

# A Supply Chain Perspective Reviewing Shoring Cases

**Olli-Pekka Hilmola**

Department of Industrial Engineering and Management,  
University of Gävle, Gävle, Sweden

Tallinn University of Technology (Taltech), Estonian Maritime Academy, Tallinn, Estonia

Email: olli-pekka.hilmola@hig.se (*Corresponding Author*)

**Haihan Li**

Department of Industrial Engineering and Management,  
University of Gävle, Gävle, Sweden

Email: haihan.li@hig.se

**Per Hilletoft**

Department of Industrial Engineering and Management,  
University of Gävle, Gävle, Sweden

Email: prof.p.hilletoft@gmail.com

**Daniella Fjellström**

Department of Industrial Engineering and Management,  
University of Gävle, Gävle, Sweden

Email: Daniella.Fjellstrom@hig.se

## ABSTRACT

Shoring trend of supply chains has changed over the decades. In the initial stages it mostly concerned about offshoring, however, recently it has changed to reshoring. This study focuses on the mainstreams of shoring case studies from the supply chain perspective with a systematic literature review. We identified 22 supply chain shoring cases from the initial pool of thousands of supply chain case studies. Publishing activity was increasing until 2010, but thereafter it has been sporadic. It could be concluded that shoring always contains numerous risks. As failures were also reported, it is simply so that not too much weight should be placed on costs and locating only to one country. Based on research works, global sourcing will continue in the future, however, new locations and practices shall prevail. Single-sided reshoring supply chains back to developed economies is not the only answer due to costs and supply chain tensions.

**Keywords:** *deglobalization, internationalization, offshoring, reshoring, supply chain management*

## 1. INTRODUCTION

In recent years there has been a paradigm shift moving away from globalization to deglobalization and from global manufacturing and supply chains to an increase of reshoring. The manufacturing shoring research mainstreams include decision-making, implementation, and evaluation. In addition, scholars focus on different perspectives: supply chain management (Kim & Chung, 2022; Li, 2020; Bailey & De Propris, 2014), value chain creation (Verdu *et al.*, 2012;

Phillips *et al.*, 2022; Strange *et al.*, 2020), operations management (Srai & Ané, 2016; Zhao & Huchzermeier, 2017; Chen & Hu, 2017), and sustainable development (Sirilertsuwan *et al.*, 2019; Barbieri *et al.*, 2020; Martínez-Mora & Merino, 2020). In the scholarly debate, there has been an increase in the number of studies on manufacturing relocation exploring what, why and how types of questions (Kinkel & Maloca, 2009; Uluskan *et al.*, 2017; Heikkilä *et al.*, 2018; Sequeira *et al.*, 2021). Even other forms of (public) institutions such as policymakers and media, have shown a growing interest in this field. Shoring decisions are dependent on the competitiveness of the company's manufacturing (Größler & Grübner, 2006; Lorentz *et al.*, 2016), and supply chain strategy (Hochrein *et al.*, 2017). In addition, it is based on several different capabilities and their achieved performance level (Gold *et al.*, 2017). Global competitiveness is more intense and has changed conditions, compared to previously. Companies are now required to reconsider their supply chain and production strategies, such as a right-shoring decision, to maintain competitiveness, diversify costs and mitigate risks (Bals *et al.*, 2016; Tate & Bals, 2017; Ciabuschi *et al.*, 2019; Johansson *et al.*, 2019). In addition, few scholars argue that the management and structure of the supply chain differ from offshoring to reshoring, since the drivers have different emphases, i.e. cost-efficient versus differentiated and flexible production (Joubioux & Vanpoucke, 2016). Thus, a shift in the management philosophy of the supply chain towards manufacturing shoring is being observed (Boffelli & Johansson, 2020; Kinkel, 2012; Arlbjørn & Mikkelsen,

2014; Wiesmann *et al.*, 2017).

Many studies have been conducted to identify the motivations of shoring activities from a manufacturing perspective (Fratocchi *et al.*, 2016; Bettiol *et al.*, 2019; Johansson *et al.*, 2019; Kim & Ching, 2022). One of the most frequently mentioned influencing factors is the supply chain, such as cooperating with responsible suppliers, enabling sustainable supply networks, enhancing supply chain resilience, and increasing supply chain operation flexibility (Moradlou *et al.*, 2012). However, studies from the supply chain design, structure and management perspective, which enable development and facilitate companies to accomplish and align shoring activities with expected outcomes, have been quite limited (Williamson, 2008; Huq *et al.*, 2016). In recent years, the magnitude of disruptions caused by the Covid-19 pandemic and the ongoing waves triggered both scholars and practitioners in building a deeper understanding of manufacturing strategy, to increase manufacturing resilience (Tate & Bals, 2017; Barbieri *et al.*, 2020; Phillips *et al.*, 2022; Kang *et al.*, 2022). The pandemic exacerbated the vulnerability of global manufacturing supply chains, that in several ways undermine the global approach (Shetu & Karim, 2023). The choice of locating production in foreign countries, or the home country, depends on many factors such as structure of the supply networks and its performance. Available studies applying a supply chain perspective are scattered. Hence, more research is needed on how to manage the supply chain in order to increase competitiveness and mitigate influences from global disturbance (Tate & Bals, 2017; Panwar *et al.*, 2022). One reported factor tackling change has been argued to be innovation, and especially taking influence from outside of an organization (Kang *et al.*, 2022). In addition to this, the role of finance in the time of global supply chain crisis is important aspect as well, especially in developing countries (Adhim & Mulyono, 2023).

This study was motivated by facilitating scholars with a holistic map of current shoring research in supply chain management field. This study aims to answer the following research questions: “What are the mainstreams of shoring case studies from the supply chain perspective?”, and “What are the research gaps in the shoring supply chain management field?”. The authors performed a systematic literature review of 22 papers on shoring case studies conducted between 2002 to 2022 from Elsevier and Emerald journals.

The research is structured as follows: first, a literature review regarding shoring research and supply chain management is presented in Section 2. Thereafter, follows the research methodology and environment in Section 3. Literature analysis findings that emerged from the literature review study were presented and discussed in Section 4. Finally, the conclusion and research avenue were elaborated in Section 5.

## 2. OFFSHORING, RESHORING AND SUPPLY CHAIN MANAGEMENT

Production location decisions are crucial for companies in the manufacturing industry (Joubioux & Vanpoucke, 2016). Over the past decades, offshoring has been a trend in the manufacturing industry, where companies decided to

locate in a developing country with lower costs to increase profit margins (Ørberg Jensen & Pedersen, 2010; Ancarani *et al.*, 2015; Di Mauro *et al.*, 2018; Johansson & Olhager, 2018). However, from 2008, with the global economic crisis and financial centres' development tendency (Kinkel, 2012), more companies experienced and realized that the offshoring outcomes were far from expectations (Ancarani *et al.*, 2015; Johansson & Olhager, 2018), thus, firms started to reconsider the offshoring decisions (Martínez-Mora & Merino, 2014; McIvor & Bals, 2021). As mentioned above, the supply chain design and strategy are important for the manufacturing location decision. Given that the varieties and impacts of disturbances increased with the length and complexity of supply chains (Fine, 2013; Stentoft *et al.*, 2015; Bals *et al.*, 2016; Vanchan *et al.*, 2018; Huq *et al.*, 2021), the vulnerability of the international supply chain experienced huge impacts from supply chain disruptions. For example, due to the long geographical distance and unstable transportation schedule, firms experienced much longer product delivery lead-time (Johansson *et al.*, 2019); to increase the market responsiveness, firms usually bundled with the high level of safety stocks, and experience expensive inventory and management costs (Ashby, 2016; Huq *et al.*, 2016 & 2021). High hidden costs with a long payback cycle, that runs in the opposite direction from offshoring intentions (Lund & Steen, 2020; Martínez-Mora & Merino, 2020). Hence, companies (most are U.S. companies from the beginning) reconsider and evaluate the offshoring manufacturing strategy, then decide to move to manufacture back to their home country, i.e., manufacturing reshoring (Ellram *et al.*, 2013; Grappi *et al.*, 2020).

With previous offshoring failures, it becomes more crucial for companies to carefully make comprehensive and accurate manufacturing relocation decisions (Dunning, 2001; Joubioux & Vanpoucke, 2016). The decision has a long-term direct impact on companies' supply chain strategy and operation processes. When the production is located closer to the markets, it enables companies to have better service for domestic market needs (Ancarani *et al.*, 2015; Baldassarre & Campo, 2015). The corresponding supply networks also need to be adjusted according to the production. As the shoring phenomenon is a fundamental location decision (Gray *et al.*, 2013), many scholars argue that whether offshoring or reshoring, as long as it suits companies' strategy, it is the so-called right shoring (Joubioux & Vanpoucke, 2016; Boffelli & Johansson, 2020; Kim & Chung, 2022).

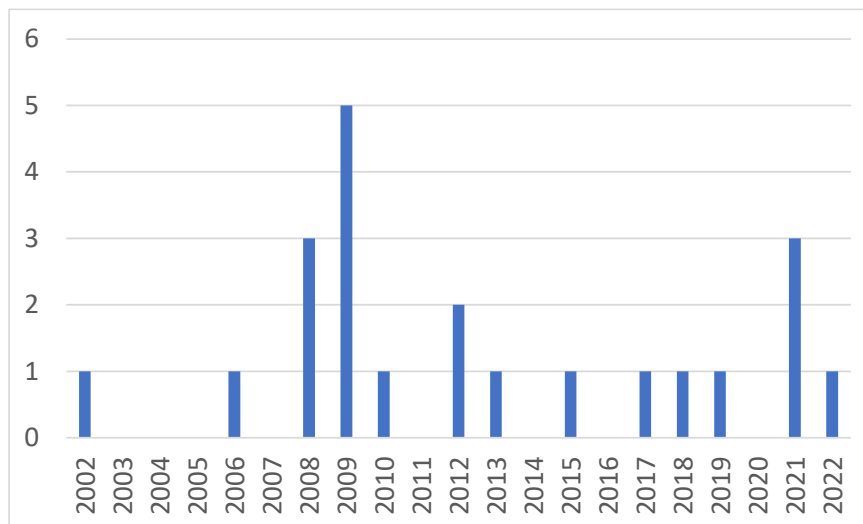
To understand and analyse the manufacturing offshoring and reshoring phenomena on a deeper level and to understand what a successful shoring case constitutes of a supply chain focus can contribute to this understanding with consideration of four aspects. Firstly, studies in supply chain integration and supply network building investigate, how companies select and integrate suppliers to build supply networks that align with the reshoring strategy (Kim & Chung, 2022; Li, 2020). Secondly, from a logistics perspective, current literature has provided analyses of logistics and reverse logistics structure and discovered value chain reorganization possibilities by adopting standardized and digitalized logistics networks (Shin & Shin, 2021; Butollo, 2021). Third, in the discussion of manufacturing total cost, researchers pointed companies should be aware of the existence of hidden costs, such as safety stock costs,

inventory costs and overhead costs (Zhai *et al.*, 2016; Hartman *et al.*, 2017; Moradlou & Tate, 2018). Finally, to overcome the impacts of more frequent global disruptions. Research has focused on answering how to enhance the supply chain robustness against shocks as well as build greater supply chain resilience to mitigate the impacts (Bailey *et al.*, 2018; Phillips *et al.*, 2022). Finally, there is an increasing trend of exploring what and how to build a sustainable supply chain and how the manufacturing shoring strategy contributes to sustainable development (Joubioux & Vanpoucke, 2016; Martínez-Mora & Merino, 2020).

### 3. RESEARCH METHODOLOGY AND ENVIRONMENT

To identify literature concerning shoring cases until 2015, earlier databases were used (Hilmola, 2018). This database started to gather supply chain case studies in the early days of it (1990s), and contained authors, titles, abstracts, and keywords. Out of this database was searched articles of interest of this research work with keywords “shore” and “shoring”. It was surprising to find out that this specific theme did not attract attention in supply chain case studies, as database contained 1699 articles, and 15 were found to concerning shoring (0.9 %). Time period of this database could be characterized as a boom era in globalization: Trade was constantly growing, and many actors were thinking that we live in the borderless world.

Therefore, it is rather striking that so few studies were made in this time out of shoring, and from supply chain case study perspective – international competitiveness is in the end the core of supply chain management and strategy. The earlier database contained published research articles from Emerald and Elsevier. Therefore, an additional search to these publishers was made from the years 2016-2022 (last year concerning articles, which were already available at the time of this research, October 2022). In this period supply chain case studies increased in popularity from the earlier period and could be characterized that popularity exploded as research theme. From this period, approx. 4000 articles were identified using case study approach in supply chain research (amount of initial assessment as not all articles were analyzed that they really are supply chain cases) was easy to find. However, the popularity of shoring in this period did not rise – only seven articles were from this theme. Again, environment for reshoring and international supply chain reconfiguration could not have been better – as in American presidential election of 2016 theme of bringing manufacturing jobs back was as one of the most important, and later-on was implemented with increase customs tariffs of Chinese imported goods (trade war), it could have been assumed that this would have increased attention on case studies. Similarly, reshoring and proximity of suppliers was widely discussed in the press during the heights of coronavirus pandemic. Despite of these, research of shoring theme of supply chains and using case studies remained as very marginal.



**Figure 1** Annual amount of analyzed articles (years 2002-2022) containing shoring with case studies and supply chains

Studied research theme with case studies did not have any trend during the examined period (**Figure 1**). It could be said that period in the first decade was having some initial interest of growth, but this ended to the Global Financial Crisis (GFC) – after 2010 it could be said that there were some sporadic amounts of publications, but they were rather few. Situation has remained as similar in 2020-2022 – only a minor spike of three articles could be detected to 2021.

### 4. LITERATURE REVIEW FINDINGS

It is understandable that the first decade of publishing activity concerned completely offshoring, and has gained most of the citations. It has been typical that the highest

citation works are mostly qualitative, but in some studies, there have been quantitative sections (like Boardman *et al.*, 2008) or quantitative data has been used as an illustration of argued issues (like Christopher *et al.*, 2006; Warburton & Stratton, 2002; Hameri & Tunkelo, 2009; Free & Hecimovic, 2021). Most of the works are having only one case in them, however, **Table 1** contains studies, which are based on 6-12 cases. In general, it could be said that offshoring is a well-established discipline as most of the articles in **Table 1** are having 30 to over 100 references in them. Lowest literature reference research is the oldest (Warburton & Stratton, 2002), but as a second comes work from 2017 (Hartman *et al.*, 2017). These are both practical oriented research works,

and have served this purpose well as just checking the amount of citations to them (they have both pinpointed issues, which were earlier neglected).

Typically, case study research tries to assure confidentiality and anonymity, and the real case companies are not introduced by their name. However, there are of course exceptions. Highest citation research work that of Andersen & Skjoett-Larsen (2009) uses Ikea as a case study and describes their corporate social responsibility progress over the years in the international context (IWAY). Two following most cited studies use British retailer, Marks &

Spencer (M&S), as a single case study (Christopher *et al.*, 2006; Khan *et al.*, 2008). Together with these three, only Warburton & Stratton (2002) mention case company using real name, which was in their case apparel manufacturer Griffin. Rest of the studies use anonymous names, but in some there is description from companies, like mentioning them to belong Fortune 500 (Boardman *et al.*, 2008; Tate & Ellram, 2009) or to some country, like Denmark (Slepnirov & Waehrens, 2008; Arlbjørn & Lüthje, 2012), Sweden (Engström *et al.*, 2018) or New Zealand (Sharma *et al.*, 2015).

**Table 1** Shoring case studies with supply chain point of view within descending order of the amount of citations (citations: Google Scholar, 1.Aug.2023)

	Author(s)	Year	# of references	Theme	Qualitative	Quantitative	# of cases	Citations
1	Andersen & Skjoett-Larsen	2009	62	Offshoring	1	0	1	1059
2	Christopher, Peck & Towill	2006	32	Offshoring	1	1	1	766
3	Arlbjørn & Lüthje	2012	50	Offshoring	1	0	4	264
4	Khan, Christopher & Burnes	2008	63	Offshoring	1	0	1	244
5	Lu & Yuan	2013	51	Offshoring	1	0	3	196
6	Boardman, Berger, Zeng & Gerstenfeld	2008	49	Offshoring	1	1	1	119
7	Free and Hecimovic	2021	116	Reshoring	1	1	1	116
8	Warburton & Stratton	2002	4	Offshoring	1	1	1	101
9	Tate & Ellram	2009	44	Offshoring	1	0	6	90
10	Hartman, Ogden, Wirthlin & Hazen	2017	9	Reshoring	1	0	12	80
11	Engström, Sollander, Hilletoft & Eriksson	2018	65	Reshoring	1	0	4	77
12	Young, Swan, Thomchick & Ruamsook	2009	26	Offshoring	1	0	6	53
13	Kumar, Medina & Nelson	2009	12	Offshoring	0	1	1	41
14	Zhang & Huang	2012	71	Offshoring	0	1	1	37
15	Slepnirov & Waehrens	2008	35	Offshoring	1	0	2	37
16	Sharma, Lindsay & Everton	2015	51	Offshoring	1	0	1	23
17	Boehme, Aitken, Turner & Handfield	2021	91	Reshoring	1	0	1	23
18	Hameri & Tunkelo	2009	24	Offshoring	1	1	1	22
19	Jørgensen	2010	29	Offshoring	1	0	4	14
20	Purvis, Lahy, Mason & Wilson	2021	71	Reshoring	1	0	1	10
21	Günay, Kremer & Park	2019	24	Reshoring	0	1	1	4
22	Harper	2022	58	Reshoring	1	0	7	1

Offshoring studies emphasize competence (especially human resources; Tate & Ellram, 2009), and supply chain strategy in the success of this process (Arlbjørn & Lüthje, 2012; Hameri & Tunkelo, 2009; Jørgensen, 2010; please see **Table 2** for further details). It is important not to base own supply chain on very distant single suppliers from particular country, but these should at least be dual or more, and from shorter distance to enable appropriate response (Christopher

*et al.*, 2006; Warburton & Stratton, 2002). This is not only important from the availability perspective, but also from inventory management (Warburton & Stratton, 2002; Young *et al.*, 2009), pricing (discounts in case of failed demand forecasts; Warburton & Stratton, 2002; Christopher *et al.*, 2006) and out of experienced possible sales cannibalization effects (when old inventory is sold with heavy discount, which affects next season demand; Warburton & Stratton,

2002). Some research works even illustrate, that offshoring location should be at first examined from a non-cost and non-profitability perspective, only to concentrate on the capabilities and competences of different countries and/or regions (and this being company practice; see Boardman *et al.*, 2008). Khan *et al.* (2008) argue that own product design together with global sourcing is the successful way forward. In research works it is emphasized through case studies, that offshoring and outsourcing will often lead to failure, and it is the result of different factors (Arlbjørn & Lüthje, 2012). As highlighted by the research of Young *et al.* (2009),

accounting systems of companies do not reflect new offshoring environment – often increased inventory holdings, needed overheads and risk factors are not incorporated in cost accounting models (which are the base of decisions, and ends up to biased picture). However, despite of all failures and challenges faced, research works argued that there does not exist any alternative to global sourcing (Khan *et al.*, 2008), and this has not changed that much even with the increased customs tariffs of USA (offshoring and outsourcing contains other performance dimensions than just costs; Hartman *et al.*, 2017).

**Table 2** Major findings/contribution of analyzed literature (in ascending order of publishing year)

Author(s)	Year	Theme	Main Findings/Contribution
Warburton & Stratton	2002	Offshoring	It is important to mix offshore and onshore suppliers in order to achieve sales and profits.
Christopher, Peck & Towill	2006	Offshoring	In offshoring and outsourcing, it is important to have number of suppliers and flexibility to react on market changes.
Khan, Christopher & Burnes	2008	Offshoring	Design is important part of business success, and sourcing needs to be global.
Boardman, Berger, Zeng & Gerstenfeld	2008	Offshoring	Non-cost based AHP decision making model used in offshore supplier selection.
Slepnirov & Waehrens	2008	Offshoring	Offshoring and outsourcing described as a process, and practices applied in it.
Andersen & Skjoett-Larsen	2009	Offshoring	Introduces corporate social responsibility in global supply chains through the experiences and implementation of IKEA.
Tate & Ellram	2009	Offshoring	Offshoring and outsourcing require a lot of human talent (management and other expertise).
Young, Swan, Thomchick & Ruamsook	2009	Offshoring	Landed costs of offshoring decision are not that advanced in companies, however, number of additional costs are identified.
Kumar, Medina & Nelson	2009	Offshoring	Evaluates offshore locations and concludes that China is having number of factors, which constrain its cost competitiveness
Hameri & Tunkelo	2009	Offshoring	Offshoring is long strategic process, which needs it support.
Jørgensen	2010	Offshoring	SME companies and their offshoring processes are eventually knowledge integration based. Sometimes failures do occur.
Arlbjørn & Lüthje	2012	Offshoring	Analyses failed and successful outsourcing processes of four companies. It is emphasized that successful processes require planning and control.
Zhang & Huang	2012	Offshoring	Sensitivity analysis of footwear industry location based on changes of different cost components. China is having its challenges in the analysis.
Lu & Yuan	2013	Offshoring	Offshored construction components are easier to manage for quality in factories rather than at construction site.
Sharma, Lindsay & Everton	2015	Offshoring	SMEs and outsourcing processes to emerging markets is a challenge. Case study shows failure in India, which was corrected by placing production to China
Hartman, Ogden, Wirthlin & Hazen	2017	Reshoring	Total Cost of Ownership (TCO) will not give complete answer on manufacturing location, but it needs to be examined from different competitiveness angles.
Engström, Sollander, Hilletoft & Eriksson	2018	Reshoring	Quality is the driver of reshoring. This does not only concern product itself, but should be seen as larger entity, including also society surrounding operations.
Günay, Kremer & Park	2019	Reshoring	Using more regional suppliers will lead much increased costs, in case study increase was at max, 65.5%.
Free and Hecimovic	2021	Reshoring	Research gives an opinion that after Covid-19 pandemic old offshoring world shall change. This means new favorite offshoring locations and onshoring processes.
Boehme, Aitken, Turner & Handfield	2021	Reshoring	Country based clusters can deliver products and results in very dire situations such as Covid-19 pandemic.

**Table 3** Major findings/contribution of analyzed literature (in ascending order of publishing year) (Con't)

Purvis, Lahy, Mason & Wilson	2021	Reshoring	Risks of centralized manufacturing in one country/location are high. Due to technology, it is nowadays possible to run distributed manufacturing in number of locations. This has its advantages in delivery processes and product freshness.
Harper	2022	Reshoring	Reshoring processes contain paradoxes and tensions between actors. Companies should not demand same performance dimensions as in situation of offshore.

As **Table 1** indicates, we have number of publications from reshoring theme existing, and they have been published in the end of the literature review period (since 2017 only reshoring theme). As highest cited in these is Free & Hecimovic (2021), which finds numerous reasons, why globalization is in the decline due to the Covid-19 coronavirus pandemic. Based on their research, it is argued that new locations for offshoring will arise, and reshoring will be the focal point of attention. Free & Hecimovic (2021) use Australian automotive sector as an example from continuous decline, and their argument that they convey is that the decline was caused in a large part by used cost accounting practices. This is similar to the findings of Hartman *et al.* (2017), which argued similarly that decision should not only be made through cost world. Arguing that offshoring and outsourced locations change is not that new, and it has been repeated in the case studies of **Table 1** as well. Typically, it is an evaluation comparing Chinese manufacturing to the rest of the world locations (Kumar *et al.*, 2009; Zhang & Huang, 2012). Strengthening currency, increasing labour costs, increasing transportation costs and price of oil have been seen as factors affecting dominant position of China (Kumar *et al.*, 2009; Zhang & Huang, 2012). New alternative locations are often proposed in Vietnam, Indonesia, Malaysia or Mexico (Kumar *et al.*, 2009; Zhang & Huang, 2012).

However, it is not straight forward move to take production back to a developed economy and use reshoring. Günay *et al.* (2019) conducted a study of bike manufacturing with the example that using local American suppliers in the USA to a large extent shall increase total costs considerably (65.5 %) as compared to product manufactured based on global suppliers. It is rather logical that reshoring decision could not be based on costs only. Engström *et al.* (2018) emphasize the role of quality in the reshoring process (and not only concerning manufacturing unit, but society as a whole). Of course, the Covid-19 era brought in consideration of certainty of supply and availability (Free & Hecimovic, 2021; Boehme *et al.*, 2021). Developed manufacturing clusters in certain sectors do offer solution in this regard (Boehme *et al.*, 2021). However, it should be reminded that reshoring manufacturing back to developed economies is not a simple or easy task. This requires a mindset change in sourcing practices – small lot size and short response manufacturing cannot have similar demands as low cost, bulky and long-distance manufacturing is having (Harper, 2022). It is interesting, how many tensions apparel manufacturing case study of Harper (2022) actually found.

## 5. DISCUSSION

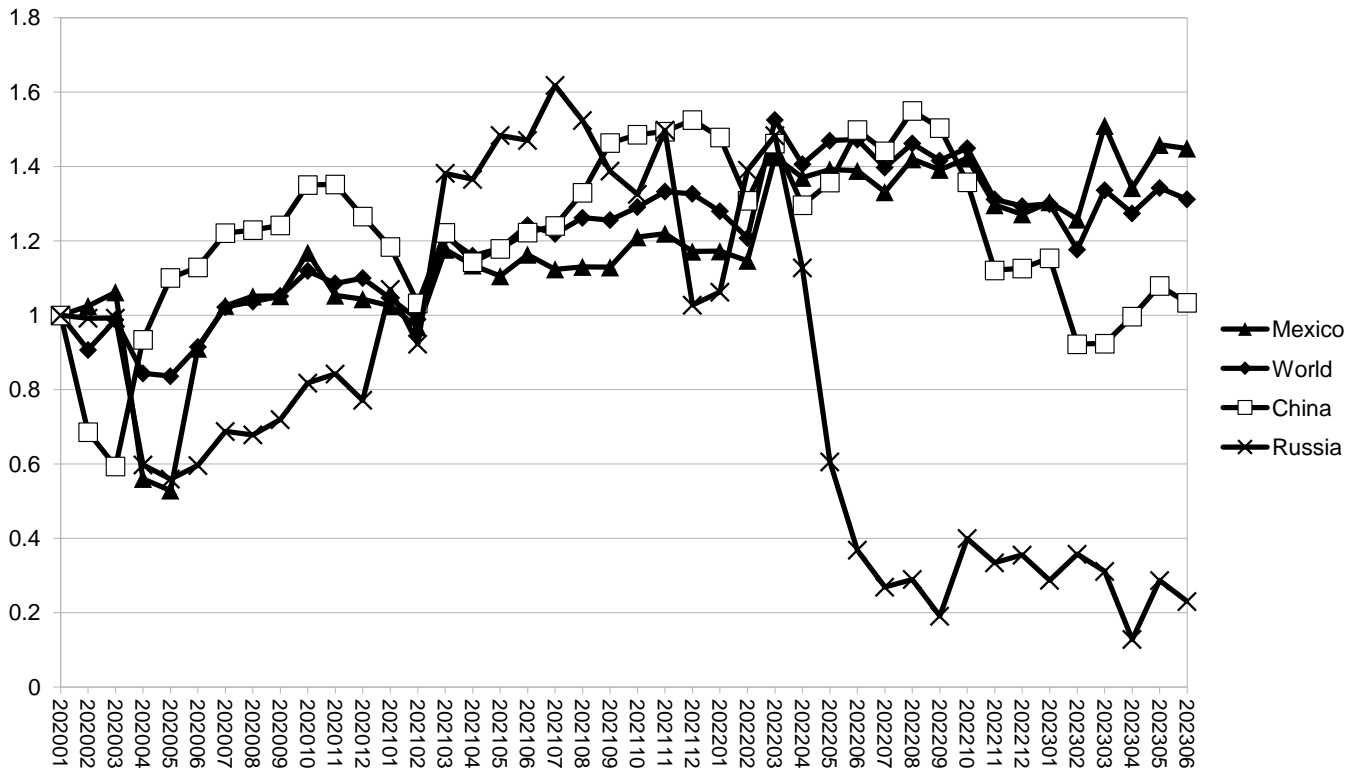
From the literature review, 15 out of 22 papers deal with offshoring, and only seven papers deal with reshoring. Almost half of the set include more than one case in the

paper, ranging from 2 to 12. Majority of the studies uses one approach, that is either qualitative or quantitative, with only a few of them uses both. However, the overwhelming majority are qualitative papers as expected since many of them are developing new, or extending, knowledge in the field. The articles published often apply different theoretical lenses. The paper with highest citations is 1059 (published in 2009) and the one following that has 766 (published in 2006). The number of citations indicates that there is a scholarly interest in the papers applying shoring cases in the field of supply chain management.

For most of the time, research has concerned about offshoring e.g., in retail (Warburton & Stratton, 2002; Christopher *et al.*, 2006; Khan *et al.*, (2008); Andersen & Skjoett-Larsen, 2009) or in manufacturing (e.g., Slepnirov & Waehrens, 2008; Hameri & Tunkelo, 2009; Arlbjørn & Lüthje, 2012; Sharma *et al.*, 2015). Supply chains were just relocated from developed countries to emerging or developing economies. Reshoring research is still emerging and is not in the centre of scholarly attention, and analyzed research works of this study showed great variance in used materials, research approaches, topics and analyses (e.g., nation-wide sectors, like Free & Hecimovic (2021), and bike manufacturing supply chains as in Günay *et al.*, (2019)).

We noticed that two factors are particularly interesting the review articles, these are risks and failures. Since it has been argued that shoring is associated with several risks and can result in failure. Risk is something, that is not taken into account within offshoring decisions as a quantified cost item (Young *et al.*, 2009; Ciabuschi *et al.*, 2019). This aspect is a key factor in distributed manufacturing, which runs in numerous locations close by main markets. It enables short response, newer products, and higher quality. Arlbjørn & Lüthje (2012) explained, that offshoring and outsourcing often lead to failure, that can be a result of different factors. Risks can be known and unknown and are therefore difficult to anticipate and calculate on.

However, despite the fact that there are challenges faced in these complex questions, research argued that there is no other option to global sourcing (Khan *et al.*, 2008). Shoring is and can be of interest to several fields and different type of companies. Due to the complex nature of these questions, this opens up for learning opportunities between sectors and industries and within cases. This suggests that while the research area is still expanding, there is potential to test the theories that have been and are developed and to further extend theory. In the forthcoming years we expect that reshoring (together with nearshoring) research shall remain main theme among case study research works of supply chain shoring. This is evident as examining **Table 2** – since the Trump presidency era and policy changes, offshoring changed to topic of reshoring.



**Figure 2** Imports (monthly) of USA from World (all countries), Mexico, China and Russia during time period of Jan.2020-June.2023 (indexed, where 2020.Jan. is 1.000).  
Source (data): Comtrade (2023)

After Russian invasion to Ukraine, world trade has experienced many changes. One of them is the decreasing trade with Russia due to implemented sanctions and Russian counter-sanctions (these have been effective for European Union countries and North America). As **Figure 2** illustrates, imports of USA from Russia have decreased significantly in 2022, and in 2023 they have mostly been around 20-30 % from the level of January 2020. What is also interesting, is the declining importance of China as the main import source of USA. In **Figure 2** Chinese import was at observation period high during August of 2022, but in June of 2023, imports were one third lower. In the same period of time, overall imports of USA have declined by 10.3 %. However, what is striking, is the fact that Mexican imports have increased by 2 % in this same period of time, and in the first six months of 2023 Mexico was clearly larger import (11.8 % larger) and overall trade (39.6 % larger) partner as compared to China (it was already in 2022 slightly larger than China, but in 2020-21 situation was opposite). Mexico is currently the largest trading partner of USA, followed closely by Canada (Torres, 2023). This illustrates well the outcome of completed literature review – sourcing from Asia and China will not end, however, other areas and countries arise as important, and near-shoring will increase in popularity (together with reshoring). As Torres (2023), notes both Canada and Mexico have sustained well in the trade of USA, especially after trade tariffs were implemented first time for the imports from China in 2018 (and this was followed by counter-measures of China on imports from USA). In addition, USA reached new trade agreement with its neighbours in 2020.

## 6. CONCLUSIONS

Supply chain case studies from shoring are not many, and in this completed literature review only in the recent years offshoring has been researched together with reshoring. It cannot be said that reshoring is now mainstream area of supply chain cases of shoring, however, it can be said that research works can contain either offshoring or reshoring, and in latter theme real company cases are rather rare, and only recently being reported (e.g., in this study: Engström *et al.*, 2018; Purvis *et al.*, 2021; Harper, 2022). It can be said that reshoring has attracted interest, at least temporarily. However, following years will show, how this interest will develop possibly as a trend.

It could be concluded that China plays a central role in the progression and possible change in supply chain shoring. This was also reported in several case studies (Kumar *et al.*, 2009; Zhang & Huang, 2012; Lu and Yuan, 2013). Alternative locations are of course available, but there does not exist only one country for this, but number of different countries (Kumar *et al.*, 2009; Zhang & Huang, 2012; Free & Hecimovic, 2021). This could be new development of shoring practice, which was already proposed to hedge risks in the early cases of offshoring (Warburton & Stratton, 2002; Christopher *et al.*, 2006; Khan *et al.*, 2008). It could be so that in the future supply chain shoring is not strictly divided between offshoring and reshoring, but it is mixed practice in many companies. This was central argument of Purvis *et al.* (2021) that the future may hold numerous locations.

This study serves as an inspiration to increase our understanding of the mainstreams in shoring case studies from the supply chain perspective and to highlight research gaps. As further research we would be interested to study

different countries and continents more through second-hand data and statistics as well as build decision making models and country ranks for different industries. This could enable better supply chain shoring practices in the future.

As indicated in the introduction, with reference to the global context such as the Covid-19 pandemic, economic crisis, and more currently the Russia-Ukraine war, it is expected that more companies will consider, or actually reshore, and this will give researchers more opportunity to extend knowledge and let the field blossom. However, it would be interesting to study the importance of external factors such as inflation, energy and electricity prices as well as salary conditions in the shoring decision, since this is something the organization is balancing alongside the internal factors and benefits. The external factors can rapidly change and determine the success or failure of the shoring.

Furthermore, when analyzing the set of data, it becomes interesting to explore the role of politics, policy makers and incentives on the reshoring. Due to the fact that many of the papers in the review were developed under conditions, when the surrounding context was rather stable.

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**Olli-Pekka Hilmola** is working as Visiting Prof. in University of Gävle, Sweden and as an Adjunct Prof. in Taltech/EMERA, Estonia. He is affiliated with number of int. journals through editorial boards. Total amount of published scientific journal manuscripts reaches approx. 190 works, and total count of all scientific publications is around 350. Research interests lie in the areas of transportation logistics, supply chains, industrial management, and quantitative methods.

**Haihan Li** is a PhD student of Industrial Management at University of Gävle in Sweden, with a background of Supply Chain and Operations Management MSc at the University of Nottingham. Her research focuses on manufacturing relocation decision-making and implementation, as well as supply chain strategy and operations management.

**Per Hilletofth** is a Professor of Industrial Management at University of Gävle in Sweden. His research focuses on operations strategy, manufacturing location, supply chain design, new product development, and demand and supply integration. He has editorial assignments in several international journals.

**Daniella Fjellström** is Associate Professor at University of Gävle. She was awarded her PhD in International Business from the Centre of International Business Studies (CIBUL) at the Leeds University Business School (LUBS), the University of Leeds, UK. She has published in, among others, British Journal of Management, Asian Business & Management, Journal of Business and Industrial Marketing, International Journal of Applied Business and Economic Research, Qualitative Research in Organizations and Management: An International Journal, Journal of Asia Business Studies, Global Business and Economics Review. Research interest in relocation of manufacturing, international business and digitalization.