

Creating marketing innovation abroad: The value of marketing professionals in foreign MNC subsidiaries

Ulrich Kaiser^{a,b,d}, Wolfgang Sofka^{b,c}, Christoph Grimpe^{b,d,*}

^a University of Zurich, Dept. of Business Administration, Affolternstrasse 56, 8050 Zurich, Switzerland

^b Copenhagen Business School, Dept. of Strategy and Innovation, Kilevej 14A, 2000 Frederiksberg, Denmark

^c University of Liverpool Management School, Strategy, International Business and Entrepreneurship Group (SIBE), Chatham Street, L69 7ZH, United Kingdom

^d Leibniz Centre for European Economic Research (ZEW), Department of Economics of Innovation and Industrial Dynamics, L7 1, 68161 Mannheim, Germany

ARTICLE INFO

Keywords:

Marketing innovation
Strategic human capital
Marketing professionals
Salary premiums
Host country innovativeness

ABSTRACT

When foreign MNC subsidiaries commercialize their products and services on foreign markets, they oftentimes rely on new marketing approaches such as a new pricing model adapted to local customers and competitors. Since MNC subsidiaries typically suffer from “liabilities of foreignness”, they depend on skilled marketing professionals who possess a deep understanding of host country markets to implement these marketing innovations. However, the value that these individuals can create for MNC subsidiaries vis-à-vis domestic firms and under which host country market conditions their B2B marketing skills are most valuable is poorly understood. We integrate mechanisms from research on value creation through marketing innovation in MNC subsidiaries into strategic human capital theory and predict higher value creation to translate into salary premiums for these individuals compared to when they would work for domestic firms. Moreover, we argue that these salary premium effects depend on the innovativeness of the host country competition which challenges MNC subsidiaries and makes marketing innovation even more salient. We test and support our hypotheses using employer-employee data for 25,374 marketing professionals from 2010 to 2012 in Denmark. The findings have broad relevance for the management of strategic human capital management in the creation of marketing innovation.

1. Introduction

Marketing capabilities are foundational for the international success of industrial firms since they enable them to find, attract and maintain customers outside of their home countries (Samiee, Katsikeas, & Hult, 2021). A central pillar of such marketing capabilities are skilled marketing professionals who can design, deploy and refine successful marketing strategies (Moorman & Day, 2016). Particularly in foreign subsidiaries of Multinational Corporations (MNCs) that seek to commercialize their products and services abroad, marketing professionals help to accumulate specific knowledge about host country markets and to build professional networks with industrial firms through which they can channel this knowledge to decision makers at MNC headquarters. As these products and services constitute new offerings on host country markets with different degrees of novelty vis-à-vis domestic competitor offerings, marketing professionals help to build three essential B2B marketing capabilities (Mora Cortez & Hidalgo, 2022): market segmentation and targeting (e.g., Ulaga &

Chacour, 2001), adaptation of the marketing mix, for example by implementing a new pricing model that fits with host country customs (e.g., Grimpe, Sofka, Bhargava, & Chatterjee, 2017), as well as development and selection of new products to be marketed abroad (e.g., Cooper & Kleinschmidt, 1987).

Hence, marketing professionals possess a distinct type of human capital, combining in-depth knowledge about host country markets that facilitates industrial marketing innovation with the ability to coordinate the need for local adaptation within the MNC network (Chi-Fai & Holbert, 2001; Griffith & Harvey, 2004; Harvey & Novicevic, 2000). However, little is known about how much foreign subsidiaries value this type of human capital vis-à-vis domestic firms and under which conditions marketing professionals are likely to be most valuable to foreign subsidiaries. While Hult, Hurley, and Knight (2004) highlight the importance of the environmental context for the innovativeness and performance of industrial firms, what sets foreign and domestic firms apart and how environmental characteristics translate into wage premiums has remained unclear. After all, foreign subsidiaries typically

* Corresponding author at: Copenhagen Business School, Dept. of Strategy and Innovation, Kilevej 14A, 2000 Frederiksberg, Denmark.

E-mail addresses: ulrich.kaiser@business.uzh.ch (U. Kaiser), ws.si@cbs.dk (W. Sofka), cg.si@cbs.dk (C. Grimpe).

<https://doi.org/10.1016/j.indmarman.2023.05.005>

Received 7 December 2022; Received in revised form 22 March 2023; Accepted 9 May 2023

Available online 27 May 2023

0019-8501/© 2023 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

experience “liabilities of foreignness” (Kindleberger, 1969; Zaheer & Mosakowski, 1997) which challenge their legitimacy and the success of their product offerings on foreign markets.

The goal of our study is to advance existing research by theorizing the salary differences of marketing professionals employed by foreign subsidiaries compared to domestic firms, for short salary premiums. We integrate theoretical mechanisms from research explaining how marketing capabilities create value in foreign subsidiaries (Chi-Fai & Holbert, 2001; Griffith & Harvey, 2004; Harvey & Novicevic, 2000) into theory on strategic human capital that helps to explain when the value creation of particular employees for their employers results in higher salaries (Campbell, Coff, & Kryscynski, 2012; Chadwick, 2017). Based on this theory integration, we reason that the human capital of marketing professionals is both uniquely valuable for foreign subsidiaries and scarce on labor markets as foreign subsidiaries need to compete against domestic firms to hire and retain these individuals. Hence, we predict that these conditions result in salary premiums for marketing professionals in foreign subsidiaries.

Furthermore, we introduce the innovativeness of host country competitors as a central contingency affecting the potential value creation of marketing professionals in foreign subsidiaries. Our logic is based on the notion that marketing professionals help build marketing capabilities for identifying emerging market opportunities and reconfiguring existing approaches (Baden-Fuller & Teece, 2020; Cooper & Kleinschmidt, 1987; Fang & Zou, 2009; Grimpe et al., 2017; Khan, 2020; Khan & Khan, 2021; Ulaga & Chacour, 2001). For this purpose, we distinguish three types of innovativeness of host country competitors which require a re-assessment of the marketing approaches of a foreign subsidiary and make marketing professionals especially valuable: the R&D investments of host country competitors into new technologies, the creation of new businesses in the host country, and the degree of digitalization among host country competitors with the potential to enable a multitude of new digital products or services. We hypothesize that all three dimensions of host country innovativeness make marketing professionals more valuable and increase their salary premiums compared with domestic firms as they raise the importance of marketing innovation. Conversely, the absence of host country innovativeness constrains the potential for salary premiums.

The empirical test of our theoretical conjectures is based on Danish linked employer-employee data. These data have several important advantages for studying our research question. First, we can identify all marketing professionals who work at foreign subsidiaries in Denmark and separate them based on occupation codes from employees with more applied tasks. Second, we observe salaries reliably and comprehensively for all marketing professionals in Denmark, providing us with an indicator for the value that marketing professionals likely create for their employers. Moreover, we can measure many other salary-relevant attributes of individuals, e.g. education, age or gender, and rule out potential alternative explanations for salary differences. Third, the population level data allow us to capture the innovativeness of host country competitors comprehensively, i.e. the industry R&D intensity, rate of startup creation, and degree of digitalization. Methodologically, we rely on the combination of coarsened exact matching and Mincer-type wage regressions (Mincer, 1958). We match on a broad range of individual and employer characteristics to obtain a balanced sample of marketing professionals working for foreign subsidiaries and domestic firms. Subsequently, we estimate wage regressions and test moderation effects. Eventually, our empirical analysis relies on 16,104 unique marketing professionals providing 23,374 observations in the period from 2010 to 2012 in Denmark, with individuals working at foreign subsidiaries accounting for 32% of observations. The estimation results support all hypotheses.

Our results have important consequences for academic literature and management practice along two dimensions. First, marketing plays an important role for the successful commercialization of both new and existing products and services (Kyriakopoulos, Hughes, & Hughes,

2016), and international firms are particularly challenged to understand host country market demands when it comes to such commercialization (Samiee et al., 2021). Yet, the individual salary effects for the marketing professionals designing and adapting the marketing of foreign subsidiaries are not well understood. We rely on mechanisms from strategic human capital theory (Campbell et al., 2012; Chadwick, 2017) for establishing how the value creation of marketing professionals in foreign subsidiaries translate into salary premiums. What is more, we establish how the potential for value creation is contingent on the innovativeness of the host country competitors.

Second, better understanding the drivers of salary premiums is important not only for foreign subsidiaries that need to compete for valuable human capital on host country labor markets but also for marketing professionals who learn about the most promising career options in a host country. They can maximize their earnings by working for foreign subsidiaries in competitive host country settings in which many new technologies are created, innovative businesses emerge and competitors invest in digital competences. Subsidiaries that seek to hire and retain marketing professionals need to be cognizant of the value created and salaries demanded by host country employees which the pay structures need to reflect. In that sense, our research fills a void unaddressed in the literature that helps to better understand the career outcomes of professionals and managers working for foreign subsidiaries and domestic firms.

2. Theoretical framework

In this section, we aim at explaining the difference in salaries between marketing professionals who are employed by a foreign subsidiary and those employed by a domestic firm. In the following, we discuss how marketing professionals create value for subsidiaries by reducing their liabilities of foreignness in the host country and how this translates into a salary premium. Next, we outline that the value of marketing professionals to foreign subsidiaries strongly depends on the innovativeness of competitors in the host country.

2.1. Marketing capabilities and their value to foreign MNC subsidiaries vis-à-vis domestic firms

The proficiency of a firm's marketing is central to its internationalization because marketing creates the interface between the firm and its international customers (Samiee et al., 2021). Firms benefit from marketing capabilities when they have better insights into the market and its trends, manage the relationships with customers so that new ones are acquired and valuable ones retained, create brands and use them as an asset, plan and implement marketing campaigns effectively or optimize pricing, product design, sales and communication (Moorman & Day, 2016). These marketing capabilities are particularly strategic for MNCs compared to domestic firms.

When MNCs engage on markets outside their home country, they are confronted with social and economic costs that can be traced back to the unfamiliarity with foreign markets and to political, cultural, and economic differences. These difficulties are typically described as liabilities of foreignness (Kindleberger, 1969; Zaheer & Mosakowski, 1997). MNC subsidiaries have to overcome knowledge gaps about customer demands, competing products or regulatory demands which increase in complexity with the number of host countries MNCs operate in (Petersen, Pedersen, & Lyles, 2008). Foreign subsidiaries experience relational, structural, and legitimacy disadvantages abroad that more often lead to errors, delays, and risks compared with their domestic counterparts. Domestic firms are advantaged relative to foreign subsidiaries because the continuous and repeated interaction with the environment in their home country – which is the MNC's host country – allows for adaptation which in turn enables more efficient and effective operations in the country (Baum & Oliver, 1991; Mezas, 2002). In that sense, domestic firms enjoy advantages with regard to information and

legitimacy at home. By contrast, foreign subsidiaries are challenged because “both the organization and the legitimating environment may lack the information and the cognitive structures required to understand, interpret, and evaluate each other” (Zaheer & Mosakowski, 1997: 67). In addition to understanding the demands of a specific host country and gaining legitimacy, MNCs operate in multiple countries where each country has idiosyncratic demands, leading to an even higher complexity in their foreign operations (Kostova & Zaheer, 1999). This suggests that MNC subsidiaries critically depend on their marketing capabilities to overcome inherent challenges in how their products and brands are perceived abroad (Bilkey & Nes, 1982; Steenkamp, Batra, & Alden, 2003), how they gain access to innovative customers in host countries (Schmidt & Sofka, 2009), plan entry strategies into new countries (Ripollés & Blesa, 2012) and find a balance between marketing approaches that can be applied globally or require national adjustments through marketing innovation (Navarro, Losada, Ruzo, & Díez, 2010).

A central underpinning of a marketing function are the individuals who can design, implement and evaluate marketing activities (Moorman & Day, 2016). They have a set of knowledge, skills and experiences that is of strategic value for their employers, for short: they possess strategic human capital (Ployhart & Moliterno, 2011). We refer to this group of employees as marketing professionals who have strategic importance for foreign subsidiaries for two primary reasons. First, they accumulate specific knowledge about particular host countries that is often times tacit in nature, embedded in the host country context and rarely comprehensively codified or articulated (Harvey & Novicevic, 2000). This type of knowledge is typically acquired in practice over time in a host country, difficult to obtain from global headquarters but consequential for an MNC's success in the host country. Second, marketing professionals create valuable personal relationships with both host country customers or partners as well as important decision makers in global headquarters (Griffith & Harvey, 2004). This network position allows marketing professionals in foreign subsidiaries to align perceptions with global headquarters and improve the overall decision making within MNCs (Chi-Fai & Holbert, 2001). In that sense, Mora Cortez and Hidalgo (2022) argue that marketing professionals help to build three essential B2B marketing capabilities: market segmentation and targeting (e.g., Ulaga & Chacour, 2001), adaptation of the marketing mix, for example by implementing a new pricing model that fits with host country customs that leads to marketing innovation (e.g., Grimpe et al., 2017), as well as development and selection of new products to be marketed abroad (e.g., Cooper & Kleinschmidt, 1987).

2.2. Value creation by marketing professionals and its effect on salaries

The performance effects of marketing professionals in foreign MNC subsidiaries do not automatically translate into salary premiums of individual employees. MNCs, like any other employer, have strong incentives to capture rents from the value that an individual is creating in a firm instead of leaving these rents to employees as salary premiums (Coff, 1997). Hence, an individual's value creation provides merely the potential for salary increases but the bargaining positions of employer and employee determine whether they will materialize (Campbell et al., 2012; Chadwick, 2017). An important determinant of bargaining outcomes within these models is the scarcity of an individual's human capital. Certain employees might create considerable value for the firm but if those employees can be easily replaced on labor markets, employers do not have to negotiate higher salaries. Conversely, certain types of human capital are inelastic in supply, i.e. alternative employees cannot simply be hired on job markets or quickly trained, which implies that the bargaining position of the employee for higher salaries is much improved (Chadwick, 2017). In fact, prior research has documented several types of scarce human capital such as advocacy group work experience (Grimpe, Kaiser, & Sofka, 2019) or start-up experience (Campbell, 2013; Distel, Sofka, De Faria, Preto, & Ribeiro, 2022) that unfold particular value when deployed in a specific firm context. Then

again, extant research on marketing professionals has largely identified their value creation in MNC subsidiaries but considerations for marketing-specific conditions under which marketing professionals benefit individually through higher salaries are largely absent from extant research and detached from more general theory in strategic human capital research. Table 1 contrasts these streams of literature and identifies the relevant marketing-specific gap.

We address this gap and argue that marketing professionals differ in the value that they can create for foreign subsidiaries and domestic firms because of the liabilities of foreignness which they help to overcome. Liabilities of foreignness are an inherently relative concept (Bell, Filatotchev, & Rasheed, 2012; Zaheer & Mosakowski, 1997), i.e., foreign subsidiaries experience such liabilities relative to domestic firms. We argue that the marketing professionals' value is higher for foreign subsidiaries than for domestic firms since they possess (1) specific knowledge about the host country that they have accumulated and that is often times tacit in nature, embedded in context and rarely comprehensively codified or articulated (Harvey & Novicevic, 2000) and on which marketing innovation is based, and (2) since the valuable personal relationships with both host country customers or partners as well as important decision makers at the global headquarters put marketing professionals in a more important role than they would have at a domestic firm (Griffith & Harvey, 2004). At the same time, the MNC-specific human capital of marketing professionals is scarce on labor markets because most available candidates for hiring will have only human capital that is valuable in a strictly domestic context. Taken together, we conclude that marketing professionals' human capital will be more valuable to foreign subsidiaries than to domestic firms and their human capital is scarce on host country labor markets. These conditions will be reflected in higher salaries that the employees receive. Our first hypothesis thus reads:

Hypothesis 1. Marketing professionals earn more in subsidiaries of foreign MNCs than comparable employees in domestic firms.

Table 1
Synthesis of important mechanisms determining salary premiums.

	General mechanisms	Marketing-specific mechanisms in MNC subsidiaries
Performance effects of key employees	<p>- Creation of maximum value from combining a firm's resources with human capital</p> <p>Relevant research: Ployhart & Moliterno, 2011; Ployhart, Nyberg, Reilly, & Maltarich, 2014; Weller, Hymer, Nyberg, & Ebert, 2019; Ployhart, 2021; Distel et al., 2022</p>	<p>- Accumulation of tacit knowledge</p> <p>- Embeddedness in the host country</p> <p>- Personal networks with global headquarters</p> <p>- Judgement of needs for adaptation or new product development</p> <p>Relevant research: Ulaga & Chacour, 2001; Harvey & Novicevic, 2000; Griffith & Harvey, 2004</p>
Salary effects for key employees from value creation	<p>- Complementarity between firm resources and human capital</p> <p>- Scarcity of human capital</p> <p>- Specificity of human capital</p> <p>- Frictions on labor markets</p> <p>- HR management capabilities</p> <p>- Non-monetary employment incentives</p> <p>Relevant research: Campbell et al., 2012; Mackey, Molloy, & Morris, 2014; Molloy & Barney, 2015; Chadwick, 2017; Kryscynski, 2021; Sofka, Grimpe, & Kaiser, 2022</p>	

2.3. Salary premiums for marketing professionals in foreign MNC subsidiaries and the innovativeness of competitors in the MNC's host country

We expand on the logic laid out for [Hypothesis 1](#) by considering the innovativeness of host country competitors as a mechanism that challenges a subsidiary's marketing in the host country and that describes when marketing professionals' human capital will be most valuable to foreign subsidiaries. We reason that marketing professionals are key to evaluating the challenges caused by innovativeness and to adapting the marketing approach. Marketing professionals provide the skills for effective market responsiveness defined as the capability to identify sophisticated host market needs and translate those needs into innovations in the existing marketing approaches ([Khan, 2020](#); [Khan & Khan, 2021](#)).

[Fang and Zou \(2009\)](#) identify such capabilities as marketing dynamic capabilities when firms operate abroad. These specific capabilities are rooted in the marketing function and determine how effectively and efficiently market changes result in new or improved business processes with the purpose of creating or delivering customer value ([Fang & Zou, 2009](#)). In this regard, marketing dynamic capabilities constitute a specific dimension within more general dynamic capabilities theory by directing attention to the marketing function and customer value as the relevant performance outcome. At the same time, marketing dynamic capabilities share the general mechanisms of dynamic capabilities research in which superior performance emerges when firms can sense new market opportunities, seize the opportunities and reconfigure existing resources to optimize the outcomes ([Teece, 2007](#)). Foreign subsidiaries benefit from managers who have the skills for making such decisions but they are inherently scarce in MNCs ([Distel, Sofka, De Faria, Preto, & Ribeiro, 2022](#)).

We follow this theoretical logic and predict that marketing professionals will be particularly valuable for foreign subsidiaries and can obtain larger salary premiums when the innovativeness of host country competitors makes marketing innovation more salient, i.e. when it is likely to require adaptation of a subsidiary's existing marketing approaches. [Baden-Fuller and Teece \(2020\)](#) describe such conditions as follows: "Whether they are 'inside out' or 'outside in', neoclassical views in marketing and strategy overlook a really crucial 'fact' of competition: what was once a valuable resource or market position can become outdated when consumer needs and technology separately or simultaneously change and rivals dream up new ways of identifying and fulfilling wholly new wants in wholly new ways that fundamentally challenge the old order – as vividly illustrated by the demise of Kodak and Nokia" (p. 105). Accordingly, we explore three dimensions of host country competitor innovativeness and their effect on the salary premiums of marketing professionals in foreign subsidiaries: the investment of host country competitors into new technologies, the creation of startups as well as the degree of digitalization with the potential to trigger a multitude of changes across various product or process dimensions.

2.3.1. Host country innovativeness based on R&D investments into new technologies

The discovery of new technologies is a major factor for changes in the nature of competition in a market ([Arrow, 1962](#); [Schumpeter, 1942](#)). R&D investments can provide firms with novel technologies that allow them to produce more efficiently than competitors or offer distinct products with more desirable functionalities ([Griliches, 1986](#); [Helfat, 1994](#)). These advantages can be persistent when innovative firms patent their technologies and obtain exclusive rights for using the patented technologies, typically for up to 20 years ([Encaoua, Guellec, & Martinez, 2006](#)). Besides, firms can use their patents to constrain the technology development of their competitors in strategic ways ([Somaya, 2012](#), provides a comprehensive review). In sum, higher R&D investments among host country competitors increase the likelihood that they will

develop new technologies which has the potential to affect the competitive position of foreign MNC subsidiaries.

Marketing plays an important role for assessing and reacting to competitor R&D investments because strategic effects of technological inventions are rarely determined by a new technology in isolation. Instead, the degree to which firms benefit from new technologies, whether they have developed them or not, depends typically on the control of assets that are complementary with the technological invention and unlock its commercial value ([Teece, 1986](#)). From a marketing perspective, such complementary assets can include brands, sales channels or customer data that make the commercialization of a technological invention profitable. Access to these complementary assets is so important, that firms frequently decide to sell or license their new technologies to competitors which have complementary assets to exploit them ([Arora & Gambardella, 2010](#)).

The marketing function has two primary responsibilities when competitor products using novel technologies emerge. First, they identify new competitor offerings and their acceptance by customers as the basis for strategic adjustments ([Day, 1994](#); [Slater & Narver, 1998](#)). Second, they analyze the extent to which technological innovation affects the effectiveness of current complementary assets and the marketing mix. Large parts of this information gathering and analysis occur under conditions of uncertainty because novel technologies might be in early stages but have a large potential once the technology is fully developed and matured. Hence, experienced marketing professionals can create value for firms by judging the competitive effect of new technologies introduced by competitors and envisioning strategic responses. Their potential for value creation is particularly high when many competitors invest in R&D, develop new technologies and require the frequent re-assessment of existing marketing approaches.

We reason that this effect is stronger for marketing professionals working for foreign subsidiaries relative to domestic firms because they do not just need to understand the changing technologies and their consequences on the host country market, but to communicate them convincingly within the MNC. Put differently, the effective response of a foreign subsidiary to technologically advanced competitors in a host country depends at least partially on the ability of marketing professionals to engage and convince decision makers at global headquarters. Typically, this requires leveraging their personal networks and communicating with decision makers across geographical boundaries ([Griffith & Harvey, 2004](#)). Skilled marketing professionals of foreign subsidiaries understand how they need to frame emerging threats from new technologies for global headquarters and the choice set that global headquarters has for adequate responses, e.g. through the MNC's own R&D activities. Competitive threats may trigger R&D at the headquarters that may eventually also benefit the MNC's subsidiaries in other countries or at the focal subsidiary itself in order to develop locally adapted solutions in response to host country innovativeness ([Kuemmerle, 1998](#)). The need for marketing dynamic capabilities to address these challenges is therefore, on the one hand, greater in foreign subsidiaries relative to domestic firms and, on the other hand, more critical for the success compared to domestic competitors. Marketing professionals working for foreign subsidiaries in host countries with technologically advanced competitors thus become more valuable for MNCs and can expect higher salary premiums. In contrast, marketing professionals of foreign subsidiaries in host countries, in which competitors rely mostly on mature technologies instead of creating new ones, are unlikely to deal with the challenges of new technologies that require creative marketing responses in correspondence with the global headquarters. This limits the value that they can create for the MNC as a whole and hence their potential for salary premiums. Our second hypothesis reads:

Hypothesis 2. The wage premium that marketing professionals can obtain in foreign MNC subsidiaries relative to domestic firms is higher when the competition in the domestic industry is more R&D intensive.

2.3.2. Host country innovativeness based on new venture creation

A separate mechanism by which the nature of competition on host country markets can be more challenging is the creation of new firms. Some startups may also invest in R&D but most R&D investments are made by established firms because startups are financially constrained (Hall, 2005). Instead, many startups experiment with new business models that are not necessarily based on technology development, e.g. by targeting new customer segments or using alternative pricing schemes.

Competition from host country startups is relevant for the marketing of foreign subsidiaries because entrepreneurs bring different priorities and decision making styles to approaching their target market and devising their marketing strategies (Alqahtani & Uslay, 2020). Often times, they do not start from market analysis and business planning but rely on their existing expertise which can be turned into action quickly with the help of partners (Read, Dew, Sarasvathy, Song, & Wiltbank, 2009). This approach can benefit the speed with which, for example, new products can reach markets but may come at the expense of quality considerations (Wu, Liu, & Su, 2020). Such entrepreneurial decision making increases the extent to which the marketing function of foreign subsidiaries faces novel marketing approaches. At the same time, the competitive effect of such unconventional marketing approaches is difficult to assess since the majority of startups end in failure while a few can be extremely successful.

As a result, we reason that foreign subsidiaries facing competition from startups in the host country benefit especially from the expertise of marketing professionals. They can provide a deep understanding of host country markets allowing them to judge when startups experiment with promising new marketing approaches that are worth adopting. Conversely, they can isolate short lived fads or ill-conceived marketing strategies of startups. These abilities are particularly valuable in foreign subsidiaries which do not have the same level of embeddedness in the host country as domestic firms. Domestic firms may find it easier to judge the effectiveness of certain new marketing approaches, e.g. particular pricing or promotion strategies, within the specific host country context. As a result, they need to rely comparatively less on marketing dynamic capabilities compared to foreign subsidiaries.

Consequently, marketing professionals of foreign subsidiaries can expect to receive higher salary premiums in host country industries in which many new startups enter the markets. Here, the marketing dynamics capabilities that they bring to the firm create more value for foreign subsidiaries compared to domestic firms. Conversely, foreign subsidiaries in markets abroad in which entrepreneurship is rare, are likely to face a stable set of competitors with well-understood marketing practices, limiting the need for re-assessment of the subsidiary's marketing approach and value of marketing dynamic capabilities. We propose:

Hypothesis 3. The wage premium that marketing professionals can obtain in foreign MNC subsidiaries relative to domestic firms is higher when the domestic industry has a higher rate of startup creation.

2.3.3. Host country innovativeness based on digitalization

The increasing use of digital technologies and networks for many business tasks and activities is typically summarized as digitalization (Nambisan, 2017; Ritter & Pedersen, 2019; von Krogh, 2018). Digitalization may overlap with R&D investments and entrepreneurship in a host country but has much wider effects. Digitalization affects the nature of competition in two primary ways. First, it changes the interaction patterns within a firm's value chain. Communication shifts increasingly to internet-based platforms and channels (BarNir, Gallaughier, & Auger, 2003; Gallaughier, 1997). What is more, digitalization allows for automated information exchanges and interfaces that integrate the value chains between producers and customers (Brynjolfsson & McAfee, 2014; Faraj, Pachidi, & Sayegh, 2018). Hence, customers become familiar with certain technological standards and make specific investments that

might be costly to reverse. Second, digitalization provides new opportunities to collect rich data from customers or competitors, analyze complex relationships and identify trends quickly. These opportunities emerge from technologies such as cloud computing, the internet of things or big data algorithms (Schwab, 2017; Sturgeon, 2021). Advanced artificial intelligence systems cannot just analyze data but optimize and automate decision making (Petrescu, Krishen, Kachen, & Gironda, 2022; von Krogh, 2018).

Given the wide range of applications for digital technologies, they can affect competition in many different ways. They can make competitors more efficient (Luo, Marco, Fang, & Qu, 2021), enable novel products and services (Petrescu et al., 2022; Ritter & Pedersen, 2019) or support and improve decision making on strategic moves (Nauhaus, Luger, & Raisch, 2021). As a result, new digital competitors emerge and existing competitors are forced to digitalize (Ritter & Pedersen, 2019). These pressures also affect foreign subsidiaries. They need to re-assess the competitiveness of existing products and processes when host country competitors are digitalized. The marketing function has an important part to play in these re-assessments. Marketing dynamic capabilities help to balance the benefits of digital products and processes with the costs and risks for introducing them (Herhausen, Miočević, Morgan, & Kleijnen, 2020).

On the one hand, digitalization provides new opportunities in the marketing function which subsidiaries may need to adopt for staying competitive compared with digitalized host country rivals. For example, they may opt for tracking the social media behavior of potential customers, follow digital transactions or obtain data from the internet of things (Miorandi, Sicari, De Pellegrini, & Chlamtac, 2012). Similarly, the analysis of such data can benefit from machine learning and artificial intelligence providing new opportunities to identify complex relationships within market data (Hair & Sarstedt, 2021). It may even become possible to use artificial intelligence to train and assist human sales agents (Luo et al., 2021). On the other hand, the benefits of adopting digital marketing approaches need to be balanced with their disadvantages. When established firms adopt digital solutions they typically need to make wider changes to organizational processes and procedures (BarNir et al., 2003). It can be costly to transform data into usable formats (Hair & Sarstedt, 2021). Algorithms can be error-prone (Srinivasan & Sarial-Abi, 2021), the inference or interpretation of causal relationships challenging (Hair & Sarstedt, 2021; Puntoni, Reczek, Giesler, & Botti, 2021) or local customers sensitive to being tracked continuously online (Cukier, 2021).

Host countries with digitalized competitors challenge the marketing functions of foreign subsidiaries to decide quickly whether they want to adopt digital solutions or offer digital products that make them competitive with host country rivals. The situation is distinct for foreign subsidiaries because MNCs rely often on digital platforms and standards that are shared across countries (Banalieva & Dhanaraj, 2019). Hence, assessments cannot just be made based on the conditions of the host country but take into account the compatibility with MNC systems and approaches. Under these conditions, marketing professionals are particularly valuable for foreign subsidiaries because they can make such assessments (Herhausen et al., 2020). In turn, the lower degree of complexity of these assessments in domestic firms suggests that marketing professionals are comparatively less valuable. Consequently, marketing professionals can expect to capture parts of the value that they create through higher wages. In contrast, marketing professionals working for foreign subsidiaries in host countries in which competitors are hardly digitalized are comparatively more likely to replicate existing marketing practices or merely implement MNC-wide systems. Naturally, that limits the value that they create for the subsidiary and the salary premiums that they can expect. Our fourth hypothesis thus reads:

Hypothesis 4. The wage premium that marketing professionals can obtain in foreign MNC subsidiaries relative to domestic firms is higher when competitors in the domestic industry have a higher degree of

digitalization.

Fig. 1 summarizes the relationships that we seek to test in our empirical analysis. The main effect (*Hypothesis 1*) relates positively to salary premiums in MNC subsidiaries, and this relationship is positively moderated by the three dimensions of host-country competition.

3. Empirical methods and data

3.1. Data

We submit our theoretical conjectures to empirical testing using Danish linked employer-employee register data which cover the full population of Danish residents and their employers. Several recent papers have used these data to study the work trajectories of individuals (e. g., *Grimpe et al., 2019; Kaiser, Kongsted, & Rønde, 2015; Rocha & van Praag, 2020*) and allow us to identify all individuals who are professionals or managers in the age groups between 20 and 65 years and who work for the marketing function of a company in Denmark, i.e. either a subsidiary of a foreign MNC or a domestic firm.

Within our theorizing, we focus on marketing professionals who have strategic roles with responsibilities for marketing planning and evaluation. Prior marketing literature refers to this group of employees as “marketing leaders” and often times equates them with a leading management position such as Chief Marketing Officer (*Moorman & Day, 2016*). We follow this precedent and focus on marketing professionals in the two highest hierarchical levels of a company and their occupation codes. We define marketing professionals based on the Danish “FUNK” codes, a variation on the International Standard Classification of Occupations (ISCO) code published by the International Labor Organization (ILO). Accordingly, we consider employees in the two highest management ranks within the occupation groups 1221 “Sales and Marketing Managers”, 1222 “Advertising and Public Relations Managers” and 243 “Sales, Marketing and Public Relations Professionals.”¹ Unfortunately, Statistics Denmark’s classification of occupations changed in 2012 while the unique firm identifier changed in 2010 which is why we can only use reliable information on occupations from 2010 to 2012, our last year of observation. Of the 16,104 unique marketing professionals identified in the dataset (25,374 individual-year observations), 5187 or 32% work at a foreign subsidiary. Overall, we obtain a comprehensive coverage of marketing professionals for a three year time period which should constitute a conservative setting for testing the hypotheses.

Following *Sofka, Grimpe, & Kaiser (2022)* who study the employment of foreign subsidiaries in Denmark, we define subsidiaries of foreign MNCs based on data from the credit rating agency Experian A/S, which tracks the ownership structure of firms in Denmark comprehensively. In our sample, almost all MNC subsidiaries have foreign majority ownership. In a robustness check, we find that taking out the few cases of minority foreign ownership does not change the results. The explanatory variables are measured in 2010 and 2011 while the dependent variable (annual income) is measured in the subsequent year ($t + 1$).

3.2. Measures

3.2.1. Dependent variable

The dependent variable in our empirical models is gross annual income that the marketing professionals earn. To account for the inherent skewness of income, we use the natural logarithm (*Carnahan, Agarwal, & Campbell, 2012*). Salary data in Danish register data is comprehensive and reliable since it follows all legal requirements for taxation.

¹ The Danish “FUNK” codes are described here: <https://www.dst.dk/da/Statistik/dokumentation/Times/fravaer/funk>, and translated to English here: <https://www.ilo.org/public/english/bureau/stat/isco/docs/grouppdefn08.pdf>.

3.2.2. Explanatory variables

The explanatory variable testing *Hypothesis 1* is defined as a dummy variable that indicates if the focal marketing professional is employed by a subsidiary of a foreign MNC instead of a domestic firm. *Hypothesis 2* suggests that the wage premium that individuals earn in foreign subsidiaries is higher if the domestic industry has a higher R&D intensity. To test the hypothesis, we interact the MNC subsidiary dummy variable with a measure of R&D intensity of the domestic industry which we define as the number of all R&D workers employed by domestic firms in the focal employer’s three-digit NACE Rev. 2 industry as a share of the total number of workers employed by domestic firms in that industry. For identifying R&D workers in register data, we follow the approach suggested by *Kaiser et al. (2015)*.² We choose the detailed three-digit industry level to measure the effect of host country competitors with very similar products and services that the focal foreign subsidiaries offers.

Hypothesis 3 suggests that the wage premium is higher when the domestic industry has a higher rate of startup creation. We use an interaction term to test the hypothesis and measure the extent to which new businesses in the focal industry are created as the number of startups as a share of the overall number of companies in the industry (focal employer’s three-digit NACE Rev. 2 industry). We define companies as startup firms if they are not older than five years.

Hypothesis 4 argues that wage premiums will be higher in host-country industries with a higher degree of digitalization. Digitalization can be measured in various ways, e.g. investments in hardware, software or algorithms. Given that we want to test an industry-level moderation effect, we require a digitalization measure that is (a) consistently and systematically available across industries as well as (b) related to strategic investments into digital assets that have competitive effects and are, for example, not just licenses for standard software. Accordingly, we rely on differences in firm’s employment of individuals with university degrees in digital technologies, for short IT workers (*Grimpe, Sofka, & Kaiser, 2022*). A higher share of IT workers would indicate that firms in an industry possess competences about digital technologies based on employees who have achieved high levels of education in this area and are likely to perform therefore not just manual IT tasks. In contrast, in industries in which few employees hold university degrees in digital technologies, competition is unlikely to depend on digital technologies.

More specifically, we test *Hypothesis 4* with an interaction term and measure the extent of host-country industry digitalization as the number of IT workers in the industry as a share of the total number of workers in that industry. We define IT workers as individuals who hold a university degree in digital technologies in Denmark since 1980, the earliest year for which this information is available. We use the title of their degree and create a list of relevant keywords based on literature on digitalization, such as machine learning or web design, and refine this list iteratively through discussions with experts on the Danish education system. Examples of such education programs include bachelor’s degrees in “IT and communication technology” or “Software engineering” or master’s degrees in “IT management” or “Multimedia technology”. We acknowledge that an ideal measure would use occupation codes analogous to the definition of R&D workers (described above) but IT workers can have a variety of functions in firms and no specific occupation code exists. Given that our hypothesis is based on differences in digitalization across industries, educational attainment can be a useful proxy that does not require differentiation by function.

² We define R&D workers as individuals who perform research and development tasks as described in their job function. We use the “FUNK” code in our data (<https://www.dst.dk/da/Statistik/dokumentation/Times/fravaer/funk>, which corresponds to the ISCO classification issued by the International Labor Organization, <https://www.ilo.org/public/english/bureau/stat/isco/>) to identify this job function. In addition, we require individuals to hold at least a BA degree.

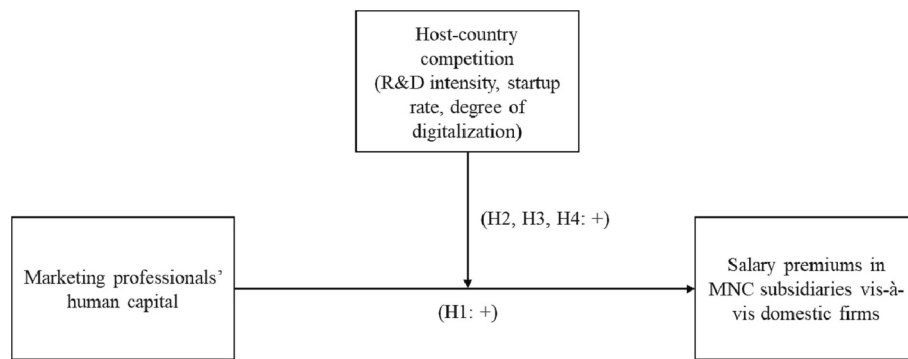


Fig. 1. Conceptual framework.

3.2.3. Control variables

We use a comprehensive set of control variables drawing from earlier work that studies employee wages, along with confounders that our rich data set allows us to consider (Campbell, 2013; Carnahan et al., 2012; Grimpe et al., 2019). Apart from the hypothesis-related explanatory variables we take into account three main groups of controls: human capital variables, other person-related variables unrelated to human capital, and employer-related variables.

Regarding the human capital variables, we use education, work experience and years of tenure at the current employer (e.g., Mincer, 1958), and occupation characteristics (e.g., Rosenfeld, 1992) that we include in the regression models. Education is measured by employing several dummy variables covering the subject areas of the individuals' university education. Moreover, we include a dummy variable which takes the value of one if an employee holds a master's degree. We measure work experience as the total number of years of employment while we also include an employee's employment at the present employer measured in years. An individual's occupation characteristics includes a dummy variable indicating whether the employee is a member of the top management team at the current employer.

In addition, we make use of the position of the focal employee within the pay scale of their current employer (Grimpe et al., 2019). The position can indicate subtle differences in quality vis-à-vis co-workers with identical observable characteristics. Hence, we generate salary quantiles which capture these within-firm differences and add dummy variables for the focal employee's position in the pay scale.

Other person-related variables that we control for include gender (e.g., Brown & Medoff, 1989) and two dummy variables for "young" employees (younger than 31 years) and "old" employees (older than 45 years) with these thresholds following the age distribution of the individuals in our data. To account for possible discrimination, we control for whether the individual is a Danish citizen and a parent (Brown & Medoff, 1989). We also include an individual's marital status measured as dummy variables for being single or in a marriage. Other marital statuses (cohabitation with a partner) serve as the reference group (Hill, 1979).

The set of employer-related variables focus on the age of the firm (years since establishment in Denmark) as a control for liabilities of newness independently from liabilities of foreignness (Henderson, 1999), firm size (measured by the natural logarithm of the total number of employees), and R&D intensity measured as the number of R&D workers as a share of the total number of employees. To account for possible pay gaps between foreign subsidiaries and domestic firms (van der Straaten, Pisani, & Kolk, 2020), we include the ratio of median salaries in foreign subsidiaries to median salaries in domestic firms, calculated at the two-digit NACE level. Our empirical identification approach additionally requires the income of comparable domestic and foreign firm employees to be situated in a narrow interval as discussed in more detail below. We finally include industry, year and regional dummy variables. Table A1 in the appendix contains a summary of all

variables, measurement and data sources.

3.3. Model

Being employed by the subsidiary of a foreign MNC or a domestic firm is arguably not a random decision. We employ CEM (coarsened exact matching, Iacus, King, Porro, & Katz, 2012) to make MNC subsidiary and domestic firm employees comparable in terms of both observed employer as well as employee characteristics and subsequently use the weights generated by the CEM matching process to run median income regressions. Quantile regression in general, and median regression in particular, is widely used in labor economics (e.g., Angrist, Chernozhukov, & Fernández-Val, 2006) since it generates outlier-robust estimates.

The core idea of CEM is to "coarsen" the data by allocating individuals into various strata based on so-called conditioning variables. Then, the treatment (MNC subsidiary employees) and control observations (domestic firm employees) are matched within these strata and create importance weights. If an observation cannot be matched weights become zero, and the unmatched observation is discarded from further analysis. When an observation can be matched, the weights are positive. Better matches are associated with higher weights, so that they become more influential in the median regression models. Compared to other matching models, CEM yields exact matches between treatment-group and control-group. But it also discards observations with no good match. Given the size of our data set, this is unproblematic.

Conditioning variables used in CEM have to influence both the selection to work for the subsidiary of a foreign MNC as well as the individual's earnings (Dehejia & Wahba, 1999). We follow prior research (Grimpe et al., 2019) and match on the position in the employers' income decile the year before, years of working experience, education, gender and year. We additionally match on tenure at the current employer and on the income bracket in which treatment and control observations need to reside because subsidiaries of foreign MNCs could generally pay more than their domestic counterparts (van der Straaten et al., 2020). We calculate the salary bracket as the plus/minus one standard deviation interval for industry mean domestic salaries. We use the importance weights generated by the CEM approach to run Mincer-type wage regressions (e.g., Bhuller, Mogstad, & Salvanes, 2017), controlling for all explanatory and matching variables. Our estimation equation is thus given as:

$$\ln(\text{inc}_{it}) = \alpha \text{MNC}_{it} + \beta \text{MNC}_{it} \text{R\&D}_{it} + \gamma \text{MNC}_{it} \text{Startrate}_{it} + \delta \text{MNC}_{it} \text{Digi}_{it} + \theta X_{it} + \varepsilon_{it}$$

where MNC_{it} is a dummy variable for MNC employment of individual i at time t , R\&D_{it} denotes the R&D intensity of the domestic industry, Startrate_{it} is the number of startups as a share of the overall number of companies in the industry, Digi_{it} denotes the degree of digitization of the host country industry and X_{it} denotes the matrix of other control

variables. The scalars α , β , γ and δ , and matrix θ are to be estimated and ε_{it} denotes the error term.

4. Results

Table 2 shows overall descriptive statistics for the variables before the CEM matching as well as for individuals working for a foreign subsidiary or a domestic firm.³ With 635,430 DKK (about 94,300 USD), average incomes for marketing professionals are generally high when compared to the Danish mean annual income of 289,658 DKK (about 42,320 USD) in 2012.⁴ The annual incomes earned by MNC subsidiary employees are substantially higher than those of domestic firm employees, but these figures do not yet control for observed employer and employee characteristics.

There are differences between individuals employed by foreign subsidiaries and by domestic firms before the CEM matching procedure. MNC subsidiary employees are more often a top management team member and less likely to be in the lowest income decile the year before. Moreover, they work in industries where domestic R&D intensity is significantly lower. There are also differences in sectoral and regional affiliation.

Table 3 shows pairwise correlations for the main model variables. We find them generally to be low. With a mean variance inflation factor of 1.37, there are no indications for collinearity (Belsley, Kuh, & Welsh, 1980).

Table 4 displays the results of the test of our hypotheses using median regressions. Here, the number of observations is lower because observations that could not be matched were dropped. Model (1) includes the treatment dummy variable and control variables only. The coefficient of the treatment variable is statistically highly significant and economically large – marketing professionals employed by MNC subsidiaries receive a 5 percentage points ($\exp(0.048)-1$) higher annual income than comparable marketing professionals employed by domestic firms, supporting Hypothesis 1. Model (2) to Model (4) test Hypothesis 2 to 4 by separately and consecutively introducing the interaction terms with the treatment variable. All interactions turn out to be both statistically and economically highly significant in these models. They are also both statistically and economically highly significant in Model (5) which includes all interactions. Hence, our results provide support for Hypotheses 2 to 4.

The interaction term coefficients do not show the income effects since they are dependent on the value of the three interaction variables. Figs. 2 to 4 therefore depict the effect sizes of the difference in wages between MNC-employed and domestic firm employed individuals. Since our dependent variable is in logarithmic form, it follows that the relative income difference between MNC and domestic firm employees is approximately:

$$\ln(\text{inc}_{it} | \text{MNC}_{it} = 1) - \ln(\text{inc}_{it} | \text{MNC}_{it} = 0) \\ = \alpha + \beta R\&D_{it} + \gamma \text{Startrate}_{it} + \delta \text{Digi}_{it}.$$

Figs. 2 to 4 display these relative income differences while separately varying $R\&D_{it}$, Startrate_{it} and Digi_{it} . An increase in either of the three variables leads to an increase in the income differences between MNC subsidiary and domestic firm marketing professionals.

4.1. Post-hoc analyses of employer heterogeneity

As an explorative step of the analysis, we test whether the home

country of the MNC matters. Hence, we account for the origin of the foreign MNC in a separate regression analysis. For practical considerations, we group home countries and incorporate MNCs employing >1 % of the marketing professionals in our sample. We end up with MNC home country dummy variables for Sweden, other Nordic countries (Norway, Finland, Iceland, excluding Sweden), Germany, the EU (excluding Germany and the Nordic countries), the U.K. and the U.S. All other countries serve as the reference category that represents the base coefficient for being employed by an MNC subsidiary in Model (6) of Table 5. As this group is rather small and highly heterogeneous, the coefficient turns out to be statistically insignificant. We see positive salary premiums for all specified MNC home countries. As expected, MNC subsidiaries from Sweden and other Nordic countries like Norway, Finland or Iceland which are both proximate and culturally similar pay the lowest salary premiums while MNCs from countries such as Germany and other EU countries pay higher premiums. For the former, liabilities of foreignness are lower as they are better able to navigate on Scandinavian markets. Moreover, the proximity facilitates interaction and coordination with the headquarters. In line with our theoretical reasoning, marketing professionals are relatively less valuable in these subsidiaries compared to other subsidiaries with headquarters in more distant locations. Perhaps surprisingly, MNCs from the United Kingdom pay the highest salary premiums while MNCs from the U.S. pay somewhat lower premiums even though the U.K. is much more spatially proximate. This may suggest that U.S.-based MNCs are perceived as more attractive employers, offering more individual career opportunities than European MNCs. Irrespective of these additional findings, the results for the hypothesized presence of salary premiums remain fully consistent.

We conduct further post-hoc analyses to probe deeper into the competition aspect outlined in Hypotheses 2 to 4. Specifically, we chose three moderators that capture a facet of the host-country competition and that may influence salary premiums for individuals employed at foreign MNC subsidiaries. These are the size of the firm, the market share at the three-digit industry level, and whether the firm is an industry leader, measured as sales greater than two thirds of the total three-digit host country industry sales. Models 7 to 9 in Table 6 show the results. We find that salary premiums for employees of foreign MNCs are relatively lower if these firms are in a strong or even leading position on the product market. In this situation, MNC subsidiaries are already well established on the market and liabilities of foreignness that skilled marketing professionals could help overcome are relatively less important. Moreover, this finding is consistent with recent research which shows that firms with product market power exert their bargaining power on employees and pay them comparatively lower wages (Dube, Giuliano, & Leonard, 2019). In a similar vein, salary premiums are lower when firms are larger, a finding that we also attribute to the fact that larger firms may face lower liabilities of foreignness as they are better known on the market compared to smaller firms. Again, irrespective of these additional findings, the results for the hypothesized presence of salary premiums remains fully consistent. In sum, we identify three contingency factors having a dampening effect on salary premiums that complement our study of factors related to host country innovativeness. Hence, salary premiums of marketing professionals strongly depend on host country market and employer characteristics.

4.2. Consistency checks

We show consistency checks in Table 7. Here, we first manipulate the definition of the subsidiary of a foreign MNC to only account for those that are majority owned by a foreign entity. Model (10) shows the coefficient for MNC subsidiary employment remains statistically highly significant and is very similar in absolute size compared to Model (1). The point estimate for Model (1) is 0.049 while it is 0.040 for Model (10). The similarity in coefficient sizes is unsurprising given that 89% of all foreign MNC subsidiaries in our sample are majority owned.

³ In the table, “n/a” indicates that the descriptive statistics cannot be provided because of confidentiality rules.

⁴ Source: <https://www.statistikbanken.dk/INDKP101>. The value indicates the average total income of all residents in Denmark who received an income in 2012.

Table 2
Descriptive statistics.

	All employees		Employed by MNC subsidiary		Employed by domestic firm	
	Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Focal variables						
Current annual income (DKK)	635,430	271,863	685,710	286,105	612,740	262,054
Domestic industry R&D intensity	0.035	0.061	0.026	0.060	0.039	0.061
Industry startup intensity	0.403	0.132	0.402	0.128	0.404	0.134
Domestic industry IT intensity	0.035	0.039	0.039	0.043	0.033	0.036
Human capital variables						
Age < 31 years (d)	0.095	–	0.093	–	0.096	–
Middle age (d)	0.493	–	0.477	–	0.501	–
Age > 45 years (d)	0.412	–	0.431	–	0.404	–
Years of work experience	19.268	8.719	19.714	8.604	19.066	8.763
Years of tenure	6.507	4.990	6.968	5.211	6.299	4.873
At least MA degree (d)	0.140	–	0.131	–	0.144	–
Management team member (d)	0.414	–	0.430	–	0.406	–
Employer characteristics						
Firm age in years	28.390	21.782	32.731	22.845	26.432	20.993
# employees	823	2044	806	1528	831	2238
Share R&D workers in all employees	0.043	0.084	0.052	0.082	0.039	0.085
MNC/domestic salary ratio at industry level	0.687	0.249	0.636	0.221	0.711	0.258
Other personal characteristics						
Female (d)	0.341	–	0.332	–	0.345	–
Danish citizen (d)	0.975	–	0.969	–	0.977	–
Married (d)	0.662	–	0.664	–	0.661	–
Single (d)	0.243	–	0.238	–	0.245	–
Other marital status (d)	0.095	–	0.098	–	0.094	–
Children (d)	0.645	–	0.639	–	0.648	–
Year 2012 (d)	0.567	–	0.580	–	0.561	–
Number of observations	25,374		7890		17,484	

(d) dummy variable.

Next, we consider alternative income brackets, i.e. the intervals into which we require observations to be placed in in our CEM matching. Our main approach uses an interval of plus/minus one standard deviation from average incomes in an industry. Model (11) alternatively considers a 95% interval while Model (12) considers a plus/minus 10 % deviation interval. Enlarging income brackets generates point estimates on the MNC subsidiary dummy which are consistent with the main results.

We finally re-estimate our main model with median regression without the application of CEM weights and with OLS instead of median regression but applying CEM weights. Models (13) and (14) show the results. Both alternative approaches generate point estimates for the MNC subsidiary employment dummy that are consistent but larger compared to the main model. In sum, we are confident that our main results are robust to different model and variable specifications.

5. Discussion

In this study, we examine how marketing professionals' skills and expertise are differentially valuable to foreign subsidiaries and domestic firms. We argue that foreign subsidiaries benefit more because marketing professionals help them to overcome liabilities of foreignness (Kindleberger, 1969; Zaheer & Mosakowski, 1997) by means of marketing innovation (D'Attoma & Ieva, 2020; Grimpe et al., 2017). Marketing professionals help to accumulate specific knowledge about host country markets (Harvey & Novicevic, 2000) and to build professional networks through which they can channel this knowledge to decision makers at MNC headquarters (Chi-Fai & Holbert, 2001). In that sense, marketing professionals are particularly important for B2B marketing in industrial firms in which relationships to key customers play an important role. They help to build B2B marketing capabilities (Mora Cortez & Hidalgo, 2022) regarding market segmentation and targeting (e.g., Ulaga & Chacour, 2001), adaptation of the marketing mix (e.g., Grimpe et al., 2017), as well as development and selection of new products to be marketed abroad (e.g., Cooper & Kleinschmidt, 1987). These capabilities are particularly valuable to foreign subsidiaries and

scarce on host country labor markets in which most candidates lack MNC-specific human capital, leading to salary premiums for marketing professionals in the host country.

Moreover, we argue that the innovativeness of host country competitors plays an important role in determining the value of marketing professionals in foreign subsidiaries. A higher degree of innovativeness indicates that new market opportunities emerge while existing marketing approaches need reconfiguration (Baden-Fuller & Teece, 2020; Cooper & Kleinschmidt, 1987; Fang & Zou, 2009; Khan, 2020; Khan & Khan, 2021; Ulaga & Chacour, 2001), suggesting that marketing professionals are particularly important as the underpinnings of a subsidiary's marketing dynamic capabilities. We conjecture that the innovativeness of host country competitors depends critically on the industry's R&D intensity as a determinant of technological innovation, the rate of startup creation, and the degree of digitalization that enables both innovative products and services. Our reasoning predicts that all three dimensions of host country innovativeness make marketing professionals more valuable and increase their salary premiums compared with domestic firms. Conversely, the absence of host country innovativeness constrains the potential for salary premiums. Our empirical results provide support for all hypotheses.

The contributions of our research to extant theory are twofold. First, marketing plays an important role for firm internationalization (Samiee et al., 2021). While the value creation of marketing professionals is widely acknowledged, the individual salary effects for the marketing professionals designing and adapting the marketing of subsidiaries of foreign MNCs to the context abroad are not well understood. Employing mechanisms from strategic human capital theory (Campbell et al., 2012; Chadwick, 2017) we establish how the specific value creation of marketing professionals in foreign subsidiaries as well as its scarcity lead to salary premiums. We also show that the potential for value creation depends on the innovativeness of host country competitors. Accordingly, we develop a theoretical model that introduces salary premiums for marketing professionals working for foreign subsidiaries as an outcome that can be systematically understood as a central determinant

Table 3
Pairwise correlations.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	Domestic industry R&D intensity	1																
2	Industry startup intensity	0.0026	1															
3	Domestic industry IT intensity	0.1705	0.2896	1														
4	Age < 31 years (d)	0.0169	0.0747	0.0056	1													
5	Age > 45 years (d)	−0.0282	−0.0739	−0.0265	−0.2992	1												
6	Years of work experience	−0.0848	−0.1048	−0.0345	−0.5112	0.6695	1											
7	Years of tenure	−0.0477	−0.0703	−0.0477	−0.2494	0.3045	0.4111	1										
8	At least MA degree (d)	0.0929	0.0049	−0.0082	0.0714	−0.0494	−0.1720	−0.0787	1									
9	Management team member (d)	−0.1831	−0.0535	−0.2456	−0.1591	0.1488	0.2381	0.1306	−0.1345	1								
10	Firm age in years	−0.0461	−0.1305	−0.0799	−0.0499	0.0686	0.0722	0.2033	−0.0005	0.0436	1							
11	ln(# employees)	0.0925	−0.0343	0.1984	−0.0048	−0.0078	−0.0098	0.0713	0.0027	−0.0600	0.1910	1						
12	Share R&D workers in all employees	0.0838	0.1894	0.0314	0.1784	−0.1363	−0.2171	−0.1368	0.1365	−0.2671	−0.1115	−0.2329	1					
13	MNC/domestic salary ratio at industry level	0.1471	0.0176	−0.1140	−0.0537	0.0230	−0.0369	−0.0085	0.0944	0.0205	0.0619	0.0663	0.0371	1				
14	Female (d)	0.0941	0.0613	−0.0054	0.0915	−0.1364	−0.1940	−0.0784	0.1101	−0.2411	0.0038	0.0341	0.1184	0.0090	1			
15	Danish citizen (d)	−0.0071	−0.0167	−0.0212	−0.0816	0.0606	0.2106	0.0636	−0.0009	0.0487	0.0109	−0.0085	−0.0213	−0.0029	−0.0388	1		
16	Married (d)	−0.0247	−0.0718	−0.0180	−0.3489	0.2080	0.3080	0.1699	−0.0406	0.1396	0.0566	0.0096	−0.1264	0.0264	−0.1263	0.0378	1	
17	Single (d)	0.0298	0.0781	0.0093	0.4438	−0.3035	−0.4193	−0.2077	0.0620	−0.1619	−0.0574	−0.0083	0.1543	−0.0202	0.1115	−0.0508	−0.8129	1
18	Children (d)	−0.0048	−0.0433	−0.0175	−0.2965	−0.0939	0.0534	0.0293	−0.0222	0.0710	0.0094	−0.0103	−0.0752	0.0325	0.0030	0.0496	0.4059	−0.3807

(d) dummy variable.

Table 4
Median regression models after CEM matching for the salary of marketing professionals.

	Model (1)		Model (2)		Model (3)		Model (4)		Model (5)	
	Coeff.	t-val.	Coeff.	t-val.	Coeff.	t-val.	Coeff.	t-val.	Coeff.	t-val.
Employed by foreign MNC subsidiary (d)	0.048***	(18.26)	0.042***	(14.52)	-0.004	(-0.43)	0.035***	(10.52)	-0.013	(-1.50)
Employed by foreign MNC subsidiary (d)			0.241***	(5.47)					0.243***	(5.28)
* domestic industry R&D intensity										
Employed by foreign MNC subsidiary (d)					0.137***	(6.47)			0.123***	(5.66)
* industry startup intensity										
Employed by foreign MNC subsidiary (d)							0.356***	(6.16)	0.186**	(2.76)
* domestic industry IT intensity										
Domestic industry R&D intensity	0.021	(0.96)	-0.039	(-1.58)	0.039	(1.68)	0.051*	(2.45)	-0.019	(-0.72)
Industry startup intensity	-0.012	(-1.16)	-0.009	(-0.85)	-0.068***	(-5.35)	-0.002	(-0.17)	-0.059***	(-4.83)
Domestic industry IT intensity	0.952***	(21.50)	0.967***	(21.88)	0.975***	(20.50)	0.771***	(17.28)	0.929***	(18.96)
Age < 31 years (d)	-0.098***	(-20.77)	-0.096***	(-20.52)	-0.099***	(-19.68)	-0.096***	(-21.44)	-0.097***	(-20.19)
Age > 45 years (d)	0.013***	(4.03)	0.011***	(3.50)	0.015***	(4.27)	0.015***	(4.77)	0.013***	(3.85)
Years of work experience	0.080***	(10.94)	0.081***	(11.08)	0.076***	(9.74)	0.078***	(11.21)	0.075***	(9.99)
Years of work experience ²	-0.021***	(-11.63)	-0.022***	(-11.85)	-0.021***	(-10.64)	-0.021***	(-12.11)	-0.021***	(-11.14)
Years of tenure	0.068**	(2.98)	0.065**	(2.86)	0.064**	(2.64)	0.055*	(2.56)	0.062**	(2.68)
At least MA degree (d)	0.026***	(6.52)	0.026***	(6.49)	0.028***	(6.43)	0.023***	(5.97)	0.025***	(6.12)
Management team member (d)	0.151***	(62.73)	0.152***	(63.30)	0.153***	(59.26)	0.155***	(67.37)	0.156***	(63.56)
Firm age in years	-0.001**	(-2.78)	-0.001*	(-2.10)	-0.002***	(-3.80)	-0.002***	(-3.77)	-0.002***	(-3.94)
ln(# employees)	-0.023***	(-32.21)	-0.023***	(-32.82)	-0.023***	(-30.23)	-0.023***	(-33.91)	-0.023***	(-32.28)
Share R&D workers in all employees	-0.123***	(-6.13)	-0.121***	(-6.05)	-0.117***	(-5.44)	-0.125***	(-6.52)	-0.120***	(-5.83)
ln(MNC/dom. Salary ratio at ind. level)	0.454***	(122.22)	0.451***	(121.79)	0.450***	(113.09)	0.449***	(126.02)	0.450***	(118.03)
Female (d)	-0.129***	(-47.21)	-0.131***	(-47.96)	-0.128***	(-43.72)	-0.127***	(-48.80)	-0.126***	(-45.52)
Danish citizen (d)	0.002	(0.21)	0.000	(0.02)	0.000	(0.02)	0.002	(0.26)	0.006	(0.77)
Married (d)	-0.009*	(-2.35)	-0.006	(-1.64)	-0.009*	(-2.22)	-0.007	(-1.87)	-0.008*	(-2.17)
Single (d)	-0.031***	(-7.33)	-0.030***	(-7.00)	-0.032***	(-7.04)	-0.030***	(-7.32)	-0.033***	(-7.55)
Children (d)	0.030***	(12.08)	0.030***	(11.81)	0.030***	(11.13)	0.031***	(12.76)	0.030***	(11.54)
Education, industry, region, salary decile, year dummies	Included		Included		Included		Included		Included	
Number of observations	14,246		14,246		14,246		14,246		14,246	
Pseudo R ²	0.357		0.357		0.357		0.357		0.358	

t-value in parentheses; (d) dummy variable.

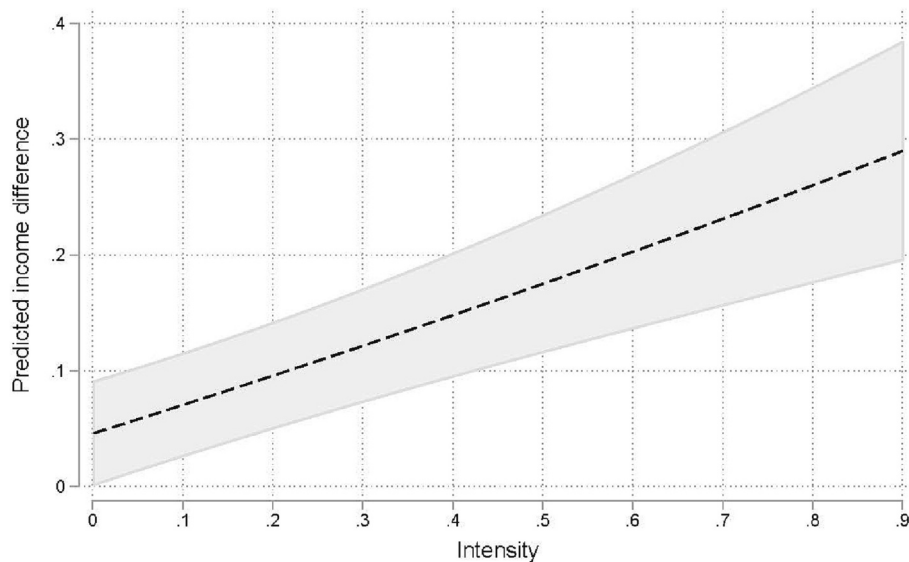


Fig. 2. Salary premiums for marketing professionals working at foreign MNC subsidiaries dependent on the industry R&D intensity.

for the individual level underpinnings of their marketing capabilities. These salary premiums are conceptually different from the higher salaries that expatriate managers typically enjoy when working at their MNC's subsidiary abroad (Belderbos & Heijltjes, 2005; Bolino, 2007).

Second, international business research has long recognized the differences in the innovativeness of host countries as a central theme. Establishing a subsidiary allows MNCs to tap into pools of valuable

expertise (Alcacer & Chung, 2007; Almeida & Phene, 2004; Meyer & Sinani, 2009) but the effect of innovative host country competitors on an MNC subsidiary's marketing decisions is rarely considered. Our research provides building blocks for an increasingly comprehensive theory of the interaction between foreign MNC subsidiaries and their host countries by considering such competition-based mechanisms. Moreover, we show how the innovativeness of host country competition increases the

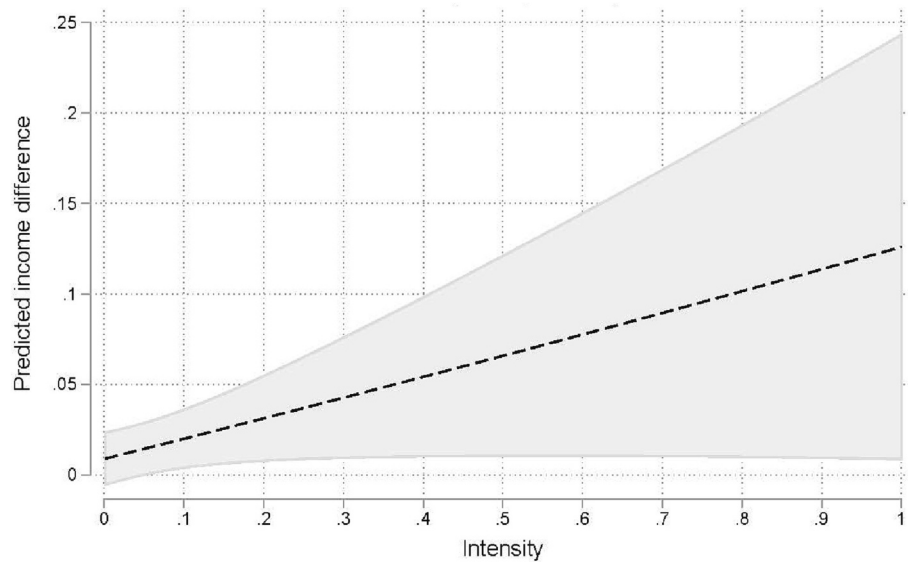


Fig. 3. Salary premiums for marketing professionals working at foreign MNC subsidiaries dependent on the industry rate of startup creation.

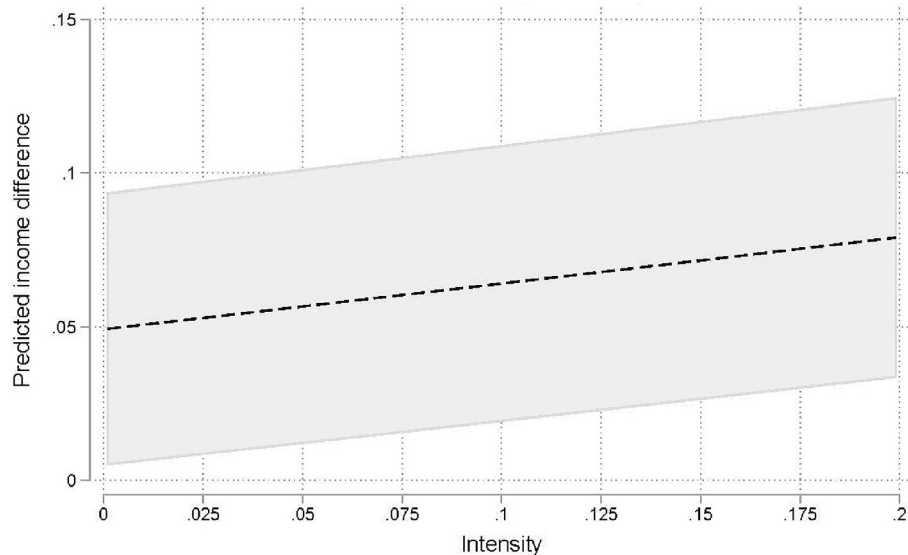


Fig. 4. Salary premiums for marketing professionals working at foreign MNC subsidiaries dependent on the industry degree of digitalization.

Table 5
Exploring the role of the MNC headquarters location.

	Model (6)	
	Coeff.	t-val.
Employed by foreign MNC subsidiary (d)	−0.011	(−0.79)
MNC headquarters located in		
Sweden	0.045**	(3.07)
Nordics (excl. Sweden)	0.032*	(2.10)
Germany	0.082***	(5.36)
EU (excl. Germany, Sweden, UK)	0.061***	(4.16)
USA	0.083***	(5.33)
United Kingdom	0.130***	(7.77)
All other variables	Included	
Number of observations	14,246	
Pseudo R ²	0.3589	

t-value in parentheses; (d) dummy variable.

value of marketing professionals for MNC subsidiaries. Beyond marketing professionals, our theoretical logic provides opportunities to analyze other types of subsidiary employees that become more valuable as the innovativeness of host country competitors increases, for example legal experts that help subsidiaries to manage increasingly demanding intellectual property disputes.

Our theoretical contributions translate into several practical and managerial implications. In particular, the theoretical logic that our research advances is useful for marketing professionals to inform them about the most promising career options in a host country. Working for foreign MNC subsidiaries in competitive host country settings maximizes their salaries when many new technologies are created, innovative businesses emerge and competitors invest in digital competences. Based on our research, employees become better informed about their value to foreign firms, and they can identify industries in which their value creation potential and hence also their ability to capture at least part of that value through higher salaries is particularly high. In that sense, our theoretical logic advances the usefulness of existing theory by tying employee value creation together with individual value capture

Table 6
Exploring other facets of host country competition.

	Model (7)	Model (8)	Model (9)
	Market share	Industry leader	Firm size
Employed by foreign MNC subsidiary (d)	0.062*** (21.58)	0.065*** (20.68)	−0.127*** (15.96)
Employed by foreign MNC subsidiary (d)	−0.066*** (−7.68)		
* market share			
Employed by foreign MNC subsidiary (d)		0.062	
* industry leader (d)		(−10.10)	
Employed by foreign MNC subsidiary (d)			−0.014***
* ln(# employees)			(−9.94)
All other variables	Included	Included	Included
Number of observations	14,246	14,246	14,246
Pseudo R ²	0.357	0.357	0.357

t-value in parentheses; (d) dummy variable.

through higher salaries. This, in turn, allows for a better understanding of the rent sharing between MNC employers and employees so that many subsidiary-level human resource outcomes, such as attraction or retention, can be more reliably managed. For hiring subsidiaries, our research suggests that employers should be more cognizant of the value created and salaries demanded by host country employees. The results indicate that these individuals possess considerable human capital, in particular tacit knowledge about host country markets that is hard to transfer and to codify, which the pay structures need to reflect.

6. Conclusion

The scope of the research presented here is broader than what fits into a single study, suggesting promising avenues for new research projects. These opportunities occur in several areas.

First, we establish that marketing professionals create value, particularly for foreign subsidiaries, and that this value translates into salary premiums. While our focus on marketing professionals is useful to build a theoretical rationale that connects the human capital that these individuals hold with the resources and specific requirements of foreign subsidiaries versus domestic firms, it conceals the heterogeneity in marketing professionals' tasks and competences. Specifically, some subsidiaries may be particularly reliant on the individuals' skills and expertise in local customer interaction while others are especially challenged to coordinate the local marketing approach with the global headquarters. We believe that dedicated research could better uncover many of the processes that underpin various forms of value creation.

Second, our empirical analysis predicts higher salaries as a reflection of higher value that marketing professionals can create when they work for the subsidiary of a foreign MNC subsidiary vis-à-vis a domestic firms.

We are however limited in the extent we can actually observe the processes leading to value being created. Future research could look in more detail into these processes which create value for firms, particularly when individuals are newly hired. Relevant aspects would include mechanisms at the level of the organization related to the flow of knowledge or the composition of teams but also the career trajectories of individuals when it comes to promotion or retention.

Third, our analysis relies on a matching approach for isolating the salary effects of working for a foreign subsidiary vis-à-vis a domestic firm. While the matching approach accounts for the selection of employees into MNC subsidiary employment, it would be interesting to better understand, which factors lead marketing professionals to consider an MNC employer in the first place and what role the host country industry contingencies play for the decision of individuals to work for the subsidiary of a foreign MNC or a domestic firm.

Fourth, we focus on three dominant areas by which host country competitors can become more innovative and marketing professionals more valuable to foreign subsidiaries as a result. These areas comprise R&D for creating new technologies, the creation of startups and digitalization affecting many dimensions of products and processes. We rely on employee-based measures for covering R&D (employees working in R&D functions) as well as digitalization (employees with degrees in digital subject areas) assuming that competitive effects occur when firms build up relevant skills and competences. If this assumption holds, R&D and digitalization can be measured across industries for testing hypotheses at the industry level. Future studies might be able to complement such human capital based measures and include firm investments, e.g. in laboratories, software or algorithms. Presumably, such data are more likely to be available for a selected number of industries but allow testing hypotheses defining changes in innovativeness of competition in more fine-grained ways. What is more, we would like to separate R&D activities from new product development but such data are not systematically available within our otherwise comprehensive database. Hence, we theorize about technology creation based on R&D but encourage future studies to isolate the effects of new product development both theoretically and empirically.

Finally, Danish register data allow to identify marketing professionals in foreign subsidiaries specifically, track their salaries comprehensively and hold many important alternative explanations constant. However, our empirical study is still limited to the particular country and labor market context. In this regard, Denmark has a very efficient labor market as well as government run social security and pension systems. Future studies might be able to compare the strength of the salary effects in our study with emerging market host countries in which formal institutions are less developed, adding an additional dimension to our theoretical framework.

Data availability

The authors do not have permission to share data.

Table 7
Consistency check estimations.

	Model (10)	Model (11)	Model (12)	Model (13)	Model (14)
	Maj. owned sub.	Income bracket +/- 1.96*st. dev.	Inc. bracket +/- 10% interval	Unmatched median regression	Matched OLS regression
Employed by foreign MNC subsidiary (d)	0.040*** (14.99)	0.069*** (24.29)	0.069*** (24.97)	0.067*** (23.19)	0.058*** (10.18)
All other variables	Included	Included	Included	Included	Included
Number of observations	14,246	14,246	14,246	14,246	14,246
Pseudo R ²	0.359	0.353	0.354	0.359	0.529

t-value in parentheses; (d) dummy variable.

Appendix A

Table A1
Variables, measurement and data sources.

Variable	Measurement	Data source
Dependent variable		
Current annual income (DKK)	Continuous	Statistics Denmark
Focal variables		
Employed by foreign MNC subsidiary	Dichotomous	Experian A/S
Domestic industry R&D intensity	Continuous	Statistics Denmark
Industry startup intensity	Continuous	Statistics Denmark
Domestic industry IT intensity	Continuous	Statistics Denmark
Human capital variables		
Age < 31 years	Dichotomous	Statistics Denmark
Middle age	Dichotomous	Statistics Denmark
Age > 45 years	Dichotomous	Statistics Denmark
Years of work experience	Continuous	Statistics Denmark
Years of tenure	Continuous	Statistics Denmark
At least MA degree	Dichotomous	Statistics Denmark
Management team member	Dichotomous	Statistics Denmark
Employer characteristics		
Firm age in years	Continuous	Statistics Denmark
# employees	Continuous	Statistics Denmark
Share R&D workers in all employees	Continuous	Statistics Denmark
MNC/domestic salary ratio at industry level	Continuous	Statistics Denmark
Other personal characteristics		
Female	Dichotomous	Statistics Denmark
Danish citizen	Dichotomous	Statistics Denmark
Married	Dichotomous	Statistics Denmark
Single	Dichotomous	Statistics Denmark
Other marital status	Dichotomous	Statistics Denmark
Children	Dichotomous	Statistics Denmark
Education, industry, region, salary decile and year fixed effects	Dichotomous	Statistics Denmark

References

- Alcacer, J., & Chung, W. (2007). Location strategies and knowledge spillovers. *Management Science*, 53(5), 760–776.
- Almeida, P., & Phene, A. (2004). Subsidiaries and knowledge creation: The influence of the Mnc and host country on innovation. *Strategic Management Journal*, 25(8/9), 847–864.
- Alqahtani, N., & Uslay, C. (2020). Entrepreneurial marketing and firm performance: Synthesis and conceptual development. *Journal of Business Research*, 113, 62–71.
- Angrist, J., Chernozhukov, V., & Fernández-Val, I. (2006). Quantile regression under misspecification, with an application to the U.S. wage structure. *Econometrica*, 74(2), 539–563.
- Arora, A., & Gambardella, A. (2010). Ideas for rent: An overview of markets for technology. *Industrial and Corporate Change*, 19(3), 775–803.
- Arrow, K. J. (1962). Economic welfare and the allocation of resources for invention. In R. Nelson (Ed.), *The rate and direction of inventive activity* (pp. 609–625). Princeton: Princeton University Press.
- Baden-Fuller, C., & Teece, D. J. (2020). Market sensing, dynamic capability, and competitive dynamics. *Industrial Marketing Management*, 89, 105–106.
- Banalieva, E. R., & Dhanaraj, C. (2019). Internalization theory for the digital economy. *Journal of International Business Studies*, 50(8), 1372–1387.
- BarNir, A., Gallagher, J. M., & Auger, P. (2003). Business process digitization, strategy, and the impact of firm age and size: The case of the magazine publishing industry. *Journal of Business Venturing*, 18(6), 789.
- Baum, J. A. C., & Oliver, C. (1991). Institutional linkages and organizational mortality. *Administrative Science Quarterly*, 36(2), 187–218.
- Belderbos, R. A., & Heijltjes, M. G. (2005). The determinants of expatriate staffing by Japanese multinationals in Asia: Control, learning and vertical business groups. *Journal of International Business Studies*, 36(3), 341–354.
- Bell, R. G., Filatotchev, I., & Rasheed, A. A. (2012). The liability of foreignness in capital markets: Sources and remedies. *Journal of International Business Studies*, 43(2), 107–122.
- Belsley, D. A., Kuh, E., & Welsh, R. E. (1980). *Regression diagnostics: Identifying influential data and sources of collinearity*. New York.
- Bhuller, M., Mogstad, M., & Salvanes, K. G. (2017). Life-cycle earnings, education premiums, and internal rates of return. *Journal of Labor Economics*, 35(4), 993–1030.
- Bilkey, W. J., & Nes, E. (1982). Country-of-origins effects on product evaluation. *Journal of International Business Studies*, 13(1), 89–99.
- Bolino, M. C. (2007). Expatriate assignments and intra-organizational career success: Implications for individuals and organizations. *Journal of International Business Studies*, 38(5), 819–835.
- Brown, C., & Medoff, J. (1989). The employer size-wage effect. *Journal of Political Economy*, 97(5), 1027–1059.
- Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. New York: WW Norton & Company.
- Campbell, B. A. (2013). Earnings effects of entrepreneurial experience: Evidence from the semiconductor industry. *Management Science*, 59(2), 286–304.
- Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking sustained competitive advantage from human capital. *Academy of Management Review*, 37(3), 376–395.
- Carnahan, S., Agarwal, R., & Campbell, B. A. (2012). Heterogeneity in turnover: The effect of relative compensation dispersion of firms on the mobility and entrepreneurship of extreme performers. *Strategic Management Journal*, 33(12), 1411–1430.
- Chadwick, C. (2017). Towards a more comprehensive model of firms' human capital rents. *Academy of Management Review*, 42(3), 499–519.
- Chi-Fai, C., & Holbert, N. B. (2001). Marketing home and away: Perceptions of managers in headquarters and subsidiaries. *Journal of World Business*, 36(2), 205.
- Coff, R. W. (1997). Human assets and management dilemmas: Coping with hazards on the road to resource-based theory. *Academy of Management Review*, 22(2), 374–402.
- Cooper, R. G., & Kleinschmidt, E. J. (1987). Success factors in product innovation. *Industrial Marketing Management*, 16(3), 215–223.
- Cukier, K. (2021). Commentary: How AI shapes consumer experiences and expectations. *Journal of Marketing*, 85(1), 152–155.
- D'Atoma, I., & Ieva, M. (2020). Determinants of technological innovation success and failure: Does marketing innovation matter? *Industrial Marketing Management*, 91, 64–81.
- Day, G. S. (1994). The capabilities of market-driven organizations. *Journal of Marketing*, 58(4), 37–52.
- Dehejia, R. H., & Wahba, S. (1999). Causal effects in nonexperimental studies: Reevaluating the evaluation of training programs. *Journal of the American Statistical Association*, 94(448), 1053–1062.
- Distel, A. P., Sofka, W., De Faria, P., Preto, M. T., & Ribeiro, A. S. (2022). Dynamic capabilities for hire – How former host country entrepreneurs as MNC subsidiary managers affect performance. *Journal of International Business Studies*, 53, 657–688.
- Distel, A. P., Sofka, W., De Faria, P., Preto, M. T., & Ribeiro, A. S. (2022). Dynamic capabilities for hire – How former host country entrepreneurs as Mnc subsidiary managers affect performance. *Journal of International Business Studies*, 53(4), 657–688.
- Dube, A., Giuliano, L., & Leonard, J. (2019). Fairness and frictions: The impact of unequal raises on quit behavior. *American Economic Review*, 109(2), 620–663.
- Encaoua, D., Guellec, D., & Martinez, C. (2006). Patent systems for encouraging innovation: Lessons from economic analysis. *Research Policy*, 35(9), 1423–1440.
- Fang, E., & Zou, S. (2009). Antecedents and consequences of marketing dynamic capabilities in international joint ventures. *Journal of International Business Studies*, 40(5), 742–761.
- Faraj, S., Pachidi, S., & Sayegh, K. (2018). Working and organizing in the age of the learning algorithm. *Information and Organization*, 28(1), 62–70.

- Gallaugh, P. A. J. M. (1997). Factors affecting the adoption of an internet-based sales presence for small businesses. *The Information Society*, 13(1), 55–74.
- Griffith, D. A., & Harvey, M. G. (2004). The influence of individual and firm level social capital of marketing managers in a firm's global network. *Journal of World Business*, 39(3), 244–254.
- Griliches, Z. (1986). Productivity, R&D, and basic research at the firm level in the 1970's. *American Economic Review*, 76(1), 141–154.
- Grimpe, C., Kaiser, U., & Sofka, W. (2019). Signaling valuable human capital: Advocacy group work experience and its effect on employee pay in innovative firms. *Strategic Management Journal*, 40(4), 685–710.
- Grimpe, C., Sofka, W., Bhargava, M., & Chatterjee, R. (2017). R&D, marketing innovation, and new product performance: A mixed methods study. *Journal of Product Innovation Management*, 34(3), 360–383.
- Grimpe, C., Sofka, W., & Kaiser, U. (2022). Competing for digital human capital – the retention effect of digital expertise in MNC subsidiaries. *Journal of International Business Studies*. forthcoming.
- Hair, J. F., & Sarstedt, M. (2021). Data, measurement, and causal inferences in machine learning: opportunities and challenges for marketing. *Journal of Marketing Theory & Practice*, 29(1), 65–77.
- Hall, B. H. (2005). The financing of innovation. In S. Shane (Ed.), *The handbook of technology and innovation management* (pp. 409–430). Oxford: Blackwell.
- Harvey, M., & Novicevic, M. M. (2000). Staffing global marketing positions: What we don't know can make a difference. *Journal of World Business*, 35(1), 80.
- Helfat, C. E. (1994). Firm-specificity in corporate applied R&D. *Organization Science*, 5(2), 173–184.
- Henderson, A. D. (1999). Firm strategy and age dependence: A contingent view of the liabilities of newness, adolescence, and obsolescence. *Administrative Science Quarterly*, 44(2), 281–314.
- Herhausen, D., Miočević, D., Morgan, R. E., & Kleijnen, M. H. P. (2020). The digital marketing capabilities gap. *Industrial Marketing Management*, 90, 276–290.
- Hill, M. S. (1979). The wage effects of marital status and children. *The Journal of Human Resources*, 14(4), 579–594.
- Hult, G. T. M., Hurley, R. F., & Knight, G. A. (2004). Innovativeness: Its antecedents and impact on business performance. *Industrial Marketing Management*, 33(5), 429–438.
- Iacus, S. M., King, G., Porro, G., & Katz, J. N. (2012). Causal inference without balance checking: Coarsened exact matching. *Political Analysis*, 20(1), 1–24.
- Kaiser, U., Kongsted, H. C., & Rønde, T. (2015). Does the mobility of R&D labor increase innovation? *Journal of Economic Behavior & Organization*, 110, 91–105.
- Khan, H. (2020). Is marketing agility important for emerging market firms in advanced markets? *International Business Review*, 29(5).
- Khan, H., & Khan, Z. (2021). The efficacy of marketing skills and market responsiveness in marketing performance of emerging market exporting firms in advanced markets: The moderating role of competitive intensity. *International Business Review*, 30(6).
- Kindleberger, C. P. (1969). American business abroad. *The International Executive*, 11(2), 11–12.
- Kostova, T., & Zaheer, S. (1999). Organizational legitimacy under conditions of complexity: The case of the multinational enterprise. *Academy of Management Review*, 24(1), 64–81.
- von Krogh, G. (2018). Artificial intelligence in organizations: New opportunities for phenomenon-based theorizing. *Academy of Management Discoveries*, 4(4), 404–409.
- Krasyński, D. (2021). Firm-specific worker incentives, employee retention, and wage–tenure slopes. *Organization Science*, 32(2), 352–375.
- Kuemmerle, W. (1998). Optimal scale for research and development in foreign environments: an investigation into size and performance of research and development laboratories abroad. *Research Policy*, 27, 111–126.
- Kyriakopoulos, K., Hughes, M., & Hughes, P. (2016). The role of marketing resources in radical innovation activity: Antecedents and payoffs. *Journal of Product Innovation Management*, 33(4), 398–417.
- Luo, X., Marco, S. Q., Fang, Z., & Qu, Z. (2021). Artificial intelligence coaches for sales agents: Caveats and solutions. *Journal of Marketing*, 85(2), 14–32.
- Mackey, A., Molloy, J. C., & Morris, S. S. (2014). Scarce human capital in managerial labor markets. *Journal of Management*, 40(2), 399–421.
- Meyer, K. E., & Sinani, E. (2009). When and where does foreign direct investment generate positive spillovers? A meta-analysis. *Journal of International Business Studies*, 40(7), 1075–1094.
- Mezias, J. M. (2002). Identifying liabilities of foreignness and strategies to minimize their effects: The case of labor lawsuit judgments in the United States. *Strategic Management Journal*, 23(3), 229–244.
- Mincer, J. (1958). Investment in human capital and personal income distribution. *Journal of Political Economy*, 66(4), 281–302.
- Miorandi, D., Sicari, S., De Pellegrini, F., & Chlamtac, I. (2012). Internet of things: Vision, applications and research challenges. *Ad Hoc Networks*, 10(7), 1497–1516.
- Molloy, J. C., & Barney, J. B. (2015). Who captures the value created with human capital? A market-based view. *Academy of Management Perspectives*, 29(3), 309–325.
- Moorman, C., & Day, G. S. (2016). Organizing for marketing excellence. *Journal of Marketing*, 80(6), 6–35.
- Mora Cortez, R., & Hidalgo, P. (2022). Prioritizing B2b marketing capabilities: Crossvergence in advanced and emerging economies. *Industrial Marketing Management*, 105, 422–438.
- Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, 41(6), 1029–1055.
- Nauhaus, S., Luger, J., & Raisch, S. (2021). Strategic decision making in the digital age: Expert sentiment and corporate capital allocation. *Journal of Management Studies*, 58(7), 1933–1961.
- Navarro, A., Losada, F., Ruzo, E., & Díez, J. A. (2010). Implications of perceived competitive advantages, adaptation of marketing tactics and export commitment on export performance. *Journal of World Business*, 45(1), 49–58.
- Petersen, B., Pedersen, T., & Lyles, M. A. (2008). Closing knowledge gaps in foreign markets. *Journal of International Business Studies*, 39(7), 1097–1113.
- Petrescu, M., Krishen, A. S., Kachen, S., & Gironda, J. T. (2022). AI-based innovation in B2b marketing: An interdisciplinary framework incorporating academic and practitioner perspectives. *Industrial Marketing Management*, 103, 61–72.
- Ployhart, R. E. (2021). Resources for what? Understanding performance in the resource-based view and strategic human capital resource literatures. *Journal of Management*, 47(7), 1771–1786.
- Ployhart, R. E., & Moliterno, T. P. (2011). Emergence of the human capital resource: A multilevel model. *Academy of Management Review*, 36(1), 127–150.
- Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. (2014). Human capital is dead; long live human capital resources! *Journal of Management*, 40(2), 371–398.
- Puntoni, S., Rezek, R. W., Giesler, M., & Botti, S. (2021). Consumers and artificial intelligence: An experiential perspective. *Journal of Marketing*, 85(1), 131–151.
- Read, S., Dew, N., Sarasvathy, S. D., Song, M., & Wiltbank, R. (2009). Marketing under uncertainty: The logic of an effectual approach. *Journal of Marketing*, 73(3), 1–18.
- Ripollés, M., & Blesa, A. (2012). International new ventures as “small multinationals”: The importance of marketing capabilities. *Journal of World Business*, 47(2), 277–287.
- Ritter, T., & Pedersen, C. L. (2019). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. *Industrial Marketing Management*, 86, 180–190.
- Rocha, V., & van Praag, M. (2020). Mind the gap: the role of gender in entrepreneurial career choice and social influence by founders. *Strategic Management Journal*, 41(5), 841–866.
- Rosenfeld, R. A. (1992). Job mobility and career processes. *Annual Review of Sociology*, 18(1), 39–61.
- Samiee, S., Katsikeas, C. S., & Hult, G. T. M. (2021). The overarching role of international marketing: Relevance and centrality in research and practice. *Journal of International Business Studies*, 1–16.
- Schmidt, T., & Sofka, W. (2009). Liability of foreignness as a barrier to knowledge spillovers: Lost in translation? *Journal of International Management*, 15(4), 460–474.
- Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. New York.
- Schwab, K. (2017). *The fourth industrial revolution*. New York: Crown Business.
- Slater, S. F., & Narver, J. C. (1998). Customer-led and market-oriented: Let's not confuse the two. *Strategic Management Journal*, 19(10), 1001.
- Sofka, W., Grimpe, C., & Kaiser, U. (2022). Understanding the unwritten rules of the game – Government work experience and salary premiums in foreign MNC subsidiaries. *Journal of International Business Studies*, 53, 1110–1132.
- Sofka, W., Grimpe, C., & Kaiser, U. (2022). Understanding the unwritten rules of the game: Government work experience and salary premiums in foreign MNC subsidiaries. *Journal of International Business Studies*, 53(6), 1110–1132.
- Somaya, D. (2012). Patent strategy and management: an integrative review and research agenda. *Journal of Management*, 38(4), 1084–1114.
- Srinivasan, R., & Sarial-Abi, G. (2021). When algorithms fail: Consumers' responses to brand harm crises caused by algorithm errors. *Journal of Marketing*, 85(5), 74–91.
- Steenkamp, J.-B. E. M., Batra, R., & Alden, D. L. (2003). How perceived brand globalness creates brand value. *Journal of International Business Studies*, 34(1), 53–65.
- van der Straaten, K., Pisani, N., & Kolk, A. (2020). Unraveling the Mne wage premium. *Journal of International Business Studies*, 51, 1355–1390.
- Sturgeon, T. J. (2021). Upgrading strategies for the digital economy. *Global Strategy*, 11(1), 34–57.
- Teece, D. J. (1986). Profiting from technological innovation: Implications for integration, collaboration, licensing and public policy. *Research Policy*, 15(6), 285–305.
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350.
- Uлага, W., & Chacour, S. (2001). Measuring customer-perceived value in business markets: A prerequisite for marketing strategy development and implementation. *Industrial Marketing Management*, 30(6), 525–540.
- Weller, I., Hymer, C. B., Nyberg, A. J., & Ebert, J. (2019). How matching creates value: Cogs and wheels for human capital resources research. *Academy of Management Annals*, 13(1), 188–214.
- Wu, L., Liu, H., & Su, K. (2020). Exploring the dual effect of effectuation on new product development speed and quality. *Journal of Business Research*, 106, 82–93.
- Zaheer, S., & Mosakowski, E. (1997). The dynamics of the liability of foreignness: A global study of survival in financial services. *Strategic Management Journal*, 18(6), 439–463.