms put equal efforts into using codified formal and personalized informal activities. |

Table 2. Sample overview and data collection

<table>
<thead>
<tr>
<th>Case</th>
<th>Re-internationalization pattern</th>
<th>Industrial sector</th>
<th>Foundation year</th>
<th>Age</th>
<th>Size (Employees)</th>
<th>Primary data</th>
<th>Secondary data</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Complete Re-Int</td>
<td>Laser and 3D printing</td>
<td>2002</td>
<td>15</td>
<td>420</td>
<td>CEO(1), MKT(1), R&amp;D(1), FIN(1)</td>
<td>CEO(1), MKT(1), R&amp;D(1), FIN(1)</td>
</tr>
<tr>
<td>B</td>
<td>Complete Re-Int</td>
<td>Pharmaceutical</td>
<td>2001</td>
<td>16</td>
<td>472</td>
<td>CEO(1), MKT(1), R&amp;D(1), FIN(1), B&amp;D(1), INT(1)</td>
<td>CEO(1), MKT(1), R&amp;D(1), FIN(1), B&amp;D(1), INT(1)</td>
</tr>
<tr>
<td>C</td>
<td>Complete Re-Int</td>
<td>Industrial robots</td>
<td>2005</td>
<td>12</td>
<td>380</td>
<td>CEO(2), MKT(1), FIN(2)</td>
<td>CEO(2), MKT(1), FIN(2)</td>
</tr>
<tr>
<td>D</td>
<td>Complete Re-Int</td>
<td>Bio-medical electronics</td>
<td>2005</td>
<td>12</td>
<td>365</td>
<td>CEO(2), MKT(2), FIN(1)</td>
<td>CEO(2), MKT(2), FIN(1)</td>
</tr>
<tr>
<td>E</td>
<td>Complete Re-Int</td>
<td>Agricultural chemicals</td>
<td>2001</td>
<td>16</td>
<td>359</td>
<td>CEO(2), MKT(2), R&amp;D(1)</td>
<td>CEO(2), MKT(2), R&amp;D(1)</td>
</tr>
<tr>
<td>F</td>
<td>Complete Re-Int</td>
<td>Fine chemicals</td>
<td>2004</td>
<td>13</td>
<td>260</td>
<td>CEO(2), FIN(2)</td>
<td>CEO(2), FIN(2)</td>
</tr>
<tr>
<td>G</td>
<td>Partial Re-Int</td>
<td>Pharmaceutical</td>
<td>2006</td>
<td>11</td>
<td>282</td>
<td>CEO(1), MKT(2), FIN(1)</td>
<td>CEO(1), MKT(2), FIN(1)</td>
</tr>
<tr>
<td>H</td>
<td>Partial Re-Int</td>
<td>Pharmaceutical</td>
<td>2005</td>
<td>12</td>
<td>325</td>
<td>CEO(2), FIN(1), INT(1)</td>
<td>CEO(2), FIN(1), INT(1)</td>
</tr>
<tr>
<td></td>
<td>Partial Re-Int</td>
<td>Industry</td>
<td>Year</td>
<td>R&amp;D</td>
<td>CEO(1), MKT(1), FIN(1), INT(1)</td>
<td>1</td>
<td>3.5 hours</td>
</tr>
<tr>
<td>---</td>
<td>----------------</td>
<td>-------------------</td>
<td>------</td>
<td>-----</td>
<td>--------------------------------</td>
<td>-----</td>
<td>----------</td>
</tr>
<tr>
<td>I</td>
<td>Partial Re-Int</td>
<td>Meteorological</td>
<td>2005</td>
<td>12</td>
<td>370</td>
<td>1</td>
<td>3.5 hours</td>
</tr>
<tr>
<td>J</td>
<td>Partial Re-Int</td>
<td>Digital technology</td>
<td>2001</td>
<td>16</td>
<td>420</td>
<td>1</td>
<td>2 hours</td>
</tr>
<tr>
<td>K</td>
<td>Partial Re-Int</td>
<td>Communication</td>
<td>2001</td>
<td>16</td>
<td>370</td>
<td>1</td>
<td>3.5 hours</td>
</tr>
</tbody>
</table>

Note: “re-int” refers to re-internationalizers.

Source: the authors.
Table 3. Initial international experience and reasons for de-internationalization

<table>
<thead>
<tr>
<th>Case</th>
<th>Products</th>
<th>Reasons for involuntary de-internationalization</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Internal</td>
</tr>
<tr>
<td>A</td>
<td>3D printing machines</td>
<td>• The management ignored the changing environment&lt;br&gt;• Management incompetence to understand the market and quickly respond&lt;br&gt;• Erroneous prospects about new products</td>
</tr>
<tr>
<td>B</td>
<td>Pharmaceutical</td>
<td>• The management ignored the changing environment&lt;br&gt;• Unable to commercialize new products</td>
</tr>
<tr>
<td>C</td>
<td>Industrial robots</td>
<td>• Obsolete existing products&lt;br&gt;• Management incompetence to launch successful products on time&lt;br&gt;• Erroneous prospects about new products</td>
</tr>
<tr>
<td>D</td>
<td>Bio-medical electronics</td>
<td>• The management ignored the changing environment&lt;br&gt;• Unnecessary failed diversifications</td>
</tr>
<tr>
<td>E</td>
<td>Agricultural chemicals</td>
<td>• Obsolete existing products&lt;br&gt;• Management incompetence to manage servitization and manufacturing in different foreign markets</td>
</tr>
<tr>
<td>F</td>
<td>Fine chemicals</td>
<td>• Management incompetence to launch new products with acceptable costs&lt;br&gt;• Unnecessary failed product diversifications</td>
</tr>
<tr>
<td>G</td>
<td>Pharmaceutical</td>
<td>• Management incompetence to understand the market and</td>
</tr>
</tbody>
</table>

quickly respond
• Erroneous prospects about new products
• Reducing customer interests and demands
• Low customer interests in new products

H  Pharmaceutical
• Management incompetence to understand the market and quickly respond
• Obsolete existing products
• Intensive competitions
• Reducing customer interests
• Unfavorable local business environment

I  Meteorological devices
• Management incompetence to understand the market and quickly respond
• Management ignored the changing environment
• Obsolete existing products
• Intensive competitions
• Pressures for new products
• Dynamic market demands

J  Telecommunication devices
• Management incompetence to understand the market and quickly respond
• Reliance on existing partners
• Customer interests changed quickly

K  Telecommunication devices
• The management ignored the changing environment
• Erroneous prospects about new products
• Intensive competitions
• Customer interests reduced quickly

Source: the authors.
Table 4. Differences of learning between complete and partial re-internationalizers

<table>
<thead>
<tr>
<th></th>
<th>What they learned from past foreign exits</th>
<th>Knowledge acquisition</th>
<th>Information distribution</th>
<th>Information interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partial re-internationalizers</td>
<td>Being cautious by being less proactive during re-entry</td>
<td>Focusing on internal sources of knowledge</td>
<td>Focusing on either learning speed through top-down distribution or learning accuracy through bottom-up distribution</td>
<td>Emphasizing a focused action through univalent interpretation</td>
</tr>
<tr>
<td>Complete re-internationalizers</td>
<td>Being cautious by being more proactive during re-entry</td>
<td>Focusing on both internal and external sources of knowledge</td>
<td>Focusing on both learning speed and accuracy through middle-up-down distribution</td>
<td>Emphasizing comprehensive actions through ambivalent interpretation</td>
</tr>
</tbody>
</table>

Source: the authors.
Figure 1. The research process

### STAGE I: THEORETICAL SAMPLING AND CASE SELECTION (2016-2017)

1. **Theoretical sampling to select suitable cases**: complete re-internationalizers reach 100% or more of their previous export volume after some foreign market exits, while partial re-internationalizers fail to reach their previous export volume after their foreign market exits. A decrease of 25% of exporting intensity was used as the threshold to exclude incidental market withdrawals (Visnik & Maasen, 2015).

2. **Approaching to potential cases**: potential firms and key informants were mainly approached and negotiated through emails and personal contact.

### STAGE II: FIRST YEAR OF INTERVIEW DATA GATHERING (2017)

3. **Collecting and analyzing archival data**: annual reports, information from official websites and private documents were collected to inform specific interview questions to each case and store for the use of data triangulation.

4. **Conducting the first round of individual interviews**: 25 initial interviews with 11 sample firms were conducted with CEOs and directors.

5. **Conducting first round of group interviews**: one group interview for each case including CEO, directors and external bank managers who were in charge of credit check of sample firms.

6. **Iterative coding and analysis**: iterative coding of data from both individual interviews and group interviews in comparison with obtained secondary data.

### STAGE III: SECOND YEAR OF INTERVIEW DATA GATHERING (2018)

7. **Conducting the second round of individual interviews**: 22 follow-up interviews with 11 sample firms were conducted with CEOs and directors with some similar questions for data triangulation and further exploration of their re-internationalization with refined interview questions.

8. **Informal contacting**: informal contacts with key informants and external bank managers were maintained for emerging questions and data validity assurance.

9. **Updating and comparing archival data with primary qualitative data**

### STAGE V: QUALITATIVE DATA ANALYSIS (2019)

10. **Developing theoretical codes and themes**: transcripts and secondary data were integrated into a retrospective history and a visual timeline of re-internationalization process for each case. Emerging codes were aggregated.

11. **Iterative coding and analysis**: comparing emerging codes and theoretical codes from internationalization and learning literatures to identify core themes and aggregated dimensions.

12. **Theorizing through case comparison**: within-case and cross-case comparisons were carried out through visual mapping and temporal bracketing strategies to identify patterns between complete and partial re-internationalizers over their re-internationalization process.

Source: the authors.
Figure 2. Summary of thematic analysis

<table>
<thead>
<tr>
<th>Selected Evidence</th>
<th>First order concepts</th>
<th>Second order themes</th>
<th>Aggregate dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>“We frequently sent our marketing staff and R&amp;D staff to foreign markets or on client visits, same as our top management.” [MKT, firm A]</td>
<td>Statements referring to intentional systematic efforts and unintentional operating experience in the market place from past experience.</td>
<td>Direct experience</td>
<td>Internal sources of knowledge (Fletcher &amp; Harris, 2012)</td>
</tr>
<tr>
<td>“We often invite clients to come to learn how we can improve our product and streamline designs.” [CEO, firm B]</td>
<td></td>
<td>Internal information (Fletcher &amp; Harris, 2012)</td>
<td></td>
</tr>
<tr>
<td>“Our employees, clients and management team provide valuable ideas about how we can re-localize our product for Middle East countries” [CEO, firm E]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“We established a knowledge repository, called Yuque. So everyone deposited their reports, their work-in-progress and project documents. It is very useful and sometimes surprises us. When we were struggling to find suitable Indian distributors in 2015, we obtained business contacts from our previous project documents.” [CEO, firm C]</td>
<td>Statements about management information system, marketing information system and R&amp;D information system.</td>
<td>Congenital learning</td>
<td></td>
</tr>
<tr>
<td>“As a founder and a technician, sometime, I often worked in the R&amp;D laboratory to share my previous work experience in a state-owned enterprise. They had both technological and R&amp;D management procedures.” [CEO, firm D]</td>
<td>Statements about collecting experience, insights and expertise from founders.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“There are tens of opportunities that we can learn from outside, such as the knowledge fair events organised by China Council for The Promotion of International Trade and other industrial conferences.” [CEO, firm B]</td>
<td>Statements about activities to observe others from network partners, strategic alliances or corporate intelligence, external intermediaries and imitate other firms.</td>
<td>Vicarious learning</td>
<td></td>
</tr>
<tr>
<td>“We also observe what our strategic partners, suppliers, distributors, competitors are doing through industry exhibitions” [CEO, firm E]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“A quick way would be hiring other experts and other management talents from outside. We have commissioned these tasks to head-hunting companies.” [FIN, firm B]</td>
<td>Statements about actions to hire people and acquire business units.</td>
<td>Grafting</td>
<td></td>
</tr>
<tr>
<td>“A new R&amp;D director and a new international sales team joined our firm for re-entries into U.S. markets.” [CEO, firm C]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“We were eager to acquire an inter-disciplinary talent who understand about European technical standards, the market and local product design.” [CEO, firm C]</td>
<td></td>
<td>External sources of knowledge (Fletcher &amp; Harris, 2012)</td>
<td></td>
</tr>
<tr>
<td>“There are also other ways to learn. I often suggested that they read published reports from the trade association, we subscribed to the digital trade press and economists to know what’s going on in our industry and international market changes.” [CEO, firm A]</td>
<td>Statements about activities to collect published marketing information, chambers of commerce banks, industry associations, consultancy companies, trade press and government outlets.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“We engaged with Accenture for their consultancy suggestions about foreign M&amp;As and international post-acquisition integration.” [CEO, firm F]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“Our top management team set tasks of what we want and then went through all the reports related to the tasks. New information and our decisions were only disseminated within the firm.” [CEO, firm H]

“We distributed from top management team to directors of each department and then to staff. Actually, staff would have no idea about what others know.” [CEO, firm J]

“The new opportunities, new collaborators and changes in foreign markets were mainly shared within our top management team and informed decisions. We shared the reports and opinions only in top management meetings, so staff would have no idea about what’s going on.” [CEO, firm A]

“We did not share reports with everyone before we reach a decision. It would create chaos and unexpected troubles.” [CEO, firm J]

The main way of sending out new information or decisions was documentation and reports. So everyone would have a clear idea. We also had regular staff training to share experience and develop staff skills” [CEO, firm F]

“We have used a variety of formal sharing activities, for example, presentations of successful stories, commendations, regular reviews about performance and big investments” [CEO, firm H]

“We are no longer control everything. What we do is to supervise managers in each department and ask them to frequently update their understanding of external trends (markets and product design) and their strategic plans. Each department works as a team to acquire and share knowledge, the same jobs what we did before. We would not control what they do but facilitate cross-function experience exchange. For example, we organize a cross-functional fair and job rotations once a year.” [CEO, firm H]

“To better describe, we have divided the firm into several functional or department-based communities. People first build their network relationships within their department and they work towards the same goals. For all functional departments, their jobs involve telling me (the top management team) what we should do and discussing with other departments what we can do.” [CEO, firm C]

“We have kept our traditional practices with knowledge sharing, such as reporting, presentations and regular review. However, we have embraced a pairing system. For example, each member of the marketing staff has to find a partner from the R&D department. They need to update what they are doing and what they are thinking from their perspectives twice a month. We have also embraced informal activities to stimulate network building within and across departments, such as short excursions and sport clubs.” [CEO, firm A]

“We have given staff the full right and they share their experience and expertise with anyone within the firm. They democratically share information with colleagues and department directors. We (top management team) also have an open plan office to support the bottom-up approach. We are the promoter of this decentralized sharing system.” [CEO, firm H]

“What we find is that staff would like to share their knowledge with the staff who sit next to them and those they are familiar with.” [CEO, firm G]

“The sharing largely relies on personal network relationships. They are reluctant to share with those with whom they are unfamiliar and who stand at higher levels of the organisational hierarchy.” [CEO, firm J]

“We aim at building or promoting inter-personal relationships to facilitate communicating new ideas and information among staff. Many informal activities and team building activities are frequently organised, such as knowledge fairs, hobby communities and even a digital forum with discussions about current affairs.” [CEO, firm H]

“I know something may take time to learn and digest. So we mixed marketing and R&D staff in the same place with glass walls.” [CEO, firm G]

• Statements about sharing new information with a top-down approach
• Top management team took responsibilities for distributing information
• A centralized way of unidirectional information distribution
• A hierarchical way to share from top management team to staff

Top-down knowledge flow (Nonaka, 1994)

Top-down information distribution (Kasper et al., 2013)

• Statements about sharing new information in a middle-up-down approach.
• Diverse teams took responsibilities for distributing information
• A decentralized way of multi-directional information distribution
• A team-oriented or function-oriented way to share across multiple levels mutually

Middle up down knowledge flow (Nonaka, 1988)

Middle-up-down information distribution (Kasper et al., 2013)

• Statements about establishing both formal & planned and informal & unplanned ways to share new information.

Focusing on formal and informal distribution (Kasper et al., 2013)

• Statements about sharing new information in a bottom-up approach.
• All individuals took responsibilities for distributing information
• A decentralized way of unidirectional information distribution
• A self-organising way to share from staff to top management team

Bottom up knowledge flow (Nonaka, 1991, 1994)

Bottom-up information distribution (Kasper et al., 2013)

• Statements about using informal and unplanned ways to share new information, such as knowledge fairs, communities of practice, best practice transfer, collaborative platforms, job shadowing and mentoring.

Focusing on informal distribution (Kasper et al., 2013)
“Our management team imposed strict regulations on various suggestions. For example, position papers were formatted to answer certain feasibility questions: how the initiatives can contribute to existing strategic priorities, how about the success rate, detailed plans of future actions including appropriate estimation about costs and benefits. So this way can help us filter out infeasible ideas at early stages.” [CEO, firm B]

“So what we did in the next step is to compare these possible plans with our past experience. For example, we judged whether we needed to localize our devices as a cheaper one with less functionality or a differentiated one with versatility when we decided to enter Germany. Our past experience told us that European firms always like cheap products from China. So we discarded the differentiation plans although it sound interesting.” [CEO, firm A]

“The final step was the most difficult and time-consuming step. It involved multiple rounds of discussing, evaluating and finalising across top management members, directors and middle managers. At this stage, we have to judge and select the plan with some tangible criteria, such as the most rewarding, a shorter payback period, the most likely to be withdrawn. We did evaluate and calculate the average expected return. We aim to come up with a single decision which may offer lower costs.” [CEO, firm D]

“We introspected and decided to change the way we encouraged opinions and suggestions. We noticed that some good ideas from staff who cannot really argue a case well as they may have limited understanding of the firm as a whole. Although position papers still have been kept there, we have further opened our online discussion sections and a topic-based chat room. Every comment is anonymous and all of our staff have the opportunity to leave their comments. We removed filters to encourage opinion-giving even without feasibility.” [CEO, firm B]

“In contrast, I realise that we may be wrong with our way of dealing with different opinions. Different opinions would not represent conflict but an opportunity for us to understand the whole story. We pay special attention to those ideas which diverge from our past experience or common sense. For example, when we re-entered Germany, we still entertained two plans (cheap price or versatility), we started to consider how our environment has changed and why differentiated localisation would be appropriate.” [CEO, firm A]

“The final step becomes more difficult than before. We acted differently and included multiple rounds of discussing, brainstorming and integrating across top management members, directors and middle managers. We removed judgemental criteria and everybody contributed their own knowledge of what is happening outside and how we can link things up. We aim to accommodate different opinions and conceive a bundle of synergistic plans or flexible plans for emergencies.” [CEO, firm D]

Source: the authors.
Figure 3. Changes in knowledge acquisition process for case firms

<table>
<thead>
<tr>
<th>Complete re-internationalization</th>
<th>Partial re-internationalization</th>
<th>Late re-internationalization phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting foreign markets by top management team members &amp; all relevant staff (A, B, C, D, E, F)</td>
<td>Visiting foreign markets by top management team members &amp; all relevant staff (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Experiences learned from domestic partners (A, B, C, D, E, F)</td>
<td>Experiences learned from domestic partners (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Building external information system for internal information (A, B, E)</td>
<td>Building external information system for internal information (K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Observing suppliers and distributors (A, B, C, D, E)</td>
<td>Observing suppliers and distributors (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Observing and initiating strategic partners (B, C, D, E, F)</td>
<td>Observing and initiating strategic partners (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Observing other firms from the same industry in industry fairs and conferences (A, B, C, D, E, F)</td>
<td>Observing other firms from the same industry in industry fairs and conferences (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Adding new members in TMTs (B, C, D, E, F)</td>
<td>Adding new members in TMTs (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Adding new staff (B, C, D, E, F)</td>
<td>Adding new staff (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Publishing reports &amp; books (A, B, C, D, E, F)</td>
<td>Publishing reports &amp; books (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
<tr>
<td>Social media &amp; “big data” analysis (A, B, C, D, E, F)</td>
<td>Social media &amp; “big data” analysis (G, H, I, J, K)</td>
<td>Keeping same</td>
</tr>
</tbody>
</table>

Source: the authors.
Figure 4. Changes in information distribution process

<table>
<thead>
<tr>
<th>Complete re-int. Information distribution</th>
<th>Early re-internationalisation phase</th>
<th>Late re-internationalisation phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Middle-down information flow</td>
<td>Middle-down information flow</td>
</tr>
<tr>
<td></td>
<td>Combining formal and planned distribution activities with informal and unplanned distribution activities</td>
<td>Combining formal and planned distribution activities with informal and unplanned distribution activities</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Partial re-int. Information distribution</th>
<th>Early re-internationalisation phase</th>
<th>Late re-internationalisation phase</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Top-down information flow</td>
<td>Top-down information flow</td>
</tr>
<tr>
<td></td>
<td>Firms mainly use codified and formal distribution activities for distributing knowledge accompanied with a few personalized and informal activities</td>
<td>Firms mainly use codified and formal distribution activities for distributing knowledge accompanied with a few personalized and informal activities</td>
</tr>
<tr>
<td></td>
<td>Bottom-up information flow</td>
<td>Bottom-up information flow</td>
</tr>
<tr>
<td></td>
<td>Firms mainly use personalized and informal activities for distributing knowledge accompanied with a few codified and formal activities</td>
<td>Firms mainly use personalized and informal activities for distributing knowledge accompanied with a few codified and formal activities</td>
</tr>
</tbody>
</table>

Source: the authors.
Figure 5. Changes in information interpretation process

<table>
<thead>
<tr>
<th>Complete re-int. knowledge interpretation</th>
<th>Partial re-int. Information interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Early re-internationalization phase</strong></td>
<td><strong>Late re-internationalization phase</strong></td>
</tr>
<tr>
<td>Pragmatic information assembling: Firms apply new established assembly rules to process data into a collective interpretation.</td>
<td>Firms have kept using pragmatic assembling.</td>
</tr>
<tr>
<td>Matching with past experience: Firms compare acquired information with their past experience and ignore any information which is inconsistent with their past experience.</td>
<td>Firms have kept comparing and exploring reasons of why there are inconsistent understandings.</td>
</tr>
<tr>
<td>Information aligning: Firms align information from various sources to their main objectives to inform a focused decision.</td>
<td>Firms have continuously accommodated inconsistent information or understandings to reconstruct a comprehensive understanding.</td>
</tr>
<tr>
<td><strong>Most common: Ambivalent interpretation</strong></td>
<td><strong>Most common: Ambivalent interpretation</strong></td>
</tr>
<tr>
<td>Firms A, B, C, D, E, F</td>
<td>Firms A, B, C, D, E, F</td>
</tr>
</tbody>
</table>

- **Pragmatic information assembling**

- **Matching with past experience**

- **Information aligning**

- **Most common: Univalent interpretation**

- **Most common: Univalent interpretation**

- **Ambivalent interpretation**

- **Ambivalent interpretation**

Source: the authors.
Appendices

Case A: Exporting ratios 2002-2017

Source: the author.

Case B: Exporting ratios 2001-2017

Source: the author.
Case C: Exporting ratios 2005-2017

Source: the author.

Case D: Exporting ratios 2005-2017

Source: the author.
Case E: Exporting ratios 2001-2017

Source: the author.

Case F: Exporting ratios 2004-2017

Source: the author.
Case G: Exporting ratios 2006-2017

Source: the author.

Case H: Exporting ratios 2005-2017

Source: the author.
Case I: Exporting ratios 2005-2017

Source: the author.

Case J: Exporting ratios 2001-2017

Source: the author.
Case K: Exporting ratios 2001-2017

Source: the author.