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Learning by Hiring, Status Distance Between Hired and Incumbent Engineers Within the Context of Follower Firms in the Semiconductor Industry

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This study explores the effect of hiring engineers from leading firms on innovation in the context of follower firms, with a particular emphasis on the role of status distance between hired and incumbent engineers. While previous research highlights the positive effects of learning by hiring on innovation, this study delves into how status distance shapes knowledge flows and the psychological safety of hired engineers. Through empirical analysis, this study uncovered that status distance plays a crucial role in shaping these dynamics, influencing the flow of knowledge and its overall innovation capacity. Moreover, this research also finds that status distance affects the psychological safety of hired engineers with high status, leading to potential challenges in knowledge-sharing initiatives. Overall, this study provides nuanced insights into the complex dynamics of learning by hiring, contributing valuable insights to the broader discourse on the influence of hiring practices on innovation outcomes.

Key Words: Learning by hiring, Status distance, Knowledge flows, Psychological safety, Follower firms, Semiconductor industry

Ⅰ. Introduction

One of the most prominent and persistent ways of building innovation by follower firms is hiring engineers from leading firms within the same sector. Previous studies have shown that learning by hiring contributes to building a firm's innovation by bringing in a great amount of knowledge to the recipient firm (Song et al., 2003; Rosenkopf & Almeida, 2003; Simonen & McCann, 2008; Tzabbar, 2009; Singh & Agrawal, 2011; Rahko, 2017; Kaiser et al., 2018). However, existing studies have predominantly focused on the impact of learning by hiring on a recipient firm's innovation, assuming that the status is inherent in engineers. However, the influence of the status of hired engineers has not been a focal point of these discussions, creating an important research gap. To address this research gap, this study explicitly delves into the status of the learning-by-hiring study within the context of follower firms. Given the cru-

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cial role of hiring engineers in facilitating innovation, this study shifts the focus from merely examining the effect of learning by hiring on a firm's innovation to exploring the linkage relationship by leveraging status literature.

The term "status" in the context of this study, refers to a superior rank in the social order (Podolny, 1993; Jensen & Roy, 2008). Recent studies, such as that by Slavova et al. (2016) and Prato & Ferraro(2018), underscore the contingent nature of hiring effects based on incumbents' status. The study posits that the impact of hiring varies depending on the status distance between hired and incumbent engineers. Status distance, defined as the difference in status among individuals (Blau, 1970; Smith-Lovin & Mcpherson, 1987), tends to increase when firms hire engineers from other firms, enhancing the bargaining power of the hired engineers (Groysberg et al., 2011). Therefore, they often find themselves in positions of high structural power within a team (Oldroyd & Morris, 2012).

Scholars argue that status distance between engineers can influence learning and knowledge flow (Tzabbar, 2009; Bunderson & Reagans, 2011) due to the associated advantages, including increased opportunities, resources, and attention conferred more on high-status (Lynn et al;., 2009; Reschke et al., 2018; Prato & Ferraro, 2018). This elevated status may afford high-status engineers more freedom and opportunities to contribute their knowledge to their current firm. However, it is also important for hired engineers to experience psychological safety, in order for them to share knowledge in their new environment.

Psychological safety is "a shared belief that the team is safe for interpersonal risk-taking" (Edmondson, 1999, p.354). Psychological safety is commonly linked to lower-status individuals who might feel disadvantaged in comparison to their higher-status counterparts, given that status distance can make low-status engineers feel uneasy about learning, taking risks, and participating in innovative activities (Nembhard & Edmondson, 2006; Bunderson & Reagans, 2011). Notably, this status distance can also negatively influence the psychological safety of high-status engineers, particularly in the context of follower's learning by hiring.

The lack of status research is particularly unfortunate when it comes to understanding the importance of learning by hiring from other firms, especially in contexts where engineers collaborate for interdependent tasks. To address these gaps, this study delves deeper into the analysis of hiring engineers, specifically considering the influence of status distance between hired and incumbent engineers. This marks a departure from the typical focus on the effect of hiring engineers on a firm's innovation, a prevalent feature in quantitative studies (Song et al., 2003; Rosenkopf & Almeida, 2003; Simonen & McCann, 2008; Tzabbar, 2009; Singh & Agrawal, 2011; Rahko, 2017; Kaiser et al., 2018). While affirming the positive impact of learning by hiring on a firm's innovation, this study emphasizes the role of status distance by exploring the link-

age relationship. Specifically, this study aims to explore *How the status distance between the hired and incumbent engineers influences knowledge flows and the psychological safety of hired engineers.* The findings, in turn, contribute fresh insights into learning by hiring, expanding our understanding of the complexities associated with hiring engineers from leading firms.

Overall, this study offers a number of contributions. First, it delves into the explicit exploration of the role of status distance in the context of learning by hiring, which has rarely been brought into the center of the discussion in previous studies. By drawing upon insights from information processing and categorization views, sheds light on the influence of status distance in the study of learning by hiring, thereby enriching our understanding of learning by hiring in the context of follower firms. Secondly, while affirming the positive impact of hiring engineers on a firm's innovation, as demonstrated in previous studies (Song et al., 2003; Rosenkopf & Almeida, 2003; Simonen & McCann, 2008; Tzabbar, 2009; Singh & Agrawal, 2011; Rahko, 2017; Kaiser et al., 2018), this study goes beyond by integrating status literature. It contends that the status distance between hired and incumbent engineers influences knowledge flows and the psychological safety of hired engineers, aspects that have been relatively unexplored. By doing so, the study offers fresh insights for management and hiring firms, enriching their understanding of how status distance influences organizational learning, innovation, and team dynamics. This knowledge serves as a guide for making strategic decisions and implementing practices that foster a more collaborative and innovative workplace, particularly in the context of hiring engineers from leading firms. In summary, this study offers practical insights for management practices, particularly in terms of optimizing knowledge transfer and enhancing the psychological safety of hired engineers.

Ⅱ. Literature Review

2.1 Status distance and Innovation

The status is defined as a superior rank in the social order (Podolny, 1993; Jensen & Roy, 2008). When firms hire engineers from other firms, hired engineers are endowed with expert power due to their experience built in their previous firms (Oldroyd & Morris, 2012). This creates a status distance between hired and incumbent engineers, influencing how engineers contribute to the hiring firm's innovation. Status distance refers to the difference between individuals with respect to the status they hold (Blau, 1977; McPherson & Smith-Lovin, 1987). From an information processing perspective, status distance enhances innovation by bringing diverse knowledge from engineers with different statuses, fostering broader perspectives and improved problem-solving in

teams. (Ancona & Caldwell, 1992; Blau, 1970; Chung & Hossain, 2009). Alternatively, adopting a categorization perspective reveals that status distance often results in divisions, creating challenging relations among engineers. This division not only impedes the knowledge exchange process (Williams & O'Reilly, 1998), and may also exert a negative influence on innovative activities. When engineers are categorized, there is a tendency to favor ingroup colleagues, exhibiting higher trust and a greater willingness to cooperate with ingroup members compared to those in the outgroups (Van Knippenberg & Schippers, 2007). This inclination may have a detrimental influence on facilitating innovation.

2.2 Status distance and Knowledge flows

Knowledge flows involve the directional transfer of knowledge, categorized as top-down, bottom-up, and horizontal (Mom, 2006). The status distance between hired and incumbent engineers plays a pivotal role in determining these knowledge flows, given that status exerts power and influence, impacting member participation and the recognition of engineers' contributions (Alkire et al., 1968). Higher authority granted to high-status engineers enhances their involvement and contribution to innovative activities (Bunderson & Boumgarden, 2010; Nickerson & Zenger, 2004). For instance, Clark and Fujimoto(1991) suggest that substantial influence and authority are critical for a product manager overseeing new product development, as it reduce conflicts, ambiguity in roles, and enhances task coordination (Bunderson & Boumgarden, 2010).

Status distance mitigates conflicts arising from differing viewpoints in technological tasks among high-status and low-status engineers. High-status engineers can effectively address disagreements about technical tasks and innovation-related activities among their lower-status counterparts, facilitating a rapid consensus (Groysberg et al., 2011). Their elevated status makes it easier for others to have their information and perspective acknowledged (Bunderson, 2003), directing attention to technological aspects requiring improvement by leveraging their knowledge. This facilitates the introduction and integration of unique or advanced knowledge from hired engineers into the firm's innovation.

2.3 Status distance and Psychological Safety

Psychological safety, defined as "a shared belief that the team is safe for interpersonal risk-taking" (Edmondson, 1999, p354), is a critical factor influencing an engineer's engagement in fostering innovation. Prior studies emphasize the necessity for engineers to have psychological safety to actively participate in innovation (Baer & Frese, 2003; Nembhard & Edmondson, 2006; Bunderson & Boumgarden, 2010). However, the engineer's psychological safety is strongly linked to status distance (Edmondson, 2002). Notably, status distance tends to have a more pro-

nounced impact on low-status engineers, as they perceive their groups to be less conducive to learning and risk-taking compared to their higher-status counterparts (Bunderson & Reagans, 2011; Prato & Ferraro, 2018).

Contu and Willmott's study in 2003 revealed that technicians strategically managed and applied their knowledge of photocopier repair to avoid relinquishing control to managers attempting to limit their power. Despite technicians holding lower status than their managers, this suggests that individuals with valuable knowledge might be reluctant to share it to maintain their significance within the firm. Preserving this value may lead individuals to be selective in sharing their knowledge, revealing only certain parts strategically or at specific times (Bunderson & Reagans, 2011) unless they gain some "political" advantage from sharing (Wittenbaum et al., 2004). In light of this, status distance may indeed influence the psychological safety of hired engineers with higher status.

Ⅲ. Research Approach

The choice of a qualitative research approach for this study is motivated by several factors. Firstly, qualitative research emphasizes a literary and humanistic focus, aiming to describe and understand actual human interactions, meanings, and processes within a real-life organizational setting. This stands in contrast to quantitative research, which relies on mathematical and statistical knowledge (Gephart, 2004). Secondly, qualitative research is well suited for comprehending phenomena within the context, establishing connections among concepts and behaviors, and generating and refining theories (Glaser & Strauss, 2017; Patton, 1990). Thirdly, it proves valuable for exploring relatively unknown phenomena, allowing the researcher to uncover underlying assumptions, beliefs, and values (Yauch & Steudel, 2003). Given the focus on the status distance between engineers, involving human interactions and interpersonal relations, qualitative research is particularly suitable for this learning-by-hiring study where this phenomenon is relatively unexplored.

This research primarily employs interviews as the main data collection method. Interviews serve as a well-established means to understand the views, perceptions, and opinions of research subjects through language (Easterby-Smith et al., 2008). The interview process allows for the extraction of rich and complex information from individuals involved in the issues under investigation (Cavana et al., 2001). In particular, a semi-structured interview approach was adopted to facilitate diverse answers, enabling the emergence of new findings not previously identified in research.

Due to the sensitive nature of the industry, securing permission to access Chinese high-technology firms proved challenging amidst heightened tensions during the peak of the trade war. Consequently, the researcher opted

not to recruit participants through organizational channels. Instead, interviewees were individually approached, employing snowballing techniques via the researcher's personal contacts, social networks, prior professional engagements, and leveraging the LinkedIn platform.

Using personal connections and social networks facilitated direct introductions to potential interviewees. Additionally, on the LinkedIn platform, the researcher utilized filtering mechanisms to identify suitable candidates based on their current affiliations with indigenous firms and previous associations with global industry leaders. This meticulous process yielded a list of approximately 500 potential interviewees, with less than 10 per cent ultimately agreeing to participate in the study.

To ensure the credibility of participating interviewees, those who expressed willingness were further scrutinized through company credentials, verifying their eligibility of data collection. This rigorous screening process aimed to uphold the quality and reliability of the gathered data.

All involved interviewees for the interview are mentioned in the table below.

The data collection phase began with a pilot interview conducted via phone calls in June 2018. Following this, field data collection took place from December 2018 to January 2019 in Chinese cities, primarily Shanghai and

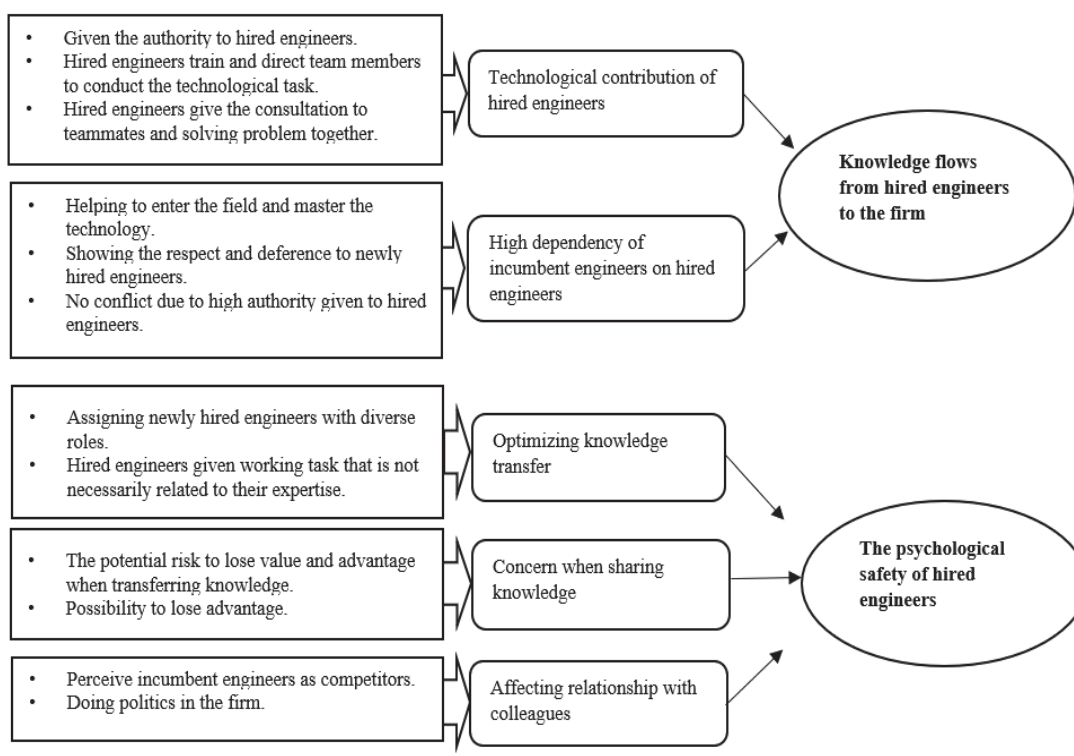
〈Table 1〉 List of participants

Interviewee	Interviewee (s)'s Position(s)	Firms	Knowledge domain	Nationality	Hired engineers	Incumbent engineers
A1	Department Director	Foundry A (A location)	Yield Enhancement	Taiwan	O	
A2	Division Manager		Lithography process	Taiwan	O	
A3	Assistant Technical Director		Analog/RF CMOS development	Korea	O	
A4	Director		Failure Analysis	China		O
A5	Fab Director		Statistical Process Control	China		O
A6	Engineer		Process engineering	China		O
A7	Engineer		Process	China		O
A8	Engineer		R&D	China		O
B1	Department Manager	(B location)	Product engineering	Taiwan	O	
C1	Senior Manager	(C location)	Back-end	Taiwan	O	
C2	Manager		Process	China		O
D1	Former director	Foundry A	3D IC & bumping	Taiwan	O	
D2	Former director	Foundry A		Taiwan	O	
E1	Team Leader	Foundry B	LED process	Korea	O	
F1	Manager	Fabless A		China	O	
G1	Project leader/manager	Fabless B	IC design	China	O	
G2	Designer		Analog	China		O
H1	Project manager	Fabless C		China		O
H2	Designer			China		O
H3	Designer			China		O
I1	R&D director	Fabless D		China		O
J1	Chief Scientist	Fabless E	IP design	Taiwan	O	
K1	R&D director	Fabless F		China		O
L1	Manager	Fabless G	IC Package Principal engineering	Taiwan	O	
L2	Designer		Mobile embedded chip, 5G	China	O	
M1	Designer	Fabless H		China		O

Beijing, to further expand upon the insights gathered during the pilot interview. The structured interview questions covered background, position, past experiences, firm experience, and hiring practices, targeting individuals such as local directors, managers, and hired and incumbent engineers in Chinese semiconductor firms. Interviews typically lasted approximately 120 minutes, occasionally running slightly beyond this timeframe. Some interviews were conducted in written form as a requisite of interviewees, and also the follow-up interviews (researcher's interpretation) were conducted over the phone to clarify certain points raised during the initial interviews.

3.1 Data Analysis

This study employed inductive approaches in analyzing the data because the researcher could not predict the possible responses that are related to the status distance in the learning-by-hiring study. The inductive analysis would not be driven by the researcher's theoretical interest in the topic, but it would be data-driven, the themes identified are strongly related to the data themselves (Patton, 1990), without trying to fit it into a pre-existing coding frame (see Appendix 1). However, the inductive approach does not necessarily mean that the researcher should begin from nothing



〈Figure 1〉 Overview of data structure

or without using the knowledge of others, but the researcher should use the literature, assume that it is correct and critically analyze it all as a whole, deconstructing the concept to identify the attributes or characteristics, assumptions, gaps, limitations, different perspectives, and different forms of the concept for different functions (Morse & Mitcham, 2002). For this study, the researcher began with the use of learning-by-hiring literature and leveraging status literature as underlying knowledge. Moreover, the inductive approach is used when the research is evolving subjective perceptions of the groups (thinking and emotion) and how these influence behavior (Huy, 2012). The status is directly evolved with one's perception and emotion that may affect their behaviors, therefore, adopting the inductive data analysis is appropriate for this study. Figure 1 below provides an overview of the data structure.

Ⅳ. Results

4.1 Knowledge Flow

The first phase entails a thorough evaluation of the status of hired engineers. The researcher specifically focused on engineers' prior experience in their respective industries, particularly in their previous firms. This involves assessing the degree to which the knowledge acquired in those prior firms is highly valued in their current firms. Significantly, 10 of the hired engineers had their working experience from prior firms highly esteemed in the current organization. This suggests an increase in their positions and influence within the current firm. Most engineers shared the same view that *"the current firm offers better positions that's why I moved here." (J1)* Engineers hired from leading firms often received elevated positions, such as team leaders or managers, within their current firms. Notably, even engineers who held mid-level positions in their prior roles often find themselves promoted to expert-level positions upon transitioning to a new firm. This practice contributes to a high level of satisfaction among hired engineers in their current work environment. For instance: *"In the previous firm, I was just an engineer, but here they treat me as an expert, so for me working environment is much better here than in the previous firm."(E1)* Several interviewees explicitly noted that their career moves significantly enhanced their value, attributed to the wealth of working experience gained in their previous firms.

Hired engineers are often entrusted with authority, control, or influence over their teams. The interview findings consistently reveal a pattern wherein, upon being hired, firms establish teams for these engineers, assigning them the role of training team members and leading or directing them in innovative activities. In some instances, hired engineers are deeply engaged in diverse processes, in-

cluding the creation of teams from the ground up, and guiding team members in technological tasks. This heightened involvement ultimately strengthens the authority of hired engineers within the team, enabling them to exert significant influence over their colleagues. *"…, when I just came, I was an assistant, when I just came there was no one with me, but after 3 months, we had around 10 to 12 engineers, so the team was established. After setting up a team, I direct the work slowly, training slowly, and doing technological tasks slowly." (C1)* Besides, hired engineers often find it effortless to work within their current firms, across multiple interviews, engineers express a sense of support from their current employers, particularly in the execution of technological tasks. The authority given to them allows them to navigate tasks that span various departments. Unrestricted access to other departments proves crucial, especially when technological tasks necessitate collaboration across multiple departments. This ease of access extends to resources such as the firm's human resources, facilitating enhanced communication with fellow engineers. Most of the interviewees shared the same view that:

"Unlike other industries, the semiconductor industry has to integrate with many departments and the sales and technical communication are important, so the firm provides fair support for this… in order to maximize the performance for an individual engineer…, we are given the authority to drive or control other departments." (A3)

The status distance between hired and incumbent engineers may lead to increased dependency of incumbents on hired engineers. Given that hired engineers often lead the team, they frequently provide technological guidance to team members, offering solutions and resolving technological disagreements. Incumbent engineers commonly seek advice and comprehensive direction from hired engineers when faced with technological challenges. Hired engineers play a crucial role in helping incumbents solve problems they could not solve independently, enabling them to address similar issues in the future. Additionally, as part of their responsibilities, hired engineers often train incumbent engineers, facilitating their entry into the field and mastery of specific technologies. This process contributes to the growth of experience and capabilities among incumbent engineers. Hence, projects initially undertaken independently by hired engineers can be transitioned to incumbents or serve as a foundation for new projects in the future.

"There is one who has 15 years' experience in our team, they usually lead us to enter and master (technology) and provide the direction like a supervisor." …"They help us to enter the field, and later they will help us develop our knowledge depending on which direction we want to develop in the field, I can learn much, and if we encounter a problem we cannot solve then we will ask them, sometimes I will be given the working task what they did if there is a problem then ask them first because they know it well as they did before." (H3)

Due to the authority granted to hired engineers, potential conflicts that could impede smooth integration are mitigated. Incumbent engineers with lower status than the hired engineers refrain from raising problems or challenges when collaborating with them. The interviews reveal that incumbent engineers display respect and deference towards hired engineers, acknowledging their superior experience in the field. The dynamic is often described by incumbent engineers as one where hired engineers assume roles akin to supervisors or seniors, prompting the incumbents to express deference. Thus, incumbent engineers with lower status are less likely to assert their opinions in opposition to hired engineers. The majority of interviewees, predominantly incumbent engineers, explicitly express their willingness to show respect and learn from their hired counterparts.

"When experts are hired, everyone shows respect, no one arises a conflict with them, you must admire him, his authority is higher than yours… when they are hired, integration into a firm has no problem because when they are initially hired, they will be given a certain level of authority, so no problem to get adapted in the firm." (H1)

From the viewpoint of hired engineers, the perception is often one of being granted higher authority than their team members, resulting in a relatively smooth experience in the hiring firm. The transition to new environments appears seamless for them, as there are minimal instances of conflicts or challenges raised by other team members. Hired engineers frequently sense that they are treated as experts, fostering a harmonious atmosphere when engaging in technological tasks or collaborative activities with their fellow engineers. *"In the previous firm, I was just an engineer, but here they treat me as an expert, so for me, the working environment is much better here than in the previous firm… the most technological task is cooperative work so harmony is important, in terms of work, we are harmonized." (E1)* One of our interviewees (local director - A5) concluded that it is preferable for their firm not to assign two high-status engineers to the same team, anticipating potential friction between them. Therefore, when engineers join from other firms, they are often appointed to lead a team, with the firm actively seeking additional engineers to provide support to the hired engineers.

Firms often implement a strategy of rotating hired engineers across various teams to optimize knowledge transfer within the organization. This practice reflects the firm's expectation that by rotating hired engineers among different teams and plants, these engineers will effectively disseminate their advanced knowledge, ensuring that a broader spectrum of engineers within the firm can acquire and possess the same valuable knowledge. It is reflected by one of the local directors: *"Within the firm, engineers are often to be rotated, so the standard operating procedure has to be made as a recipe when one goes from A team to B team, he has to bring SOP (the standard operating*

procedure) together. The technology has to be shared between teams, and the firm will make hired engineers sufficiently share their knowledge, I have four teams under me, for example, A team make the most advanced technology, and the hired engineer from A team will be sent to the B team to set up technology, share their knowledge, so more teams can conduct same technology." (A4) Firms seek to acquire advanced knowledge of hired engineers, initially assigning them their familiar responsibilities, and later entrusting them with the development of new technologies. In instances where hired engineers face difficulties in contributing to the firm's new technology, they may be redirected to roles that emphasize sharing their knowledge with other engineers. This often involves working in different plants, allowing hired engineers to maintain involvement in innovative activities, albeit with a primary focus on knowledge dissemination. The local director concluded well that

"Firms hire engineers for a reason, hired engineers do what they used to do, or they will train other engineers, and there is a possibility they may continue to develop the next generation of technology. Usually, the purpose of hiring is to absorb advanced knowledge so he will be asked to do what he had done before and then develop new technology, but if he is not able to develop the next generation, if he still has value, he will train other engineers to diffuse the knowledge to more engineers so that more engineers can do the same technology." (A4)

4.2 The Psychological Safety of Hired Engineers

The interviewees highlighted the importance of psychological safety, deeming it a critical factor influenced by status distance. In the context of learning by hiring, the extent to which hired engineers share their knowledge is intricately tied to their perceived psychological safety within the hiring firm. Hired engineers often worry about the potential decline in their value within the hiring firm once incumbent engineers acquire the knowledge. The concern is heightened when the knowledge they bring matures within the firm, posing a risk of them losing their standing. *"The firm cannot operate by depending on one or two persons, so we have to remain (since 2002), now they already learn certain degree about 8 inches, for the 12 inches, the firm will directly hire experts from other firms, we also feel risky because 8 inches become a mature technology, they can make themselves without us."(A2)* The local director (C2) added that when hired engineers cease to contribute significantly to new technological development, particularly if their team members surpass them in capability, their value diminishes, putting them at a disadvantage. This situation poses a potential risk of being replaced, resulting in the loss of benefits, such as special incentives initially offered by the firm. Despite the knowledge gap between hired and incumbent engineers, hired engineers often perceive the decision to maintain special incentives as contingent on the hiring firm's discretion. It

is reflected by one of the interviewees:

"The technology of this firm was behind another company when I decided to come here in 2012. Everybody said I was crazy. We gain a special incentive for new technology, is it long term? If the local guy can learn does the company keep the special incentive? This is a potential risk for us. Even the local guy still has a gap with us, but it depends on how the firm thinks, it is not controlled by us." (A1)

Hired engineers' driven by the concern of diminishing their value within a firm, engage in strategic knowledge sharing. Some engineers have explicitly conveyed that the perceived value of hired engineers declines if they transfer all their knowledge to the firm. Therefore, they adopt a strategic approach, sharing their knowledge selectively or partially. In instances where the knowledge is deemed critical, hired engineers tend to refrain from sharing it with other team members, aiming to preserve their intrinsic value. One of the interviewees emphasized that *"I train them and teach them how to do it, about methodology, but in terms of know-how once I transfer it then there will be no value for me. We see know-how as an idea… I teach them, I teach what I have to teach, but not all of what I know" (C1).* Conversely, from the incumbent engineers' perspective, they acknowledge that hired engineers share some knowledge but express reluctance to share the entirety of their expertise. Thus, incumbent engineers feel that they have not gained substantial knowledge from the hired engineers. incumbent engineers recognize the inherent risk for hired engineers in sharing all their knowledge with team members. This is reflected by one of the incumbent engineers collaborating with a hired engineer.

"I don't think I learn that much by working with newly hired engineers, not much has changed for me, I just do my own work, if a project leader teaches team members too much, he will have a risk, and my boss will teach us, but he does not want to teach all, he does not want to teach you too much." (M1)

The finding also shows that the local manager or director frequently observes hired engineers viewing their team members as competitors rather than collaborators. The evidence suggests that, in the eyes of these local managers and directors, hired engineers struggle to establish positive relationships with their team members, leading to a deteriorating work environment. With the ability to wield power and influence over other engineers within the team, hired engineers often adopt contrarian positions for the sake of opposition. This tendency is exacerbated by the perception of team members as competitors. Hired engineers tend to engage in political manoeuvring within the team, causing team members to leave and consequently diminishing overall work efficiency. While firms may hire engineers to bridge knowledge gaps, the departure of other engineers from the firm hampers development progress, particularly in tasks reliant on teamwork and collaboration. This is reflected in the statement of the local director:

"Some hired engineers are not good at building

a good relationship with people or when it has a destructive effect on a team atmosphere, this will negatively influence their team working capability. It may depend on the power within a team, more power, more influential so can have a great influence on others in terms of technology and integration. For instance, hired engineers have great capability but tend to do office politics and cause other engineers to leave, even though the technology gap can be filled, if the firm lacks basic human resources, it can slow down the development progress." (A5)

"When the experts come to the firm, they have to integrate or get along (Mohe)with their team members who are in a lower position than them. But they cannot really get along, they stand opposite for the sake of opposition. Experts see other members as competitors." (A2)

Ⅴ. Discussion and Propositions

Status distance facilitates the flow of knowledge from hired engineers to a hiring firm. When firms hire engineers from other firms, these engineers are granted authority, occupying high levels of structural power within a team. The findings of this study indicate that hired engineers play a dominant role in exercising authority and directing team actions, increasing the reflection of their knowledge in technological tasks. Past research has suggested that members with unequal status, particularly those with higher status, tend to play a more participative role (Larson et al., 1998). This research further reveals that hired engineers with high status actively direct and guide incumbent engineers in performing technological tasks, resolving differences in technical tasks and related innovative activities among those with lower status (Groysberg et al., 2011). The higher status of hired engineers makes it easier for them to have their information and perspectives heard within the team (Bunderson & Boumgarden, 2010).

Furthermore, given the elevated status of hired engineers, they enjoy privileged access to human resources and other departments. In industries like semiconductors, characterized by collaborative and interdependent technological tasks, such access holds significant importance. The findings underscore that hired engineers can navigate human resources and other departments in the new firms with minimal restrictions, thereby fostering their active participation and engagement in innovative activities. Hence, their advanced and distinctive knowledge, cultivated in previous firms, is more likely to be integrated into the ongoing technological tasks within the current firms.

Status distance is generally known to impede rapid consensus among engineers and enhance information processing by encouraging an understanding of divergent positions (Van Knippenberg & Schippers, 2007), this study reveals a contrasting scenario. Consensus is swiftly reached due to a respectful acknowl-

edgement of power differences. The findings also indicate that incumbent engineers working with higher status hired engineers are less likely to express divergent viewpoints. Incumbent engineers often perceive hired engineers as seniors or supervisors, leading them to show respect and deference. This tendency is especially pronounced in highly hierarchical societies, such as China, where individuals are expected to defer to those with higher status or greater experience. In such contexts, engineers are inclined to show respect and deference to hired engineers considered more experienced and of higher status. Consequently, when working with high-status engineers, incumbent engineers are more likely to follow their direction or supervision and less likely to voice differing opinions.

The finding illuminates how firms optimize knowledge transfer. When firms recruit engineers from other firms, the engineers' bargaining power increases, leading to the allocation of more organizational resources, including higher salaries (Groysberg et al., 2008; Prato & Ferraro, 2018). The study indicates that hiring firms strategically entice engineers from other firms by offering attractive incentives, such as elevated salaries. Interestingly, these firms aim to maximize benefits from hiring by assigning diverse roles to hired engineers. This is reflected in the higher status accorded to hired engineers within the team, where they often assume leadership roles and direct team members. Hired engineers wield higher structural power, overseeing their specialized technical tasks, while concurrently taking on multifaceted responsibilities such as management, security, and training. Additionally, firms frequently rotate engineers across teams to facilitate knowledge transfer, ensuring that the expertise of hired engineers becomes accessible to a broader sphere. This underscores the firm's deliberate effort to prioritize and enhance knowledge transfer from hired engineers by affording them a high status within their teams.

The evidence indicates that when there is a status distance among engineers, the expectation that engineers will effectively leverage the knowledge of individuals with different status levels becomes doubtful. Instead, it becomes apparent that in asymmetric status relations, there is a reduced consideration of knowledge from different statuses. Those higher in the hierarchy tend to contribute more significantly to the firm's innovation compared to individuals with lower status. In essence, status distance tends to stimulate knowledge flows primarily originating from hired engineers. Hence,

Proposition 1: The status distance between hired engineers and incumbent engineers spurs knowledge flows from hired engineers to the hiring firm.

Status distance significantly influences the perceived psychological safety of hired engineers. For effective knowledge sharing among engineers (Kale et al., 2000; Dovey, 2009), psy-

chological safety is imperative as it empowers engineers to share knowledge and contribute to a firm's innovation (West, 2000; Bunderson & Reagans, 2011). The status distance can contribute to predictability in interactions, reducing uncertainty, fostering intragroup trust (Edmondson, 2004), lowering defenses, and enhancing psychological safety within a team (Bunderson & Boumgarden, 2010). Previous studies suggest that status distance affects the psychological safety of low-status individuals, with higher-status individuals feeling more secure than their lower-status counterparts (Nembhard & Edmondson, 2006; Bunderson & Reagans, 2011). Nevertheless, this study finds that the status distance also fosters an environment that diminishes the perceived psychological safety of hired engineers with high status.

Similar to many work environments, privileges and advantages often hinge on one's status (Lynn et al., 2009). This is especially pronounced when engineers are recruited from external firms, as they receive a comprehensive package of benefits from the hiring firm, encompassing not just elevated positions and salaries, but also additional incentives and favorable working conditions. Consequently, high-status engineers enjoy more but also stand to lose more. The study indicates that the status distance between hired and incumbent engineers contributes to hesitancy in knowledge sharing among the hired engineers. This hesitancy stems from the concern that sharing their knowledge may diminish their perceived value, risking the loss of benefits provided by the firm. The apprehension among hired engineers is closely linked to the fear of potential replacement once their knowledge is transferred to the hiring firm.

Hired engineers from leading firms, driven by the need to protect their value, tend to be selective in sharing knowledge. They disclose only certain insights or strategically time the dissemination of knowledge to maintain a perceived advantage (Bunderson & Reagans, 2011). When dealing with critical knowledge, their reluctance to share openly leads to strategic practices like partial disclosure or delayed sharing. This aligns with Contu and Willam's (2004) findings, where technicians strategically managed knowledge to retain control over their work. This study underscores that transferring knowledge to a hiring firm may diminish their perceived value, influencing their strategic knowledge sharing within the organization.

This study also highlights a significant finding that high-status engineers may encounter challenges in effectively collaborating with their peers (Groysberg et al., 2011). Indeed, the possession of valuable knowledge confers power, potentially leading individuals to withhold information or knowledge for strategic gain (Wittenbaum et al., 2004). Hired engineers often engage in internal politics, prompting team members to leave, thereby reducing efficiency, and slowing down production development. Such hired engineers, often recruited from leading firms, perceive their team members as com-

petitors rather than collaborators, fostering concerns about potential replacement, even among those in elevated positions within the team.

Such insecurity may stem from the perception of hired engineers as an outgroup rather than an ingroup. Viewing status distance through the lens of categorization and leader-member exchange perspectives (LMX), as a form of division (Williams & O'Reilly, 1998), becomes particularly relevant, and this division becomes more pronounced when engineers are recruited from external firms (Thrasher, et al., 2020). The concept of status distance categorizes hired and incumbent engineers into ingroup and outgroup, where those identified as outgroup members often experience heightened insecurity (Van Knippenberg & Schippers, 2007). This insecurity can be attributed to the strong sense of trust and interpersonal connection typically enjoyed by members of the ingroups category, contrasting with more distant and formal relationships maintained by outgroup members within the organization, according to the LMX views (Graen & Uhl-Bien, 1995; Thrasher et al., 2020). Based on this rationale, engineers hired into the outgroup category may experience diminished levels of trust and relationships with their employing organization, despite holding elevated status within a team. This could ultimately result in a deterioration of psychological safety.

Put it together, the finding of this study highlights a close link between psychological safety and engineers' employment status. Even though hired engineers may hold a higher status, they still experience negative effects on psychological safety. This insecurity can obstruct knowledge sharing, as hesitant engineers may withhold valuable insights. Therefore, the study underlines the importance of addressing psychological safety for effective knowledge sharing within organizations. Thus, this study proposes:

Proposition 2: Status distance within hiring firms may diminish the perceived psychological safety of high-status engineers, potentially leading to a reluctance to share their knowledge with the organization.

Ⅵ. Summary

While the importance of hiring engineers on the hiring firm's innovation (Kaiser et al., 2018; Rosenkopf & Almeida, 2003; Simonen & McCann, 2008; Singh & Agrawal, 2011; Song et al., 2003b; Tzabbar, 2009) and the effect of hiring engineer have been examined in prior research (Azoulay et al., 2010; Groysberg et al., 2011; Oettl, 2012; Tzabbar & Vestal, 2015; Prato & Ferraro, 2018). These studies had the assumption that status is embedded in hired engineers and did not bring it into the center of the discussion. To fill this gap, this study explicitly paid attention to the status of hired engineers and explored how

the status distance between hired and incumbent engineers affects innovation by exploring the linkage relationships. In doing so, this study shifts the focus from looking at whether hiring engineers contribute to a hiring firm's innovation, to how the status of hired engineers affects knowledge flows and the psychological safety of hired engineers. Our findings enrich existing research on learning-by-hiring by bringing the status of engineers into the center of the discussion.

The status of hired engineers is found to play an important role in building a firm's innovation, especially when status distance emerges between hired and incumbent engineers. Our findings reveal two dynamic factors-knowledge flows and the psychological safety of hired engineers are closely associated with the status distance between hired and incumbent engineers. This aspect has been under-explored theoretically and empirically in the literature on learning-by-hiring. Status distance determines how knowledge flows, and hired engineers' knowledge is more likely to flow to the firm and contribute to the firm's innovation. That is, status distance spurs knowledge flows coming from hired engineers to the firm. This study also reveals that the firm's intention has focused on optimizing knowledge transfer by assigning hired engineers with diverse roles.

In addition to that, the research reveals that status distance influences not only the psychological safety of low-status engineers, as suggested by prior studies but also exerts a negative influence on the psychological safety of high-status engineers. Despite the various benefits linked to high status, it frequently fosters a reluctance to share knowledge due to concerns about losing these privileges. Partly attributed to the hiring of engineers from other firms, they often perceive themselves as outsiders rather than insiders upon joining the new firms. This perception aligns with the tendency for trust and strong bonds to be established more readily within the ingroup category rather than the outgroup category, as outlined in LMX theory (Graen & Uhl-Bien, 1995; Thrasher et al., 2020). Thus, high-status hired engineers also feel psychologically insecure within their hiring firm which often results in reluctance to share their knowledge.

The focus on knowledge sharing among high-status hired engineers within a team can inadvertently reinforce the perception that sharing knowledge may diminish their value within the organization, consequently affecting their psychological safety. To address these challenges, follower firms can enhance the psychological safety of hired engineers by assigning them to new projects that facilitate their professional growth alongside high-status incumbent engineers. This approach prioritizes their growth and collaboration with peers, rather than solely focusing on knowledge-sharing initiatives. It is imperative for hiring firms to implement policies that foster inclusivity and equity among all employees, providing equal opportunities for meaningful contributions. Furthermore, the lack of security in the hiring firm may arise from a lack of trust in the or-

ganization's ability to protect its status and privileges. Hence, incentivizing interpersonal relationships among co-workers through relationship-building events or open communication channels can have a positive effect on fostering trust and shared value. This, in turn, cultivates a culture of belonging and effective collaboration within the organization, ultimately enhancing the psychological well-being of hired engineers.

Finally, this research acknowledges limitations for future endeavors. Primarily, the study focused exclusively on the setting of the Chinese semiconductor industry, which may limit the broader generalizability of its findings. Future studies should extend their scope to encompass diverse industries and organizational cultures, potentially yielding varied results. Conducting comparative analyses of status distance in the context of learning by hiring across multiple industries or organizations could offer valuable insights into how status distance affects knowledge flows and psychological safety. Moreover, while the study identified an association between status distance, knowledge flows, and psychological safety, establishing causal relationships presents challenges. To address this limitation, future research could adopt longitudinal or experimental designs, thereby facilitating a more profound comprehension of the underlying causal mechanism governing these relationships. Such methodological approaches hold the potential to offer more definitive evidence concerning the impact of status distance on organizational processes.

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〈Appendix 1〉 Data analysis table (sample)

Example quotations	Condensed meaning units (close to the text)	Revising codes/ categories	Concepts
"Unlike other industries, the semiconductor industry has to integrate with many departments and the sales and technical communication are important so the firm provides fair support for this··· in order to maximize the performance for an individual engineer··· we are given the authority to derive or control other departments." (A3)	• The firm provides fair support to maximize the performance of the engineers • We are given the authority to derive or control other departments	Technological contribution of hired engineers	Knowledge flows
"They would not isolate me, when I just came I was an assistant, and when I just came there was no one with me, but after 3 months, we had around 10 to 12 engineers, so the team was established. After setting up a team, I direct the work slowly, training slowly, doing technological tasks slowly." (C1)	• The team was established when I came • I direct the work, training them and doing the technological task		
"Within the firm, hired engineers are often to be rotated, so the standard operating procedure (SOP) has to be made as a recipe when one goes from A team to B team, he has to bring SOP together. The technology has to be shared between teams, and the firm will make hired engineers sufficiently share their knowledge, I have four teams under me, for example, A team make the most advanced technology, and the hired engineer from A team will be sent to the B team to setup technology, share their knowledge, so more teams can conduct same technology." "Firms hire engineers for a reason, hired engineers do what they used to do, or they will train other engineers, and there is a possibility they may continue to develop the next generation of technology. Usually, the purpose of hiring is to absorb advanced knowledge so he will be asked to do what he had done before and then develop new technology, but if he is not able to develop the next generation, if he still has value, he will train other engineers to diffuse the knowledge to more engineers so that more engineers can do the same technology." (A4)	• Hired engineers are often rotated to set up technology • Sharing knowledge between teams • Hired engineers will train other engineers • He will do what he has to do or develop new technology • When hired engineers are not able to develop the next generation • If he still has value he will train other engineers to diffuse the knowledge to more engineers		
"You find an expert, and he belongs to our department, he will be the same as other workers, but the role of hired experts will be more important, many times giving the consultant about his idea if there is a problem then ask, and see if there is the point of conflict if there is something engineers find it different then look for the correct one. Sometimes what they do is right and sometimes what we do is right." (A2)	• Same as other workers but the role is more important • Giving the consultant about his idea • If there is a problem, then ask and find the correct one		
"When experienced one is hired, the firm will create a team, they will have to lead the team to build the foundation, running cycles, the process building foundation is the process of growth and improvement. In the process of self-improvement, if we have some problems, then we will ask them. they will give you a comprehensive direction of guidance. I learnt how to solve the problem in technology··· if we have a problem then we ask them, solving the problem is the process of learning, it will not be the problem when we have a new problem next time." (A8)	• Create a team for a hired engineer • Ask them if we have some problem • They will give a comprehensive direction of guidance • I learn how to solve the problem in technology • Solving problems together to learn		
"There were 18-19 engineers within my team at the time, by now I trained 4 engineers to become managers to support other factories, of course, some of them got promoted or gained new project (duty)" (C2)	• Trained 4 engineers to become managers to support other factories • Some got promoted or gained new project		

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Example quotations	Condensed meaning units (close to the text)	Revising codes/ categories	Concepts
"There is one who has 15 years experience in our team, they usually lead us to enter and master (technology) and provide the direction like a supervisor." …"They help us to enter the field, and later they will help us develop us depending on which direction we want to develop in the field, I can learn much, and if we encounter a problem we cannot solve then we will ask them, sometimes I will be given the working task what they did if there is a problem then ask them first because they know it well as they did before." (H3)	• Lead us to enter the field and master technology • Help us develop depending on which direction we want to develop • When encounter problems then we will ask them • Given the project, they did and ask them about the problem		
"I also train other workers, and if there is a problem, I will tell them why the problem is like this. The person who got trained can work more effectively." (G1)	• Train engineers • Give the reason why the problem is like this • Training to enhance work efficiency		
"Instead of saying training them, I would say since I have more experience than other engineers, so, during the technological task, I will maximize the efficiency when there is a chance, or tell them the technology they did not recognize like seniors tell juniors." (A3)	• Maximize the efficiency • Tell them the technology they did not recognize like seniors tell juniors		
"In this firm, for the last 9 years, I trained 100 engineers, they got a better job after being trained, their working quality has been improved."(A2)	• I trained 100 engineers • They got a better job after being trained • Working quality has been improved		
"Training them is to increase their experience, some technology if you do not transfer, and they do not experience themselves, they are likely to make mistakes, this is one thing. On the other hand, they may not have the same way of analysis of the problem, they will look at this thing very simply but experts will tell you that from a larger scope of analysing things. So this will be helpful for them. When they conduct the same thing by themselves, the first time I have to do it, and if we have the same technological task they can do it independently, or I will help them to find the problem they cannot find when analysing, then they will learn it. So I improve their experience and capability." (G2)	• Training engineers and transfer to help them build experience • Experts will tell you from a larger scope of analyzing things • Trained engineers will do the technological task themselves after I do first • Help them to find the problem they cannot find • Improving their experience and capability		
"In the previous firm, I was just an engineer, but here they treat me as an expert, so for me, the working environment is much better here than in the previous firm… the most technological task is cooperative work so harmony is important, in terms of work, we are harmonized. "(E1)	• Treated as an expert • The working environment is much better than the previous firm • We are harmonized when doing cooperative work	High dependency on newly hired engineers	
" My position was right below manager before being hired by the current firm when I came here, I got promoted, and the salary has increased to … when we work we do not have a problem, because…, our authority is higher so we have relatively less problem in working. " (A2)	• Got promoted and my salary has increased • Do not have a problem when we work because our authority is higher		
"When experts are hired, everyone shows respect, no one arises a conflict with them, you must admire him, his authority is higher than yours… when they are hired, integration into a firm has no problem because when they are initially hired, they will be given a certain level of authority, so no problem to get adapted in the firm. " (H1)	• Everyone shows respect to hired experts • No one arises in conflict with them • Must admire them as his authority is higher • No problem in integration when they are initially hired • They are given certain authority • No problem to get adapted in the firm		

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Example quotations	Condensed meaning units (close to the text)	Revising codes/ categories	Concepts
"I got certain authority, so it is not so difficult to work in the new firm." (A1)	• Certain authority • No difficulty in the new firm		
"They are given a higher position when they are hired, so the integration with other engineers will be easier." (G2, H3)	• Higher position when they are hired • The integration will be easier		
"There will be conflicts, knowledge gap, which will not affect the work. Because of matrix management, the authority given by the firm to the program manager (hired) is relatively high" (L1)	• The conflict and knowledge gap will not affect the work • Matrix management • Given high authority to a hired manager		
"I also do the task that is not in my expertise, it belongs to "Zashi", relating to safety, it has somehow had a relation with my expertise, but the relation is not absolute. Not really, but it is what I have to think about··· What I said that I have never done before means I do manage the cost or to calculate the production capacity, how many machines we need to buy to produce, then I have to find the indicators, the cost of machine and material and so on. I don't know how to do then I learn and ask. I did not know about the operation of the factory at R&D before, but for these few years I learned concepts, so when I went back to my original expertise (profession), I will consider these, for instance, the cost down, I will consider if what I am doing is affect the cost or will it help." (C1)	• Doing things not related to expertise but chores • Manage the cost or calculate the production capacity • I learn and ask if I do not know	Maximizing knowledge transfer	
"I have a lot of chores (Zashi), for instance, work about the public security, the production safety, there is a management team in charge of production safety, but now I manage the production safety of our department···I have to help, this is not my expertise (profession), so my time is dialled away. ···When I was just hired, I was doing my expertise (Huang guan) and training other engineers." (A2) My previous firm is very specialized, but here we have a lot of chores. You cannot focus on what you do, you have to do a lot of things that are not your responsibility, not your speciality, and you should not do. For instance, hiring is what the HR department does, but here we have to do it if they cannot hire. My previous firm was not like this··· specialization is not obvious, and while the previous firm makes it really specific and precise, you will not do it outside of your speciality, it is acceptable to do a technology-related thing. But here you are asked to do many things not related to technology. a lot of things, if you do not do it then you have a disadvantage, in the previous firm, there were no chores, none-technical things." (A2)	• I have a lot of chores, not technical things • The previous firm is specialized, here have a lot of chores • You cannot focus on what you do		
"The atmosphere is similar, but I have to deal with external things and have many chores (Zashi), More times I deal with things and chores (Zashi) with the outside of the firm, more things to do with management. When I was in the previous firm, I didn't do these things, I only did what I had to do." (G1)	• I have to deal with external things and chores • I do things that I have never done before		
"I do things that I have never done before such as managing cost, calculating production capacity, how many machines should be purchased to produce, I will have to look for indicators, the cost for the materials of machines, etc. If I don't understand then I will ask, before I didn't understand the operation of the factory because I was in R&D before, but these years I know it. at least I have the concept, so I will consider more about cost when I do my own expertise if it affects the cost or not." (A1)			

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Example quotations	Condensed meaning units (close to the text)	Revising codes/ categories	Concepts
"Technology of Alpha firm was behind another company when I decided to come here in 2012. Everybody said I was crazy. We gain special incentive for new technology, is it long term? If the local guy can learn does the company keep the special incentive? This is a potential risk for us. Even the local guy still has a gap with us, but it depends on how the firm thinks, it is not controlled by ourselves."(A1)	• Gain special incentives for new technology • A local guy learns then the firm does no keep incentives • The potential risk for us	The potential risk of losing value when sharing knowledge	**The perceived psychological safety**
"To be honest, we came here in 2002 and were going to be here until 2006 and going back to Taiwan, we are going to transfer our value and then when we will have no value to be used, so it is how we set our plan at the time but see we are still here now and did not go out. I think we did not go out because we still have value. Why we have value, firstly, it is about cultural differences, they did not learn seriously, a lot of people cannot drive things··· and secondly, at the time the salary for them is low causing them slow learning. We did not go back between 2002 and 2006 because they did not completely replace us··· The firm cannot operate by depending on one or two persons, so we have to remain (since 2002), now they already learned a certain level of about 8 inches, for the 12 inches, the firm will directly hire experts from other firms, we are also risky because 8inches become a mature technology, they can make themselves without us."(A2) "If he asks me to do something new, I think I can do it too, but you will not have this opportunity, I think I will be replaced, you don't know when. If I want to go to the old factory, then I will not be worried." (A2)	• We are staying here longer than we initially planned • The local guys did not learn much from us • The firm does not replace us • The firm already learn a certain level of 8-inch • We are risky because 8 inches become a mature technology, and they can make it without us • I have no opportunity to do new technology • I will be replaced, but don't know when • If I go to the old factory, there are no worries		
"When we were just hired, we were given a high salary and position, but as time goes by, in some cases, the promotion is slower than local engineers, of course for people who are in a higher position than me, they will prefer workers who have no language and cultural barriers···engineers like me will only work in technical parts, so it is hard to be a higher-level position and become important decision-maker within a firm. therefore, it is undervalued compared to my experience and skill." (A3).	• Given a high salary and position when just hired • The promotion is slower than local engineers • They will prefer workers with no language and cultural barriers • Engineers like me find it hard to be in a higher-level position and become important decision-makers • My knowledge is undervalued		
"I train them and teach them how to do it, about methodology, but in terms of knowhow once I transfer it then there will be no value for me. We see knowhow as idea··· I teach them, but not all" (C1).	• I train and teach them methodology but if I transfer knowhow, no value for me • I teach them but not all		
"I don't think I learn that much by working with mobile engineers, not much has changed for me, I just do my own work, if a project leader teaches team members too much, he will have a risk, and my boss will teach us but he does not want to teach all, he does not want to teach you too much." (M1)	• I don't learn much from them • No much has changed if the leader teaches team members too much, he will have a risky • My boss does not want to teach all		
"A few years ago, Java was popular in the market, now is AI and Big Data, so now we need engineers whose integrating ability is stronger, ···when an expert comes at the time, there is a possibility his knowledge can be fell behind with when he stops learning··· When experts are hired initially, at the time they are useful but they will be obsoleted when the technology is outdated··· when he is just hired, they repeat what they did before, but later if they cannot make a new thing, then their title used to be a manager but now it was removed" (H1)	• Experts will be obsoleted when the technology is out of date • When he repeats what he did before, cannot make a new thing • Their title will be removed	Possibility to lose the advantage	

(계속)

Example quotations	Condensed meaning units (close to the text)	Revising codes/ categories	Concepts
"If you are the leader when you are hired, but the engineers you lead are more capable than you, if the leaders cannot give them advice or the direction that you lead is not as good as your team members then they will be obsoleted. This is probably because they did not grow themselves, there is no value, you remain the same, and people you lead better than you then you have no value." (C2)	• When the team members you lead are more capable than you • When the leaders cannot give advice or lead to a good direction, they will be obsoleted • Leaders do not grow themselves there is no value		
"In terms of technology there is no problem, but if I do not pay attention then I would not gain new information and news about what is going on within the firm, I think it is caused by language problems, or even though in the same firm, department, project, I am a foreigner so I am treated an outsider, so I feel isolated, which decrease my self-esteem which also affects my working efficiency." (A3)	• If I do not pay attention, I will not gain new information due to a language problem • I'm a foreigner so I am treated as an outsider • I feel isolated which decreases my self-esteem • Affects my working efficiency	Personal concern	
"… There is salary requirement, which may be higher than the original salary structure, resulting in an impact on the internal salary system…engineers from other countries face a huge change in language and living condition, challenges associated with team psychological establishment (團隊精神的建立), and concern about future localisation, rising living costs including the cost of children's education and obstacles." (A5)	• Require a higher salary • Resulting in an impact on the internal salary system • Challenges in language and living conditions, team psychological establishment • Concern about future • Rising living costs and the children's education		
"Some hired engineers are not good at building a good relationship with people, sometimes it has a destructive effect on a team atmosphere, this will negatively influence their team working capability. It may depend on the power within a team, more power, more influence so can have a great influence on others in terms of technology and integration. For instance, hired engineers have great capability but tend to do office politics and cause other engineers to leave, even though the technology gap can be filled but if lack of basic human resources can slow down the development progress." (A5)	• Some experts are not good at building a good relationship • It has a destructive effect on the team atmosphere • Negative influence on working capability • More power and more influence on others in technology and integration • Some tend to do office politics • Cause other engineers to leave • The technological gap may be filled but a lack of human resources can slow down the development progress	Perceive others as competitors	
" You feel there is something good, you think it should be done, this new thing you suggest to your department but they may not agree with you, this is to say, the firm looked for an expert, the firm thinks this expert got a lot of good things, that has to transfer to others, refining the current efficiency and some engineering conditions, but the boss in this team may not accept. Promoting your idea is really challenging. People here are not good at adjusting to each other (Mohe), so the expert has no way to promote these good things. What is the point of hiring experts? This is also the reason I want to leave… When the experts come to the firm, they have to integrate or get along (Mohe)with their team members who are in lower positions. But they cannot really get along, they stand opposite for the sake of opposition. Experts see other members as competitors." (A2)	• Hired engineers have to integrate or get along with their team members in a lower position • They cannot get along • Stand opposite for the sake of the opposition • See other members as competitors		

고용된 기술자와 기존의 기술자의 지위적 거리: 반도체 산업의 추격기업의 고용을 통한 학습

전민경*

요 약

본 연구는 선도 기업에서 기술자를 고용하는 것이 추격 기업의 혁신에 미치는 영향을 탐구하며, 특히 고용된 기술자와 기존 기술자 간의 지위적 거리의 역할에 중점을 둔다. 과거 연구는 고용을 통한 학습이 혁신에 미치는 긍정적인 영향을 강조했지만, 본 연구는 지위적 거리가 지식의 흐름과 고용된 기술자들의 심리적 안전감에 미치는 영향을 탐구했다. 실증적 분석을 통해, 지위적 거리는 지식의 흐름과 전반적인 혁신 능력에 영향을 미치고, 또한 높은 지위에 있는 고용된 기술자들의 심리적 안전에도 영향을 미치며, 그들의 지식 공유에 잠재적인 어려움을 일으킨다는 것을 발견하였다. 전반적으로, 본 연구는 고용 관행이 혁신 결과에 미치는 영향에 대한 폭넓은 논의에 유익한 통찰을 제공하여 고용을 통한 학습의 복잡한 다이너믹을 세밀하게 이해할 수 있도록 한다.

주제어: 고용을 통한 학습, 지위적 거리, 지식 흐름, 심리적 안전감, 추격기업, 반도체 산업

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