# University of Groningen

## Historical Institutional Differences and Entrepreneurship

Fisch, Christian; Wyrwich, Michael; Nguyen, Thi Lanh; Block, Jörn H.

university of groningen

faculty of economics and business

**2020004-I&O**

**Historical Institutional Differences and Entrepreneurship: The Case of the Socialist Legacy in Vietnam**

**February 2020**

Christian Fisch
Michael Wyrwich
Thi Lanh Nguyen
Jörn H. Block

SOM is the research institute of the Faculty of Economics & Business at the University of Groningen. SOM has six programmes:
-  Economics, Econometrics and Finance
-  Global Economics & Management
-  Innovation & Organization
-  Marketing
-  Operations Management & Operations Research
-  Organizational Behaviour

Research Institute SOM
Faculty of Economics & Business
University of Groningen

Visiting address:
Nettelbosje 2
9747 AE  Groningen
The Netherlands

Postal address:
P.O. Box 800
9700 AV   Groningen
The Netherlands

T +31 50 363 9090/7068/3815

www.rug.nl/feb/research

# Historical Institutional Differences and Entrepreneurship: The Case of Socialist Legacy in Vietnam

Christian Fisch
Trier University, Faculty of Management, and Erasmus University Rotterdam, Erasmus School of Economics

Michael Wyrwich
University of Groningen, Faculty of Economics and Business, Department of Innovation Management & Strategy
m.wyrwich@rug.nl

Thi Lanh Nguyen
Trier University Faculty of Management

Jörn H. Block
Trier University, Faculty of Management, and Erasmus University Rotterdam, Erasmus School of Economics

# Historical institutional differences and entrepreneurship: the case of socialist legacy in Vietnam

**Christian Fisch [a,b,*], Michael Wyrwich [c], Thi Lanh Nguyen [a], Jörn H. Block [a,b]**

[a]  *Trier University, Faculty of Management, 54296 Trier, Germany.*

[b]  *Erasmus University Rotterdam, Erasmus School of Economics, P.O. Box 1738, 3000 DR Rotterdam, The Netherlands.*

[c]  *Rijksuniversiteit Groningen, Innovation Management & Strategy, Nettelbosje 2, 9747 AE Groningen/ PO Box 800, 9700 AV Groningen, The Netherlands.*

\*  Corresponding authors

*E-mail:* cfisch@uni-trier.de (C. Fisch), m.wyrwich@rug.nl (M. Wyrwich), ntlanhkttc@gmail.com (T. L. Nguyen), block@uni-trier.de (J. H. Block)

**Abstract**

We study the case of Vietnam to assess the long-lasting role of institutional and historical legacy on entrepreneurial outcomes. In particular, we investigate the detrimental effect of socialist institutions on entrepreneurship. Vietnam offers a unique quasi-experimental setting because the country was divided into the socialist North and the nonsocialist South for a relatively short period of two decades. After re-unification the South adopted the institutional framework conditions of the North. To assess the relationship between socialist history and entrepreneurship in this unique setting, we survey more than 3,000 North and South Vietnamese individuals more than four decades after the re-unification of the country. We find that North Vietnamese respondents have lower entrepreneurship intention, are less likely to select into entrepreneurship education programs, and are less willing to engage in business takeover. These patterns indicate the persistence of a long-lasting influence of historical differences in institutional framework conditions on entrepreneurship. The long-run effect of socialism on entrepreneurship is apparently deeper than previously discovered in the prominent case of Germany, where differences in institutional treatment lasted for much longer and ended more recently.

# 1. Introduction

Institutions influence entrepreneurship intentions and activity (e.g., Welter, 2011). Therefore, many countries create policy initiatives to establish entrepreneurship-facilitating institutional framework conditions (e.g., Fritsch et al., 2019). While it is relatively easy to influence factors such as barriers to entry in an entrepreneurship-friendly way (e.g., reducing the number of steps necessary to launch a venture), changing "soft" factors, such as the mentality, values, and attitudes toward entrepreneurship, is more challenging.

We study the case of Vietnam to test the role of institutional and historical legacy on entrepreneurial outcomes. Vietnam offers a unique quasi-experimental setting because the country was divided into the North and the South in 1955 and reunified in 1976. While the North turned into a socialist regime, the South trended toward the Western world. After the devastating Vietnam War (1955–1975), the country was reunited, and the South adopted the socialist institutional framework conditions of the North. Hence, the people in North Vietnam endured socialist treatment for approximately 20 years longer than did those in South Vietnam.

In recent decades, the regime has promoted market-oriented reforms that increase the scope for entrepreneurial activity. The changes in the formal framework conditions have been the same in North and South Vietnam (e.g., Tran, 2019). Prior to these changes, Vietnam's economic and social policy was severely antientrepreneurial (e.g., Tran, 2019; Walder and Nguyen, 2008) and comparable to those of other socialist regimes (e.g., Earle and Sakova, 2000; Pickel, 1992; Wyrwich, 2013). Schwartz and Bardi (1997), for example, find that such policies imply the emergence of antientrepreneurial values among the exposed population. Hence, the approximately 20-year-longer socialist treatment among North Vietnamese people implies a less proentrepreneurial attitude relative to that of South Vietnamese people. A large body of the

3

literature argues that such mental dispositions can persist, despite changes in the formal institutional framework (e.g., Nunn, 2009; Stuetzer et al., 2016; Williamson, 2000).

To assess the relationship between socialist history and entrepreneurship in the unique setting of Vietnam, we survey more than 3,000 individuals in Vietnam. If formal framework conditions rather than informal institutions drive entrepreneurship, then North-South differences regarding entrepreneurship should have vanished soon after reunification and should not persist today (i.e., more than 40 years after reunification). However, we find that the difference in socialist treatment is still visible in a variety of entrepreneurial outcomes, even more than 40 years after the reunification of Vietnam in 1976 and the subsequent similarity in the institutional framework conditions of the North and South. In summary, North Vietnamese respondents are less likely to start a new venture in the next five years. Additionally, they are less likely to enroll in entrepreneurship education programs. Another interesting finding is that North Vietnamese respondents are also less willing to engage in succession and take over an existing business. Overall, these findings highlight the long-lasting influence of historical differences in institutional framework conditions on entrepreneurship.

Given the experimental conditions of our setting (i.e., the formal framework conditions are "fixed"), our findings suggest that informal institutions such as differences in attitudes and values toward economic behavior determine entrepreneurship. Another feature of our setting is that we focus on students who were born long after reunification and have therefore not been exposed to the period with different institutional treatment in the past. Thus, our experimental setting allows us to isolate the intergenerational transmission effect of mentality and attitudes. Furthermore, by focusing on students who are not yet integrated in the labor market, we can rule out that

unobserved labor market characteristics and the selection of people into certain occupations drive our findings. The same holds for external influences on socialization. Aldrich and Kim (2007) argue that this is accompanied by a higher chance that significant events over the life course disrupt the linked lives of children and parents. This, in turn, makes it likely that events outside the family context play a role in the entrepreneurial choices of the children of entrepreneurs.

We contribute to the literature in several ways. First, our study enhances the understanding of the long-term effects of socialism (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013; Xu et al., 2014). In this regard, we also discuss the unique opportunities offered by the case of Vietnam for studying the role of historical legacies on entrepreneurial outcomes (e.g., Tran, 2019). To date, studies on the relationship between socialism and entrepreneurship have mostly focused on Europe. In Europe, socialist legacy in East Germany and Eastern Europe may explain the differences in entrepreneurship compared to Western Europe after the collapse of communism in 1989–1990. Vietnam was reunified in 1976 as a socialist country after a period of separation of only 21 years in which the North had been exposed to socialism but the South had not. Thus, the period of socialist treatment in Vietnam was much shorter than that in Europe, where socialism in the East lasted for approximately 40 years. Thus, the case of Vietnam provides information on whether socialist legacy still matters for entrepreneurial outcomes when the differences in exposure are relatively small and go further back in history. We also add to the literature on the institutional dimension of entrepreneurship education (e.g., Walter and Block, 2016) and on the intergenerational transmission of entrepreneurship (e.g., Chlosta et al., 2012; Laspita et al., 2012; Zellweger et al., 2011), which is an important antecedent for the emergence and persistence of entrepreneurship culture. Finally, we show whether and

how history contributes to explaining entrepreneurial phenomena in emerging economies (e.g., Chang and Wu, 2014; Santarelli and Tran, 2013; Tran, 2019).

Our findings have several practical implications. First, we document the long-lasting impact of institutional differences on entrepreneurship. The short-term-oriented policies for promoting entrepreneurship are unable to reverse long-term historical and institutional legacies. Instead, a long-term-oriented policy is required to overcome the long shadow of history. There are also implications for theory. The role of environmental context in entrepreneurial outcomes should be a central element to any practically relevant theory. Therefore, the role of context extends beyond general factors such as location factors, including industry and market structures or local demand conditions. The history of places also matters. Any theory ignoring historical legacies in entrepreneurial decision making is ill advised. Third, there are managerial implications. Owners of small firms with an entrepreneurial drive may find it difficult to attract talented people from regions with a history of inhibiting entrepreneurship, despite the fact that such people would be a great match based on their job skills. At the same time, the perspective of these employees could increase a company's diversity and development. In countries such as Vietnam but also for the whole of Eastern Europe (e.g., East vs. West Germany) and practically in all places with immigrants from former socialist countries, attracting talented people who have been exposed to an entrepreneurship-inhibiting environment is a major challenge that can be tackled by public-private programs (e.g., support for the presence of SMEs and entrepreneurs at career weeks in universities). In a similar vein, universities that aim to promote their third mission of technology transfer via entrepreneurship need to design their entrepreneurship programs in a way that also attracts students socialized in an entrepreneurship-inhibiting context. The findings on business succession are also interesting because they suggest that the prevalence of entrepreneurs is not sufficient to creating

persistent entrepreneurship or the emergence of an entrepreneurial culture that is self-perpetuating. Apparently, family role models in North Vietnam do not spur such a process to a large degree.

## 2. Theory, context, and hypotheses

### 2.1 Theory and prior research

#### 2.1.1 Institutions and entrepreneurship

A large body of research has studied the role of institutions in entrepreneurship (e.g., Baumol, 1990; Elert et al., 2017; Sobel, 2008). Many studies have focused on the impact of *formal* framework conditions on entrepreneurship, which are typically understood as the formal "rules of the game" such as laws, regulations, and constitutions (e.g., North, 1990; 1994). A typical example of such rules affecting entrepreneurship is entry regulation (Djankov et al., 2002).

Interest in this type of research has increased because changes in formal conditions can be easily implemented by political action. However, despite policy changes and entrepreneurship-promotion programs, mounting empirical evidence suggests persistent place-based differences with respect to entrepreneurial activity. These differences are partially grounded in regional differences in mentality and entrepreneurial attitudes, which are related to the societal approval of entrepreneurship (e.g., Fritsch et al., 2019; Glaeser et al., 2015; Stuetzer et al., 2016). The societal approval of entrepreneurship is a typical example of an *informal* ("soft") institution, which comprises norms, conventions, codes of behavior, and the conduct of society (e.g., North, 1990, 1994). The finding that formal institutional changes do not reverse or cancel out the influence of historically determined informal institutions on entrepreneurship has created an increased research interest in the latter (e.g., Boettke and Coyne, 2009,

Elert et al., 2017). The available evidence suggests that there are long-lasting place-based differences in the approval of entrepreneurship or the "social legitimacy of entrepreneurship" (Etzioni, 1987).

Role models play an important role in establishing the social legitimacy of entrepreneurship (for a vivid conceptualization of this process, see Andersson and Koster, 2011). These mechanisms are also antecedents of well-established conceptual approaches to harnessing entrepreneurship, such as entrepreneurial culture (e.g., Beugelsdijk, 2007; Huggins and Thompson, 2017; Fritsch and Wyrwich, 2017), entrepreneurial ecosystems (e.g., Acs et al., 2014; Stam, 2015; Spigel, 2017), entrepreneurial capital (Audretsch and Keilbach, 2004), and social capital (Westlund and Bolton, 2003). All approaches have in common that there is a local "entrepreneurial climate" that stimulates entrepreneurship. Altogether, the informal approval of entrepreneurship is an important building block of this entrepreneurial climate.

### 2.1.2 Socialism and entrepreneurship

The introduction of socialism in a country entails both formal and informal institutional ramifications. For example, socialism typically includes the establishment of antientrepreneurial formal institutions that trigger low informal approval of entrepreneurship over time. Schwartz and Bardi (1997) describe how socialism crowds out a value orientation for autonomy, which is crucial for entrepreneurship (e.g., Taylor, 1996; Van Gelderen and Jansen, 2006). Additionally, socialism is associated with negative informal values toward private business, a lack of property rights enforcement, an exploiting government inference, and corruption with negative consequences for the development of the private sector (e.g., Aidis et al., 2008; Puffer and McCarthy, 2001; Shleifer and Vishny, 1999). As a result, a negative link between socialist heritage

and entrepreneurship is well documented in a variety of countries (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013).

Based on the available theory and evidence, we conclude that the origin of the institutional approval of entrepreneurship is place-specific. Additionally, low regional institutional approval due to historical development should negatively impact the entrepreneurship intentions of respondents socialized in these places compared to respondents from areas with higher institutional approval of entrepreneurship.

We will focus on the second conclusion in the empirical part of the paper by examining a case where a "natural historical experiment" shaped approval of entrepreneurship differently across regions while the supra-regional formal institutional framework today is the same in both regions. Our examination starts with a careful description of the historical development of our case (i.e., Vietnam).

## 2.2  Context: Vietnam

Following Vietnam's initial division after the First Indochina War in 1954, two socio-economic systems began operating side by side. In the North, the 'Democratic Republic of Vietnam' was under socialist rule and followed the models of the Soviet Union and China. In the South, the nonsocialist 'Republic of Vietnam' was supported by the US and influenced by prior French colonial rule. After the socialist North won the devastating Vietnam War (1955–1975), Vietnam was reunified under socialist rule in 1976. The newly established 'Socialist Republic of Vietnam', which still persists today, is ruled by the Communist Party of Vietnam (CPV) and initially utilized a central planning system. Hence, the formerly nonsocialist South adopted the institutional framework conditions of the socialist North in 1976, in contrast to other settings such as Germany, which was reunified under nonsocialist rule (e.g., Wyrwich, 2013).

From 1976 to 1986, the now socialist Vietnam was characterized by a governmental focus on the development of heavy industry and agriculture. Vietnam was dominated by state-owned enterprises (SOEs), and the private sector was almost nonexistent (Han and Baumgarte, 2000). In 1986, Vietnam began to transition from a planned economy to a market economy with the introduction of the Doi Moi ("renovation") reforms. In contrast to other planned economies, Vietnam's transition process was gradual and characterized by a wait-and-see approach (e.g., Tran, 2019; Walder and Nguyen, 2008). Instead of abruptly privatizing SOEs, Vietnam prompted SOEs to begin operating under market conditions to increase their efficiency and ensure their survival (Tran, 2019). In the following years, Vietnam gradually reduced the privileged treatment of SOEs and began to dissolve them. As part of this transition, private ownership was allowed. The introduction of an "Enterprise Law" in 2000 was a crucial enabler of entrepreneurship in Vietnam, which had previously been prohibited. Since then, the number of private enterprises has increased significantly, from 400 in 2000 to more than 250,000 in 2010 (Tran, 2019).

Today, the Communist Party of Vietnam (CPV) labels Vietnam as a "socialist-oriented market economy". Economically, Vietnam has almost fully transitioned to a market economy. Foreign trade and the labor market are fully liberalized, SOEs are partly privatized, private enterprises are an important contributor to the Vietnamese economy, and Vietnam is a member of the WTO (Tran, 2019). Politically, however, Vietnam is still socialist. The CPV is the sole political actor and maintains a unitary government with centralized control, and socialism is the official political ideology. This is also reflected in the education system, where political subjects are compulsory courses (e.g., Marxist-Leninist philosophy and Marxist political economics) that students have to pass prior to graduating.

Vietnam's transition process shares many features with that of China, where market reforms began in 1982 (e.g., Tran, 2019; Walder and Nguyen, 2008). In contrast to other transition economies, both countries were relatively successful in transitioning to market-based economies, as evidenced by steady GDP growth (Tran, 2019). Both countries stand out with regard to the continuity of their political institutions. However, a distinct difference is China's focus on attracting multinational companies, while Vietnam's transition was backed by the rise of local, private companies (e.g., Tran, 2019; Walder and Nguyen, 2008). While SOEs continue to be flagships of China's economy, entrepreneurial ventures play a crucial role in Vietnam's transition to a market economy (Nguyen and Rose, 2009).

Given Vietnam's historical diversity regarding the influence of socialism, Vietnam offers a unique quasi-experimental setting that allows us to explore the influence of socialist heritage in a nuanced way. Various studies have assessed the effect of socialism on entrepreneurship intentions and attitudes based on the case of Germany (e.g., Bauernschuster et al., 2012; Lechner and Pfeiffer, 1993). Germany was divided for 40 years into the nonsocialist West and the socialist East. After Germany's reunification in 1990, the same formal institutional framework became effective in both parts of the country. Studies have documented the persistence of East-West differences regarding entrepreneurship more than two decades after reunification (e.g., Wyrwich, 2013). In our Vietnamese setting, the (different) exposure to socialism only endured for 21 years, and reunification had already taken place in 1976. In contrast to Germany, this allows us to test the effect of a significantly shorter treatment intensity. Since the reunification was 15 years earlier than that in Germany, we can also investigate a larger temporal distance to the treatment with the current data. Put differently, the case of Vietnam is more "extreme" than those of other countries, and finding a socialist treatment effect under these conditions suggests that socialist legacy can endure much

longer than we know from previous research, despite much shorter treatments compared to that in previous research.

## 2.3 Hypotheses: socialist heritage and entrepreneurship in Vietnam

### 2.3.1 Socialist heritage and entrepreneurship intentions

Various conceptual approaches explain how the informal societal approval of entrepreneurship shapes an individual's entrepreneurship intentions and, ultimately, his/her entrepreneurial activity.

The role model approach (e.g., Andersson and Larsson, 2016; Bosma et al. 2012; Chlosta et al. 2012; Kacperczyk, 2013; Minniti 2005; Nanda and Sorenson 2010; Sorenson, 2017) argues that entrepreneurship intentions emerge via social interaction with entrepreneurs at the local or micro level. Social interaction with entrepreneurs implies learning about entrepreneurial tasks through demonstration and peer effects. Consequently, if there are only a few entrepreneurs in the local environment because of low institutional approval, the capacity of entrepreneurial role models to unfold and promote entrepreneurship intentions is also low. Additionally, low institutional approval may also decrease the "willingness" of individuals to socially interact with or learn from existing entrepreneurs. Low approval may also reduce demonstration and peer effects. In this regard, Wyrwich et al. (2016) show that knowing an entrepreneur has a lower impact on promoting entrepreneurial attitudes among respondents who have been exposed to socialism, one of the most entrepreneurship-hostile economic systems in history (Earle and Sakova, 2000).

North Vietnam has been under socialist rule since 1955, while South Vietnam became socialist in 1976. In essence, the socialist treatment in North Vietnam lasted 21 years longer than that in the South. Since exposure to socialist ideology negatively affects entrepreneurship intentions, people from South Vietnam should have higher

entrepreneurship intentions relative to people from the North. We expect these differences to persist beyond the generation of people who directly experienced the period prior to 1976. If this is true, people born after 1976 but who were raised and socialized in either North or South Vietnam should be different with respect to their perception of entrepreneurship and entrepreneurship intentions.

**H1:** *Individuals from North Vietnam have lower entrepreneurship intentions than individuals from South Vietnam.*

### 2.3.2 Socialist heritage and entrepreneurship education

Another crucial pillar of entrepreneurship is entrepreneurship education. In the hopes of fostering entrepreneurship, policy makers frequently invest in entrepreneurship education at the university level (e.g., Brush et al., 2003; Katz, 2003). Studies indeed have suggested that entrepreneurship education is able to foster entrepreneurial activity (e.g., Kautonen et al., 2015; Rauch and Hulsink, 2014). Walter and Block (2016) find that the positive relationship between entrepreneurship education and the subsequent entrepreneurial activity of entrepreneurship education is particularly pronounced in entrepreneurship-hostile institutional environments.

While these studies have focused on the effect of entrepreneurship education on entrepreneurship, we argue that there is a selection effect involved. If people from North Vietnam have lower entrepreneurial intentions due to their socialization as hypothesized in the previous section, they should also reveal a lower willingness to learn about entrepreneurship. Therefore, we expect individuals in North Vietnam to engage less often in entrepreneurship courses than their South Vietnam counterparts.

**H2:** *Individuals from North Vietnam are less likely to participate in entrepreneurship education programs than are individuals from South Vietnam.*

### 2.3.3 Socialist heritage and the intergenerational transmission of entrepreneurship

In addition to the role model approach, the vast literature on the intergenerational transmission of entrepreneurship is helpful for understanding the persistent effect of the informal institutional approval of entrepreneurship and the formation of entrepreneurship intentions. (e.g., Chlosta et al. 2012; Laspita et al., 2012; Lindqvist et al., 2015; Wyrwich, 2015).

Parents can influence their children via certain parenting practices and by transmitting their value orientation (e.g., Aldrich and Kim 2007; Dohmen et al. 2012). Furthermore, children observe their parents' entrepreneurial behavior and their day-to-day business activity. These mechanisms foster the internalization of the norms of entrepreneurial behavior that are conducive to the development of a preference for entrepreneurial behavior.

The parental transmission of values is part of the socialization process. This idea is also guided by approaches that demonstrate the role of family socialization in the transmission of norms and values (e.g., Bisin and Verdier, 2000, 2001; Doepke and Zilibotti, 2008; Tabellini, 2008). We understand values as "...deeply held convictions about religious or moral principles or beliefs about the long-run consequences of alternative patterns of behavior that likely apply to everyone", which are crucial for preference formation (Tabellini, 2008, 918). In the approach of Bisin and Verdier (2000, 2001), for example, parents experience an increase in utility when they can increase the wellbeing of their offspring. This is referred to as paternalistic altruism. Parents can exert socialization effort (e.g., spending time with their children), with one purpose of doing so being their desire to instill in their children their own values, based on the assumption that their value system is the best one for their children, which is referred to as imperfect empathy. The authors also argue that nonfamily socialization

occurs in the local environment. Hence, overall socialization is affected by family and local influences.

Against this background, we assume that entrepreneurial parents (or close family members) in regions with a low institutional approval of entrepreneurship are willing to transmit their value orientation to their offspring. However, the environmental context may imply that their emphasis on transmitting the entrepreneurial components of their value profile is lower. For example, if they experience resistance toward their own activity, then this may discourage their effort to instill entrepreneurial preference among their children to spare them the same experience in the future. Even if this is not taking place, a low institutional approval of entrepreneurship in the local environment may offset parental efforts to instill entrepreneurial experiences in their children. As mentioned above, not only parents but also other local role models influence the entrepreneurial decision making of individuals. If the social acceptance of entrepreneurship and the number of entrepreneurial peers in the local environment are low, then parental efforts might be thwarted. Therefore, the local environment is not complementary to parents' efforts but rather in conflict with social standards regarding entrepreneurship.

A low institutional approval of entrepreneurship may imply that children of entrepreneurs also show a lower willingness to learn about entrepreneurial task profiles from their parents. It was argued above that people exposed to socialist regimes show a lower willingness to develop and learn entrepreneurial skills (see also Wyrwich et al., 2016). Altogether, we expect that people in regions with a low institutional approval of entrepreneurship also reveal a lower willingness to run a venture when their parents are self-employed compared to people with role models in their environment in areas with higher institutional approval. The same applies to business succession, and the arguments are similar. Therefore, we hypothesize the following:

**H3a:** *Individuals from North Vietnam who are exposed to the entrepreneurial experiences of their parents or close family members have a lower willingness to start new ventures than individuals from South Vietnam with such experience.*

**H3b:** *Individuals from North Vietnam who are exposed to the entrepreneurial experiences of their parents or close family members have a lower willingness to engage in business succession than individuals from South Vietnam with such experience.*

## 3. Data and variables

### 3.1 Survey design and data collection

We developed a paper-based survey to collect primary data on the effect of socialist legacy on entrepreneurial outcomes in Vietnam.

Since we are primarily interested in younger individuals who have not been directly exposed to socialism, students serve as our target population. While the use of student samples is often criticized, they can be appropriate under certain circumstances. In particular, prior research has indicated that student samples are particularly useful and adequate when studying entrepreneurship intentions (e.g., Hsu et al., 2019; Hsu et al., 2017; Krueger et al., 2000). This is because experienced entrepreneurs have already transformed their entrepreneurship intent to actual behavior, which makes it difficult to assess the impact on intentions in retrospect (Liñán and Chen, 2009). In addition, starting or taking over a business is a realistic and relevant option for students, which is crucial for the validity of the results (Zellweger et al., 2011).

The questionnaire was developed in English and then professionally translated into Vietnamese. Before entering the field, we conducted a pretest with 24 Vietnamese students (including 12 Ph.D. students) and a Vietnamese entrepreneurship scholar. In the pretest, we collected and incorporated an extensive amount of feedback on all aspects of the survey.

We conducted the survey at Vietnamese universities in September and October 2018. A total of 3,557 students from 21 universities throughout Vietnam participated in the survey. The 21 universities include some of the country's largest institutions, such as the University of Economics Ho Chi Minh City, Vietnam National University (Hanoi), and Hanoi University of Science and Technology. Ten universities were located in the North, and 11 universities were located in the South of Vietnam. A detailed breakdown of the universities and the respondents per university is provided in the Appendix (Table A1).

We excluded participants who were not Vietnamese, participants with missing values for variables of interest, and participants who did not indicate clear career choice intentions (e.g., Walter and Block, 2016; Zellweger et al., 2011). Our final sample comprised 3,010 respondents.

### 3.2 Variables

### 3.2.1 Dependent variables

To capture respondents' career choice intentions, we follow Zellweger et al. (2011) and use the intention scale employed in the "global university entrepreneurial spirits students' survey" (GUESSS). This established scale was specifically developed to capture the career choice intentions of students in a nuanced way. Based on the question "Which career path do you intend to pursue five years after the completion of stud-

ies?", respondents can choose among the responses of (1) employee, (2) founder entrepreneur, (3) successor, and (4) others (e.g., "no professional career" and "do not know"). In line with the prior research, we exclude individuals who answered (4) 'others' because they do not have a clear career intention (e.g., Walter and Block, 2016; Zellweger et al., 2011). Similar to Zellweger et al. (2011), we use a time lag of five years because entrepreneurs often work in a different company before starting or taking over their own business (Brockhaus and Horwitz, 1986).

We derive two dependent variables from this question. First, we create a dummy variable ('*entrepreneurship intention*') that takes a value of 1 if the respondent intends to pursue a career as a (2) founder entrepreneur or (3) successor and 0 if the respondent intends to pursue a career as an (1) employee. Second, among the individuals with entrepreneurship intentions, we capture respondents' preference to take over an existing business vs. creating a new startup ('*new venture startup vs. business takeover*'). The dummy variable takes a value of 1 if the respondent intends to pursue a career as a (3) successor and 0 if the respondent intends to pursue a career as a (2) founder entrepreneur.

As a third dependent variable, we capture whether respondents received some form of entrepreneurship education during their studies via the following question: "have you ever taken a course or workshop related to entrepreneurship during your studies?" The dummy variable '*entrepreneurship course*' is coded 1 for yes and 0 for no. The question is derived from the European Commission's Flash Eurobarometer (No. 354), "Entrepreneurship in the EU and Beyond", which has frequently been used in prior entrepreneurship research (e.g., Block et al., 2019; Gohmann, 2012).

### 3.2.2 Independent variable

To capture the impact of socialist legacy on entrepreneurial outcomes, we asked respondents to indicate whether they were born and grew up[1] in North Vietnam (socialist) or South Vietnam (nonsocialist). The dummy variable '*Origin: North Vietnam*' takes a value of 1 for respondents from North Vietnam and a value of 0 for respondents from South Vietnam.

### 3.2.3 Control variables

We control for a range standard of sociodemographic characteristics that shape entrepreneurial outcomes. These include age, gender, marital status, nationality, ethnicity, religion, level of studies, field of studies, and years of studies. All variables and their definitions are summarized in Table 1.

To capture respondents' risk attitudes, we asked them to state their willingness to take a risk on a ten-point scale ranging from 0 ("highly risk-averse") to 10 ("fully prepared to take a risk"). This question is adapted from Block et al. (2015). Finally, we collect information on respondents' family background, which is associated with the intergenerational transmission of socialist values in prior entrepreneurship research (Wyrwich, 2015). As such, we control for whether respondents' father, mother, or other close family members were or are currently self-employed.

*- Please insert Table 1 around here -*

---

[1] We asked respondents to separately indicate (1) where they were born and (2) where they grew up. All of the respondents that were born in the North (South) also grew up in the North (South).

# 4. Results

## 4.1 Descriptive statistics and univariate analysis

Table 1 displays descriptive statistics and compares the mean values of individuals born and raised in North Vietnam (socialist) and South Vietnam (formerly nonsocialist). Our North-South distribution is balanced: out of the 3,010 individuals in our sample, 1,466 were born and raised in North Vietnam (49%) and 1,544 were born and raised in South Vietnam (51%).

### 4.1.1 Dependent variables

Regarding respondents' career choice intentions, 55% of respondents intend to pursue a career as an entrepreneur (i.e., founder or successor) five years after the completion of their studies. In contrast, 45% of respondents intend to work as employees. Among the 1,656 with entrepreneurship intentions, 7% of respondents intend to engage in business succession, while 93% intend to start a new venture. Significant differences exist between North and South Vietnamese: While 59% of South Vietnamese respondents have entrepreneurship intentions, only 51% of North Vietnamese respondents do. In general, the descriptive statistics show that North Vietnamese respondents seem to perceive a career as an employee as more attractive than do South Vietnamese respondents.

In addition, 60% of our respondents indicated that they participated in a course at a university that was related to entrepreneurship. Again, the ratio is notably higher in the South (64%) than in the North (55%).

Finally, among the respondents with entrepreneurship intentions (N = 1,656), the intention to takeover an existing business (vs. founding a new venture startup) is also less pronounced in the North: 5% of respondents from the North intend to engage in business succession, in contrast to 8% in the South.

Overall, the North-South differences in the dependent variables (*entrepreneurship intention, entrepreneurship course*, and *startup vs. takeover*) are statistically significant (p < .05). The results indicate a higher interest in entrepreneurship among respondents from South Vietnam than among those from North Vietnam and simultaneously provide the first evidence of a negative impact of a more pronounced socialist history.

### 4.1.2  Control variables

Our respondents are 20 years old on average and mostly female (56%). Ninety-five percent of our respondents are Kinh, which is the main ethnicity in Vietnam. While no major North-South differences exist regarding gender and ethnicity, respondents from the North less often have a religious affiliation. Overall, 87% of respondents with North Vietnamese origin have no religious affiliation, in contrast to 65% of respondents from the South. Since antireligion is a central tenet in socialism (Barro and McCleary, 2005), this finding may be a further outcome of the enduring socialist rule in North Vietnam.

The majority of our respondents study law or economics (46%), which partially explains the high number of students who had already taken entrepreneurship courses. The second-largest field of study is computer sciences (21%). On average, our respondents studied for 14 years (the typical number of school years before attending a university is 12 in Vietnam).

While no significant differences exist regarding respondents' willingness to take risks, 49% of respondents have self-employed parents or close family members. Interestingly, this value does not significantly differ between the South (50%) and the North (49%).

### 4.2 Main analyses

We perform multiple regression analyses to assess the impact of a North Vietnamese origin on different entrepreneurial outcomes. The main results regarding our hypotheses are displayed in Table 3, which shows logit coefficients with robust standard errors in parentheses. Table 2 provides a correlation matrix and variance inflation factors, which indicate that our main results do not suffer from multicollinearity problems.


*- Please insert Tables 2 and 3 around here -*


Model (1) of Table 3 focuses on H1 and uses '*entrepreneurship intention*' as the dependent variable. The analysis compares individuals with entrepreneurship intentions (i.e., as a founder entrepreneur or successor) to individuals who intend to pursue a career as an employee. Since the dependent variable is dichotomous, we employ a logistic regression. The analysis considers the full sample of 3,010 individuals. Model (1a) only includes the independent variable '*Origin: North Vietnam*' and shows a negative and highly significant ($p < .01$) effect of a North Vietnamese origin on entrepreneurship intentions. The highly significant effect persists when the control variables are entered into Model (1b) ($p < .01$). This finding supports H1 and shows that entrepreneurship intentions in North Vietnam continue to be significantly lower than those in the formerly nonsocialist South Vietnam.

Model (2) of Table 3 focuses on an individual's selection into entrepreneurship education (H2) and uses '*entrepreneurship course*' as the dependent variable. Since the dependent variable is dichotomous, we use a logistic regression. Model (2) considers the full sample of 3,010 individuals. Model (2a) only includes the independent variable 'O*rigin: North Vietnam*' and shows a negative and highly significant ($p < .01$)

effect of a North Vietnamese origin on the likelihood of participating in an entrepreneurship-related course at a university. The effect persists when the control variables are entered into Model (2b). This finding supports H2, which argues that respondents from North Vietnam are less likely to enroll in entrepreneurship-related activities, such as entrepreneurship education.

Finally, Model (3) of Table 3 focuses on H3 and uses '*new venture startup vs. business takeover*' as the dependent variable. Research on an individual's mode of entry into entrepreneurship (e.g., new venture startup vs. business succession) often distinguishes individuals from business-owning families and individuals from non-business-owning families since the possibility of engaging in business succession depends on the availability of a business in the family environment (e.g., Parker and Van Praag, 2012). In this analysis, we therefore only consider those respondents who have a close family member that is self-employed. This reduces our sample from 3,010 to 1,489 respondents. For testing H3, the sample restriction is not critical because we refer to a comparison between North and South Vietnamese with entrepreneurship experience among family members.

We estimate a multinomial logit model with three career choice outcomes: (1) employee (baseline), (2) new venture startup (founder entrepreneur), and (3) business takeover (succession). In line with our hypotheses, the results show that the North Vietnamese respondents have a significantly lower intention to start a new venture (Model 3a, $p < .01$) and to engage in business succession and take over an existing venture (Model 3b, $p < .01$) than do South Vietnamese respondents. Further, the results indicate that the aversion of business succession seems to be more pronounced than the aversion of new venture startup. As such, business takeover seems to be particularly unattractive to respondents from North Vietnam.

## 4.3 Further analyses and robustness checks

Our main analysis suggests that business takeover seems to be more unattractive to our respondents than new venture start-up. To assess this finding in more detail, we perform a subsample analysis that only considers individuals with entrepreneurship intentions and excludes individuals who intend to pursue a career in wage employment (N = 1,656). Hence, the dependent variable '*new venture startup vs. business takeover*' takes a value of 1 if the respondent intends to takeover an existing business and 0 if the respondent intends to start a new venture startup. The results are reported in Model 1 of Table 4. Model (1a) shows a negative relationship (p < .05). The negative effect persists when the control variables are entered into Model (1b) but slightly loses significance (p < .10). Overall, these results suggest that North Vietnamese respondents have a particular aversion to business succession.

The possibility of succeeding in a business usually depends on whether close family members own a business. Extending Model (1), we thus reduce our sample to individuals (a) with entrepreneurship intentions and (b) with close family members who are self-employed (N = 892). The results of this subsample analysis are displayed in Model (2). The results show that the negative association between a North Vietnamese origin and business succession persists even when only individuals with close family members in self-employment are considered. The effect is significant (Model 2a, p < .05) and persists when all control variables are entered (Model 2b, p < .05). This result further underlines the pronounced aversion to business succession among respondents from North Vietnam.

Our main analysis uses a sample of individuals who have close family members who are self-employed. As a further robustness check, we reestimate Model (3) of Table 3 using the full sample (i.e., including respondents who have no self-employed members in their close family). The results reported in Model (3) of Table 4 underline

24

the robustness of the main results. The negative associations between a North Vietnamese origin and new venture startup as well as business takeover persist. Again, the negative effect is more pronounced in the case of business takeover.

Finally, our arguments and previous findings suggest that an interaction effect exists between origin (i.e., North Vietnam) and family environment (i.e., close family members are self-employed). As a second robustness check on H3, we reestimate our main analyses and include also respondents without entrepreneurship experience among family members. We introduce an interaction term between '*Origin: North Vietnam*' and '*close family member who is self-employed*'. Since both variables are dummy variables, we construct a new set of variables that capture all possible combinations of the variables. The results are reported in Model (3) of Table 4. The reference category comprises individuals from South Vietnam who do not have any close family members who are self-employed. Compared to this reference category, individuals from South Vietnam with self-employed family members have entrepreneurship intentions that are significantly higher than those of individuals from North Vietnam. Furthermore, the results show that North Vietnamese respondents without close family members in self-employment have significantly lower entrepreneurship intentions than that of South Vietnamese respondents. This effect supports our main results and indicates that the positive effect of the family environment on entrepreneurship intentions is significantly larger in South Vietnam.

## 5. Discussion and conclusions

### 5.1 Discussion

We document the long-lasting influence of historical differences in institutional framework conditions on entrepreneurship. To the best of our knowledge, we are the

first to make use of the quasi-natural experiment of Vietnam. While the Vietnamese setting is similar to the German case that has been heavily studied in the past (e.g., Wyrwich, 2013), important differences exist.

In Germany, both parts of the country reunited after four decades of separation, at which time Eastern Germany was exposed to socialism. There is evidence that exposure to socialism negatively impacts entrepreneurship in Eastern Germany (e.g., Bauernschuster et al., 2012; Wyrwich, 2013). The Vietnamese setting differs because it reflects a reverse situation. Here, the North and South reunited with the socialist institutional framework conditions being introduced in the South. In Germany, the framework conditions of the West-German-type market economy prevailed in the formerly socialist East. Our reverse setting is a testbed to assess whether the effect of socialism on entrepreneurship is specific to Germany and its specific form of reunification. Thus, we provide evidence of an effect of socialism on entrepreneurship beyond the German context and beyond the context of Eastern vs. Western Europe.

Furthermore, the period of differences in exposure is much shorter in Vietnam (two decades) compared to that in Germany (four decades) and that in Western and Eastern Europe (seven decades when considering former Soviet Union countries). Hence, our setting allows for testing whether even a "small" difference in socialist exposure can have a long-run impact on entrepreneurship. Our evidence suggests that two decades of different exposure to socialism have led to pronounced differences in entrepreneurship more than 40 years later. This pattern also suggests that the effect of socialism and institutions more generally works through the intergenerational transmission of values since our respondents were not born when the differential institutional treatment of North and South Vietnam ended in the mid-1970s. It is even very likely that many parents of our study group were born after the reunification of Vietnam. In Germany, studying legacy effects is only possible for a period of up to 25

years, with most respondents at least partly socialized in the formerly socialist East Germany.

*- Please insert Table 4 -*

## 5.2 Contributions

We contribute to the literature in several ways. First, we show that differences in exposure to socialism affect entrepreneurship beyond the cultural context of Germany and Eastern Europe, and we show that even small differences in socialist treatment intensity can have long-run effects on entrepreneurial outcomes. These insights enhance our understanding of the role of institutions in entrepreneurship and socialism in particular (e.g., Aidis et al., 2008; Alesina and Fuchs-Schuendeln, 2007; Wyrwich, 2013; Xu et al., 2014).

Second, we contribute to the entrepreneurship education literature by highlighting the role of external framework conditions on enrollment in entrepreneurship programs. Thus, our results suggest that entrepreneurship education is influenced by institutions not only regarding its effectiveness (e.g., Walter and Block, 2016) but also in regard to the question of who participates in entrepreneurship education in the first place.

Third, we contribute to the literature on entrepreneurship in emerging economies (e.g., Chang and Wu, 2014; Santarelli and Tran, 2013; Tran, 2019). More precisely, we show how history and socioeconomic legacies still impact entrepreneurial development. This finding also contributes to the emerging literature that focuses on the past to understand entrepreneurial phenomena (e.g., Wadhwani and Lubinski, 2017).

Finally, our paper also contributes to the literature on the emergence and persistence of entrepreneurial culture via intergenerational transmission. This transmission is assumed to be a main mechanism for the self-perpetuation of entrepreneurship (e.g., Fritsch and Wyrwich, 2019). However, our results show that individuals with self-employed parents or close family members have lower start-up and business takeover intentions if their families are exposed to antientrepreneurial institutions for a longer time. Thus, the emergence of an entrepreneurial culture is hampered by such historical legacies.

## 5.3 Practical implications

We find that students from North Vietnam enroll in entrepreneurship courses less often than students from South Vietnam, which we attribute to North Vietnam's entrepreneurship-hostile environment. This finding has as an important practical implication since prior research shows that entrepreneurship education (e.g., participation in entrepreneurship-related courses) has a particularly strong effect in entrepreneurship-hostile environments (Walter and Block, 2016). Hence, if students do not sign up for an entrepreneurship course in entrepreneurship-hostile environments, the positive effect of entrepreneurship education cannot unfold. Thus, university administrators or policy makers from formerly socialist countries interested in fostering entrepreneurial activity should consider making entrepreneurship education a compulsory element of university education. At the same time, individuals who actually participate in entrepreneurship courses, especially in hostile environments where they face resistance for their decision to engage in entrepreneurship education and activity, may be characterized by a high interest in entrepreneurship, which is then manifested in higher entrepreneurial activity.

Another practical implication stems from our finding on business takeover or family succession as a career option. We find that students in North Vietnam are less interested in taking over an established business than founding a new venture, which can lead to a situation in which successful businesses do not find a successor. This has negative implications for the development of a healthy family business sector and the country's economic development. Prior research has shown that family firms constitute an important part of many economies around the world (e.g., Andersson et al., 2018; Carney et al., 2017) and can contribute positively to job stability (e.g., Bjuggren, 2015; Neckebrouck et al., 2018) and national competitiveness (Carney et al., 2017). Policy makers and higher education administrators in (formerly) socialist countries should consider improving the image of family businesses and setting up specific courses to motivate and prepare potential family business successors.

## 5.4   Limitations and avenues for future research

We focus on entrepreneurship intentions as our dependent variable. The theory of planned behavior assumes that intentions are generally a good predictor of actual behavior. However, prior research has shown that entrepreneurship intentions do not always translate into actual entrepreneurial actions, which is known as the intention-action gap (e.g., Kautonen et al., 2015; Van Gelderen et al., 2015). An intention-action gap exists in entrepreneurship because several internal and external factors shape individuals' final decisions to engage in entrepreneurship. In formerly socialist countries such as Vietnam, external factors might still be prevalent and ultimately prohibit individuals from translating their high intentions into actual behavior. This intention-action gap potentially limits the generalizability of our results beyond the construct of entrepreneurship intentions. Building on this finding, future studies could use a similar setting to study entrepreneurial action against the background of socialist history.

Additionally, future research could draw on longitudinal designs to assess whether and how students turn their intentions into entrepreneurial actions in such a setting (e.g., Van Gelderen et al., 2015).

Relatedly, we focus on students as our target population because we are primarily interested in younger individuals that were not directly exposed to socialism. Prior research indicates that student samples can be particularly useful and adequate when studying entrepreneurship intentions (Hsu et al., 2019; Hsu et al., 2017; Krueger et al., 2000). Still, the external validity of student samples can be criticized. As such, it would be interesting to reassess our findings using different samples, such as employees or actual entrepreneurs.

# References

Acs, Z.J., Autio, E., Szerb, L., 2014. National systems of entrepreneurship: measurement issues and policy implications. Research Policy, 43(3), 476–494.

Aidis, R., Estrin, S., Mickiewicz, T., 2008. Institutions and entrepreneurship development in Russia: a comparative perspective. Journal of Business Venturing, 23(6), 656–672.

Aldrich, H.E., Kim, P.H., 2007. A life course perspective on occupational inheritance: self-employed parents and their children. In: Ruef, M., Lounsbury, M. (Eds.). The Sociology of Entrepreneurship, Research in the Sociology of Organizations, 25, 33–82.

Alesina, A., Fuchs-Schuendeln, N., 2007. Good-bye Lenin (or not?): the effect of communism on people's preferences. American Economic Review, 97(4), 1507–1528.

Andersson, F.W., Johansson, D., Karlsson, J., Lodefalk, M., Poldahl, A., 2018. The characteristics of family firms: exploiting information on ownership, kinship, and governance using total population data. Small Business Economics, 51(3), 539–556.

Andersson, M., Koster, S., 2011. Sources of persistence in regional start-up rates—evidence from Sweden. Journal of Economic Geography, 11(1), 179–201.

Andersson, M., Larsson, J.P., 2016. Local entrepreneurship clusters in cities. Journal of Economic Geography, 16(1), 39–66.

Audretsch, D.B., Keilbach, M., 2004. Entrepreneurship capital and economic performance. Regional Studies, 38(8), 949–959.

Barro, R.J., McCleary, R.M., 2005. Which countries have state religions? The Quarterly Journal of Economics, 120(4), 1331–1370.

Bauernschuster, S., Falck, O., Gold, R., Heblich, S., 2012. The shadows of the socialist past: lack of self-reliance hinders entrepreneurship. European Journal of Political Economy, 28(4), 485–497.

Baumol, W.J., 1990. Entrepreneurship: productive, unproductive, and destructive. Journal of Political Economy, 98(5), 893–921.

Beugelsdijk, S., 2007. Entrepreneurial culture, regional innovativeness and economic growth. Journal of Evolutionary Economics 17(2), 187–210.

Bisin, A., Verdier, T., 2000. "Beyond the melting pot": cultural transmission, marriage, and the evolution of ethnic and religious traits. The Quarterly Journal of Economics, 115(3), 955–988.

Bisin, A., Verdier, T., 2001. The economics of cultural transmission and the dynamics of preferences. Journal of Economic Theory, 97(2), 298–319.

Bjuggren, C.M., 2015. Sensitivity to shocks and implicit employment protection in family firms. Journal of Economic Behavior & Organization, 119, 18–31.

Block, J.H., Fisch, C.O., Lau, J., Obschonka, M., Presse, A., 2019. How do labor market institutions influence the preference to work in family firms? A multilevel analysis across 40 countries. Entrepreneurship Theory and Practice, 43(6), 1067–1093.

Boettke, P.J., Coyne, C.J., 2009. Context matters: institutions and entrepreneurship. Foundations and Trends in Entrepreneurship, 5(3), 135–209.

Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., Verheul, I., 2012. Entrepreneurship and role models. Journal of Economic Psychology, 33(2), 410–424.

Brockhaus, R.H., Horwitz, P.S., 1986. The art and science of entrepreneurship. The Psychology of the Entrepreneur, 2(11), 25–48.

Brush, C.G., Duhaime, I.M., Gartner, W.B., Stewart, A., Katz, J.A., Hitt, M.A., Alvarez, S.A., Meyer, G.D., Venkataraman, S. 2003. Doctoral education in the field of entrepreneurship. Journal of Management, 29(3), 309–331.

Carney, M., Duran, P., van Essen, M., Shapiro, D., 2017. Family firms, internationalization, and national competitiveness: does family firm prevalence matter? Journal of Family Business Strategy, 8(3), 123–136.

Chang, S.J., Wu, B., 2014. Institutional barriers and industry dynamics. Strategic Management Journal, 35(8), 1103–1123.

Chlosta, S., Patzelt, H., Klein, S.B., Dormann, C., 2012. Parental role models and the decision to become self-employed: the moderating effect of personality. Small Business Economics, 38(1), 121–138.

Djankov, S., La Porta, R., Lopez-de-Silanes, F., Shleifer, A., 2002. The regulation of entry. The Quarterly Journal of Economics, 117(1), 1–37.

Doepke, M., Zilibotti, F., 2008. Occupational choice and the spirit of capitalism. The Quarterly Journal of Economics, 123(2), 747–793.

Dohmen, T., Falk, A., Huffman, D., Sunde, U., 2012. The intergenerational transmission of risk and trust attitudes. Review of Economic Studies, 79(2), 645–677.

Earle, J.S., Sakova, Z., 2000. Business start-ups or disguised unemployment? Evidence on the character of self-employment from transition economies. Labour Economics, 7(5), 575–601.

Elert, N., Henrekson, M., Stenkula, M., 2017. Institutional reform for innovation and entrepreneurship—An agenda for Europe. Springer Nature.

Etzioni, A., 1987. Entrepreneurship, adaptation and legitimation. Journal of Economic Behavior & Organization, 8, 175–199.

Fritsch, M., Obschonka, M., Wyrwich, M., 2019. Historical roots of entrepreneurial culture and innovation activity—an analysis for German regions. Regional Studies, 53(9), 1296–1307.

Fritsch, M., Sorgner, A., Wyrwich, M., 2019. Self-employment and well-being across institutional contexts. Journal of Business Venturing, 34(6), 105946.

Fritsch, M., Wyrwich, M., 2017. The effect of entrepreneurship on economic development—an empirical analysis using regional entrepreneurship culture. Journal of Economic Geography, 17, 157–189.

Glaeser, E.L., Kerr S.P., Kerr W.R., 2015. Entrepreneurship and urban growth: an empirical assessment with historical mines. Review of Economics and Statistics, 97(2), 498–520.

Gohmann, S.F., 2012. Institutions, latent entrepreneurship, and self-employment: an international comparison. Entrepreneurship Theory and Practice, 36(2), 295–321.

Han, V.X., Baumgarte, R., 2000. Economic reform, private sector development, and the business environment in Viet Nam. Comparative Economic Studies, 42(3), 1–30.

Hsu, D.K., Burmeister-Lamp, K., Simmons, S.A., Foo, M.D., Hong, M.C., Pipes, J.D., 2019. "I know I can, but I don't fit": perceived fit, self-efficacy, and entrepreneurial intention. Journal of Business Venturing, 34(2), 311–326.

Hsu, D.K., Simmons, S.A., Wieland, A.M., 2017. Designing entrepreneurship experiments: a review, typology, and research agenda. Organizational Research Methods, 20(3), 379–412.

Huggins, R., Thompson, P., 2017. The behavioral foundations of urban and regional development: culture psychology and agency. Journal of Economic Geography, 19(1), 121–146.

Kacperczyk, A., 2013. Social influence and entrepreneurship: the effect of university peers on entrepreneurial entry. Organization Science, 24(3), 664–683.

Katz, J.A. 2003. The chronology and intellectual trajectory of American entrepreneurship education 1876–1999. Journal of Business Venturing, 18(2), 283–300.

Kautonen, T., van Gelderen, M., Fink, M., 2015. Robustness of the theory of planned behavior in predicting entrepreneurial intentions and actions. Entrepreneurship Theory and Practice, 39(3), 655–674.

Krueger Jr., N.F., Reilly, M.D., Carsrud, A.L., 2000. Competing models of entrepreneurial intentions. Journal of Business Venturing, 15(5–6), 411–432.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1999. The quality of government. The Journal of Law, Economics, and Organization, 15(1), 222–279.

Laspita, S., Breugst, N., Heblich, S., Patzelt, H., 2012. Intergenerational transmission of entrepreneurial intentions. Journal of Business Venturing, 27(4), 414–434.

Lechner, M., Pfeiffer, F., 1993. Planning for self-employment at the beginning of a market economy: evidence from individual data of East German workers. Small Business Economics, 5(2), 111–128.

Liñán, F., Chen, Y.W., 2009. Development and cross–cultural application of a specific instrument to measure entrepreneurial intentions. Entrepreneurship Theory and Practice, 33(3), 593–617.

Lindqvist, M., Soel, J., Van Praag, M., 2015. Why do entrepreneurial parents have entrepreneurial children? Journal of Labor Economics, 33(2), 269–296.

Minniti, M., 2005. Entrepreneurship and network externalities. Journal of Economic Behavior and Organization, 57, 1–27.

Nanda, R., Sorenson, J.B., 2010. Workplace peer effects and entrepreneurship. Management Science, 56(7), 1116–1126.

Neckebrouck, J., Schulze, W., Zellweger, T., 2018. Are family firms good employers? Academy of Management Journal, 61(2), 553–585.

Nguyen, T.V., Rose, J., 2009. Building trust—evidence from Vietnamese entrepreneurs. Journal of Business Venturing, 24(2), 165–182.

North, D.C., 1990. Institutions, institutional change and economic performance. Cambridge: Cambridge University Press.

North, D.C., 1994. Economic performance through time. American Economic Review, 84(3), 359–368.

Nunn, N., 2009. The importance of history for economic development. Annual Review of Economics, 1(1), 65–92.

Parker, S.C., Van Praag, C.M., 2012. The entrepreneur's mode of entry: business takeover or new venture start? Journal of Business Venturing, 27(1), 31–46.

Pickel, A., 1992. Radical transitions: the survival and revival of entrepreneurship in the GDR. Boulder, CO: Westview Press.

Puffer, S.M., McCarthy, D.J., 2001. Navigating the hostile maze: a framework for Russian entrepreneurship. Academy of Management Perspectives, 15(4), 24–36.

Rauch, A., Hulsink, W., 2015. Putting entrepreneurship education where the intention to act lies: an investigation into the impact of entrepreneurship education on entrepreneurial behavior. Academy of Management Learning & Education, 14(2), 187–204.

Santarelli, E., Tran, H.T., 2013. The interplay of human and social capital in shaping entrepreneurial performance: the case of Vietnam. Small Business Economics, 40(2), 435–458.

Schwartz, S.H., Bardi, A., 1997. Influences of adaptation to communist rule on value priorities in Eastern Europe. Political Psychology, 18(2), 385–410.

Sobel, R.S., 2008. Testing Baumol: institutional quality and the productivity of entrepreneurship. Journal of Business Venturing, 23(6), 641–655.

Sorenson, O., 2017. Regional ecologies of entrepreneurship. Journal of Economic Geography, 17(5), 959–974.

Spigel, B., 2017. Bourdieu, culture, and the economic geography of practice: entrepreneurial mentorship in Ottawa and Waterloo, Canada. Journal of Economic Geography, 17(2), 287–310.

Stam, E., 2015. Entrepreneurial ecosystems and regional policy: a sympathetic critique. European Planning Studies, 23(9), 1759–1769.

Stuetzer, M., Obschonka, M., Audretsch, D.B., Wyrwich, M., Rentfrow, P.J., Coombes, M., Shaw-Taylor, L., Satchell, M., 2016. Industry structure, entrepreneurship, and culture: an empirical analysis using historical coalfields. European Economic Review, 86: 52–72.

Tabellini, G., 2008. Institutions and culture. Journal of the European Economic Association, 6(2–3), 255–294.

Taylor, M.P., 1996. Earnings, independence or unemployment: why become self-employed? Oxford Bulletin of Economics and Statistics, 58(2), 253–266.

Tran, H.T., 2019. Institutional quality and market selection in the transition to market economy. Journal of Business Venturing, 34(5), 105890.

Van Gelderen, M., Jansen, P., 2006. Autonomy as a start-up motive. Journal of Small Business and Enterprise Development, 13(1), 23–32.

Van Gelderen, M., Kautonen, T., Fink, M., 2015. From entrepreneurial intentions to actions: self-control and action-related doubt, fear, and aversion. Journal of Business Venturing, 30(5), 655–673.

Wadhwani, R.D., Lubinski, C., 2017. Reinventing entrepreneurial history. Business History Review, 91(4), 768–773.

Walder, A.G., Nguyen, G.H., 2008. Ownership, organization, and income inequality: market transition in rural Vietnam. American Sociological Review, 73(2), 251–269.

Walter, S.G., Block, J.H., 2016. Outcomes of entrepreneurship education: an institutional perspective. Journal of Business Venturing, 31(2), 216–233.

Welter, F., 2011. Contextualizing entrepreneurship—conceptual challenges and ways forward. Entrepreneurship Theory and Practice, 35(1), 165–184.

Westlund, H., Bolton, R., 2003. Local social capital and entrepreneurship. Small Business Economics, 21(2), 77–113.

Williamson, O., 2000. The new institutional economics: taking stock, looking ahead. Journal of Economic Literature, 38(3), 595–613.

Wyrwich, M., 2013. Can socioeconomic heritage produce a lost generation with regard to entrepreneurship? Journal of Business Venturing, 28(5), 667–682.

Wyrwich, M., 2015. Entrepreneurship and intergenerational value transmission. Small Business Economics, 45(1), 191–213.

Wyrwich, M., Stuetzer, M., Sternberg, R., 2016. Entrepreneurial role models, fear of failure, an institutional approval of entrepreneurship: a tale of two regions. Small Business Economics, 46(3), 467–492.

Xu, D., Lu, J.W., Gu, Q., 2014. Organizational forms and multi-population dynamics: economic transition in China. Administrative Science Quarterly, 59(3), 517–547.

Zellweger, T., Sieger, P., Halter, F., 2011. Should I stay or should I go? Career choice intentions of students with family business background. Journal of Business Venturing, 26(5), 521–536.

# Tables

**Table 1.** Description of variables and descriptive statistics

| Variable | Definition | N | Mean | SD | Min. | Max. | North (socialist) (N = 1,544) | South (formerly non-social-ist) (N = 1,466) | Diff (t-test) |
|---|---|---|---|---|---|---|---|---|---|
| *Independent variable* | | | | | | | | | |
| Origin: North Vietnam | Dummy, 1 if the respondent was born and grew up in North Vietnam, 0 other-wise (South Vietnam). | 3,010 | 0.49 | - | 0 | 1 | - | - | - |
| *Dependent variables* | | | | | | | | | |
| Entrepreneurship inten-tion | Dummy, 1 if the respondent intends to pursue a career as an entrepreneur (founder or successor) five years after the completion of studies, 0 otherwise (employee). | 3,010 | 0.55 | - | 0 | 1 | 0.51 | 0.59 | -0.08*** |
| Entrepreneurship course | Dummy, 1 if the respondent has ever taken a course or workshop related to en-trepreneurship during their studies, and 0 otherwise. | 3,010 | 0.60 | - | 0 | 1 | 0.55 | 0.64 | -0.09*** |
| Startup vs. takeover | Dummy, 1 if the respondent intends to takeover an existing business, and 0 the respondent intends to found a new venture startups. | 1,656 | 0.07 | - | 0 | 1 | 0.05 | 0.08 | -0.03** |
| *Controls* | | | | | | | | | |
| Age | Respondent's age. | 3,010 | 20.40 | 1.15 | 18 | 25 | 20.44 | 20.34 | 0.09** |
| Gender | Dummy, 1 if the respondent is male, 0 otherwise. | 3,010 | 0.44 | - | 0 | 1 | 0.42 | 0.45 | 0.03 |
| Ethnicity (Kinh) | Dummy, 1 if the respondent is of Kinh ethnicity, 0 otherwise. | 3,010 | 0.95 | - | 0 | 1 | 0.94 | 0.97 | -0.03*** |
| Religion: Buddhist | Dummy, 1 if the respondent is Buddhist, 0 otherwise. | 3,010 | 0.18 | - | 0 | 1 | 0.11 | 0.24 | -0.13*** |
| Religion: Christian | Dummy, 1 if the respondent is Christian, 0 otherwise. | 3,010 | 0.06 | - | 0 | 1 | 0.02 | 0.09 | -0.07*** |
| Religion: None | Dummy, 1 if the respondent has no religious affiliation, 0 otherwise. | 3,010 | 0.76 | - | 0 | 1 | 0.87 | 0.65 | 0.22*** |
| Religion: Other | Dummy, 1 if the respondent has another religious affiliation, 0 otherweise. | 3,010 | 0.01 | - | 0 | 1 | 0.00 | 0.02 | -0.01*** |
| Study: Computer sciences | Dummy, 1 if the respondent's current field of studies is computer science, 0 oth-erwise. | 3,010 | 0.21 | - | 0 | 1 | 0.15 | 0.26 | -0.11*** |
| Study: Agriculture | Dummy, 1 if the respondent's current field of studies is agriculture, 0 otherwise. | 3,010 | 0.07 | - | 0 | 1 | 0.12 | 0.02 | 0.10*** |
| Study: Law/economics | Dummy, 1 if the respondent's current field of studies is law/economics, 0 other-wise. | 3,010 | 0.46 | - | 0 | 1 | 0.46 | 0.45 | 0.02 |
| Study: Engineering | Dummy, 1 if the respondent's current field of studies is engineering, 0 other-wise. | 3,010 | 0.11 | - | 0 | 1 | 0.13 | 0.08 | 0.05*** |
| Study: Others | Dummy, 1 if the respondent has another field of studies. | 3,010 | 0.17 | - | 0 | 1 | 0.13 | 0.20 | 0.07*** |
| Years of study | Respondent's total years of study. | 3,010 | 14.25 | 1.00 | 12 | 18 | 14.32 | 14.19 | 0.13*** |
| Close family self-employed | Dummy, 1 if a parent or close family member of the respondent is self-em-ployed, 0 otherwise. | 3,010 | 0.49 | - | 0 | 1 | 0.49 | 0.50 | -0.01 |
| Risk-taking | Respondent's willingness to take risk on a ten-point-scale ranging from 0 ("highly risk-averse") to 10 ("fully prepared to take risk") | 3,010 | 6.49 | 2.25 | 0 | 10 | 6.49 | 6.49 | -0.01 |

*Notes*: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Values do not always add up to 1.00 due to rounding.

**Table 2.** Correlations.

| Variable | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | VIF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Independent variable* | | | | | | | | | | | | | | | | | |
| (1) Origin: North Vietnam | | | | | | | | | | | | | | | | | 1.15 |
| *Dependent variables* | | | | | | | | | | | | | | | | | |
| (2) Entrepreneurship intention | -0.08* | | | | | | | | | | | | | | | | 1.05 |
| (3) Entrepreneurship course | -0.10* | 0.04 | | | | | | | | | | | | | | | 1.04 |
| (4) Startup vs. takeover | -0.05 | -ᵃ | -0.01 | | | | | | | | | | | | | | 1.04 |
| *Controls* | | | | | | | | | | | | | | | | | |
| (5) Age | 0.04 | 0.00 | 0.00 | 0.01 | | | | | | | | | | | | | 5.84 |
| (6) Gender | -0.03 | 0.07* | -0.09* | 0.02 | 0.14* | | | | | | | | | | | | 1.53 |
| (7) Ethnicity (Kinh) | -0.06* | 0.01 | 0.01 | 0.01 | -0.03 | 0.04 | | | | | | | | | | | 1.08 |
| (8) Religion: Buddhist | -0.17* | 0.03 | 0.06* | 0.01 | -0.05* | 0.02 | 0.07* | | | | | | | | | | 16.29 |
| (9) Religion: Christian | -0.15* | 0.05* | 0.04 | 0.01 | 0.01 | -0.03 | -0.06* | -0.11* | | | | | | | | | 6.70 |
| (10) Religion: None | 0.25* | -0.06* | -0.08* | -0.02 | 0.04 | 0.00 | 0.00 | -0.81* | -0.44* | | | | | | | | 19.97 |
| (11) Study: Computer sciences | -0.13* | 0.05* | -0.07* | -0.04 | -0.10* | 0.41* | 0.10* | 0.05 | 0.02 | -0.04 | | | | | | | 2.24 |
| (12) Study: Agriculture | 0.21* | 0.02 | 0.02 | -0.01 | 0.13* | -0.02 | -0.06* | -0.01 | -0.03 | 0.03 | -0.14* | | | | | | 1.40 |
| (13) Study: Law/economics | 0.02 | -0.06* | 0.10* | 0.04 | -0.18* | -0.38* | 0.03 | -0.01 | -0.02 | 0.02 | -0.46* | -0.24* | | | | | 2.13 |
| (14) Study: Engineering | 0.08* | 0.01 | -0.09* | -0.04 | 0.25* | 0.31* | 0.06* | -0.06* | -0.03 | 0.07* | -0.18* | -0.09* | -0.32* | | | | 1.83 |
| (15) Years of study | 0.06* | -0.01 | -0.01 | 0.00 | 0.91* | 0.11* | 0.01 | -0.04 | 0.01 | 0.03 | -0.12* | 0.14* | -0.17* | 0.28* | | | 5.93 |
| (16) Close family self-employed | -0.01 | 0.10* | 0.07* | 0.16* | 0.01 | -0.02 | 0.08* | 0.05* | -0.02 | -0.03 | -0.01 | 0.03 | 0.03 | -0.04 | 0.04 | | 1.03 |
| (17) Risk-taking | 0.00 | 0.17* | 0.04 | -0.04 | 0.01 | 0.12* | -0.04 | 0.01 | 0.00 | 0.00 | 0.05* | 0.01 | -0.07* | 0.04 | 0.00 | 0.04 | 1.05 |

*Notes*: ᵃ = the takeover vs. new venture startup group only consists of individuals with entrepreneurship intention = 1. *** $p < 0.01$

37

**Table 3.** Main analysis on the influence of socialist heritage on entrepreneurship outcoimes.

| Model | (1a) | (1b) | (2a) | (2b) | (3a) | (3b) |
|---|---|---|---|---|---|---|
| *Hypothesis* | *H1* | *H1* | *H2* | *H2* | *H3* | |
| Method | Logistic regression | Logistic regression | Logistic regression | Logistic regression | Multinomial logistic regression | |
| Dependent variable | Entrepreneur-ship intention | Entrepreneur-ship intention | Entrepreneur-ship course at university | Entrepreneur-ship course at university | (1) Employee vs. (2) new venture startup | (1) Employee vs. (3) business takeover |
| *Sample* | *Full sample* | *Full sample* | *Full sample* | *Full sample* | *Individuals with close family member SE* | |
| **Origin: North Vietnam** | **-0.337** | **-0.311** | **-0.389** | **-0.399** | **-0.403** | **-0.920** |
| | **(0.074)*** | **(0.080)*** | **(0.075)*** | **(0.081)*** | **(0.118)*** | **(0.251)*** |
| Age | | 0.049 | | 0.059 | -0.057 | 0.188 |
| | | (0.082) | | (0.081) | (0.130) | (0.196) |
| Gender | | 0.172 | | -0.202 | 0.089 | 0.911 |
| | | (0.095)* | | (0.094)** | (0.140) | (0.252)*** |
| Ethnicity: Kinh | | 0.048 | | 0.073 | -0.214 | 0.106 |
| | | (0.185) | | (0.186) | (0.340) | (0.787) |
| Religion: Buddhist | | -0.116 | | 0.178 | 0.189 | 0.018 |
| | | (0.410) | | (0.403) | (0.749) | (1.129) |
| Religion: Christian | | 0.231 | | 0.185 | 1.003 | 1.051 |
| | | (0.429) | | (0.422) | (0.788) | (1.186) |
| Religion: None | | -0.202 | | -0.112 | 0.218 | 0.023 |
| | | (0.403) | | (0.395) | (0.741) | (1.109) |
| Study: Computer sciences | | 0.038 | | -0.123 | -0.037 | -1.199 |
| | | (0.144) | | (0.139) | (0.215) | (0.420)*** |
| Study: Agriculture | | 0.253 | | 0.452 | 0.267 | -0.387 |
| | | (0.181) | | (0.181)** | (0.258) | (0.596) |
| Study: Law/economics | | -0.106 | | 0.355 | -0.130 | -0.124 |
| | | (0.111) | | (0.111)*** | (0.167) | (0.327) |
| Study: Engineering | | 0.027 | | -0.257 | -0.184 | -1.147 |
| | | (0.166) | | (0.164) | (0.247) | (0.540)** |
| Years of study | | -0.098 | | -0.022 | 0.080 | -0.184 |
| | | (0.096) | | (0.095) | (0.150) | (0.236) |
| Close family self-employed | | 0.389 | | 0.259 | - | - |
| | | (0.076)*** | | (0.076)*** | - | - |
| Risk-taking | | 0.144 | | 0.047 | 0.155 | 0.054 |
| | | (0.017)*** | | (0.017)*** | (0.026)*** | (0.055) |
| Pseudo R2 | 0.005 | 0.037 | 0.007 | 0.030 | 0.037 | |
| Log Likelihood | -2060.678 | -1995.131 | -2014.932 | -1968.220 | -1,248.225 | |
| Obs. | 3,010 | 3,010 | 3,010 | 3,010 | 1,489 | |

*Notes*: Logits are displayed with robust standard errors in parentheses. Reference categories: Religion: Other, Study: Other. *** p < 0.01, ** p < 0.05, * p < 0.10.

**Table 4.** Further analyses and robustness checks.

| Model | (1a) | (1b) | (2a) | (2b) | (3a) | (3b) | (4a) | (4b) |
|---|---|---|---|---|---|---|---|---|
| Method | Logistic regression | Logistic regression | Logistic regression | Logistic regression | Multinomial logistic regression | | Logistic regression | Logistic regression |
| Dependent variable | Takeover vs. new venture | Takeover vs. new venture | Takeover vs. new venture | Takeover vs. new venture | (1) Employee vs. (2) new venture | (1) Employee vs. (3) takeover | Entrepreneurship intention | Entrepreneurship intention |
| *Sample* | *Individuals with EI* | *Individuals with EI* | *Individuals with EI + close family member SE* | *Individuals with EI + close family member SE* | *Full sample* | *Full sample* | *Full sample* | *Full sample* |
| **Origin: North Vietnam** | -0.407 | -0.393 | -0.567 | -0.523 | -0.288 | -0.701 | - | - |
| | (0.206)** | (0.221)* | (0.236)** | (0.247)** | (0.081)*** | (0.222)*** | - | - |
| Age | | 0.185 | | 0.355 | 0.038 | 0.165 | | 0.045 |
| | | (0.181) | | (0.244) | (0.084) | (0.161) | | (0.082) |
| Gender | | 0.680 | | 0.864 | 0.128 | 0.777 | | 0.171 |
| | | (0.226)*** | | (0.249)*** | (0.097) | (0.224)*** | | (0.095)* |
| Ethnicity: Kinh | | -0.029 | | 0.231 | 0.042 | 0.016 | | 0.051 |
| | | (0.547) | | (0.781) | (0.187) | (0.551) | | (0.185) |
| Religion: Buddhist | | 0.386 | | 0.273 | -0.128 | 0.120 | | -0.134 |
| | | (0.959) | | (0.995) | (0.412) | (1.061) | | (0.412) |
| Religion: Christian | | 0.527 | | 0.458 | 0.204 | 0.695 | | 0.215 |
| | | (0.996) | | (1.040) | (0.431) | (1.091) | | (0.431) |
| Religion: None | | 0.367 | | 0.225 | -0.217 | 0.055 | | -0.224 |
| | | (0.941) | | (0.972) | (0.404) | (1.045) | | (0.405) |
| Study: Comp. sciences | | -0.955 | | -1.212 | 0.098 | -0.858 | | 0.028 |
| | | (0.367)*** | | (0.420)*** | (0.146) | (0.362)** | | (0.144) |
| Study: Agriculture | | -0.316 | | -0.722 | 0.273 | -0.015 | | 0.253 |
| | | (0.463) | | (0.562) | (0.183) | (0.472) | | (0.181) |
| Study: Law/economics | | -0.117 | | -0.020 | -0.099 | -0.190 | | -0.113 |
| | | (0.281) | | (0.326) | (0.113) | (0.281) | | (0.111) |
| Study: Engineering | | -1.009 | | -0.969 | 0.088 | -0.964 | | 0.016 |
| | | (0.473)** | | (0.544)* | (0.168) | (0.470)** | | (0.166) |
| Years of study | | 1.561 | | -0.390 | -0.085 | -0.208 | | -0.091 |
| | | (0.272)*** | | (0.286) | (0.098) | (0.194) | | (0.096) |
| Close family SE | | -0.204 | | - | 0.304 | 1.874 | | - |
| | | (0.214) | | - | (0.077)*** | (0.269)*** | | - |
| Risk-taking | | -0.079 | | -0.099 | 0.149 | 0.065 | | 0.144 |
| | | (0.047)* | | (0.051)* | (0.018)*** | (0.050) | | (0.017)*** |
| Origin: North Vietnam = 0, close family member SE = 1 | | | | | | | 0.504 | 0.499 |
| | | | | | | | (0.104)*** | (0.107)*** |
| Origin: North Vietnam = 1, close family member SE = 0 | | | | | | | -0.229 | -0.203 |
| | | | | | | | (0.103)** | (0.108)* |
| Origin: North Vietnam = 1, close family member SE = 0 | | | | | | | 0.051 | 0.073 |
| | | | | | | | (0.104) | (0.110) |
| *Reference: Origin: North Vietnam = 0, close family member SE = 0* | | | | | | | | |
| Pseudo R2 | 0.005 | 0.082 | 0.032 | 0.074 | 0.044 | | 0.012 | 0.037 |
| Log Likelihood | -399.892 | -369.025 | -260.110 | -248.771 | -2,363.622 | | -2,045.342 | -1,994.041 |
| Obs. | 1,656 | 1,656 | 688 | 688 | 3,010 | | 3,010 | 3,010 |

*Notes:* Logistic regression analysis. Logits are displayed with robust standard errors in parentheses. EI = entrepreneurship intentions, SE = self-employed. Reference categories: Ethnicity: Other, Religion: Other, Study: Other. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

# Appendix

**Table A1.** Universities included in our study.

| No. | University | Obs. | Region | City | Approx. number of students (2018) |
|---|---|---|---|---|---|
| 1 | Academy of Finance | 141 | North | Hanoi | 20,000 |
| 2 | Academy of Journalism and Communication | 120 | North | Hanoi | 10,000 |
| 3 | Foreign Trade University (Hanoi) | 97 | North | Hanoi | 12,000 |
| 4 | Hanoi University of Science and Technology | 128 | North | Hanoi | 30,000 |
| 5 | National Ecomics University | 80 | North | Hanoi | 45,000 |
| 6 | University of Transport Technology | 396 | North | Hanoi | 21,000 |
| 7 | Vietnam National University (Hanoi) | 35 | North | Hanoi | 37,403 |
| 8 | Vietnam National University of Forestry | 244 | North | Hanoi | 10,445 |
| 9 | Vietnam National University of Agriculture | 195 | North | Hanoi | 30,360 |
| 10 | Banking Academy | 58 | North | Hanoi | 15,700 |
| 11 | Dalat University | 526 | South | Dalat | 12,500 |
| 12 | Duytan University | 265 | South | Danang | 19,600 |
| 13 | University of Economics HCMC | 32 | South | HCMC | 46,000 |
| 14 | HCMC University of Food Industry | 107 | South | HCMC | 14,000 |
| 15 | University of Finance and Marketing | 195 | South | HCMC | 20,000 |
| 16 | HCMC University of Technology and Education | 206 | South | HCMC | 20,396 |
| 17 | HCMCUniversity of Transport | 147 | South | HCMC | 18,000 |
| 18 | Hutech University | 161 | South | HCMC | 12,000 |
| 19 | University of Economics and Law | 139 | South | HCMC | 9,000 |
| 20 | HCMC Medicine and Pharmacy University | 69 | South | HCMC | 8,500 |
| 21 | Ton Duc Thang University | 44 | South | HCMC | 23,286 |

*Notes*: All surveys were collected in September and October 2018. HCMC = Ho Chi Minh City.

# List of research reports

15001-EEF: Bao, T., X. Tian, X. Yu, Dictator Game with Indivisibility of Money

15002-GEM: Chen, Q., E. Dietzenbacher, and B. Los, The Effects of Ageing and Urbanization on China's Future Population and Labor Force

15003-EEF: Allers, M., B. van Ommeren, and B. Geertsema, Does intermunicipal cooperation create inefficiency? A comparison of interest rates paid by intermunicipal organizations, amalgamated municipalities and not recently amalgamated municipalities

15004-EEF: Dijkstra, P.T., M.A. Haan, and M. Mulder, Design of Yardstick Competition and Consumer Prices: Experimental Evidence

15005-EEF: Dijkstra, P.T., Price Leadership and Unequal Market Sharing: Collusion in Experimental Markets

15006-EEF: Anufriev, M., T. Bao, A. Sutin, and J. Tuinstra, Fee Structure, Return Chasing and Mutual Fund Choice: An Experiment

15007-EEF: Lamers, M., Depositor Discipline and Bank Failures in Local Markets During the Financial Crisis

15008-EEF: Oosterhaven, J., On de Doubtful Usability of the Inoperability IO Model

15009-GEM: Zhang, L. and D. Bezemer, A Global House of Debt Effect? Mortgages and Post-Crisis Recessions in Fifty Economies

15010-I&O: Hooghiemstra, R., N. Hermes, L. Oxelheim, and T. Randøy, The Impact of Board Internationalization on Earnings Management

15011-EEF: Haan, M.A., and W.H. Siekman, Winning Back the Unfaithful while Exploiting the Loyal: Retention Offers and Heterogeneous Switching Costs

15012-EEF: Haan, M.A., J.L. Moraga-González, and V. Petrikaite, Price and Match-Value Advertising with Directed Consumer Search

15013-EEF: Wiese, R., and S. Eriksen, Do Healthcare Financing Privatisations Curb Total Healthcare Expenditures? Evidence from OECD Countries

15014-EEF: Siekman, W.H., Directed Consumer Search

15015-GEM: Hoorn, A.A.J. van, Organizational Culture in the Financial Sector: Evidence from a Cross-Industry Analysis of Employee Personal Values and Career Success

15016-EEF: Te Bao, and C. Hommes, When Speculators Meet Constructors: Positive and Negative Feedback in Experimental Housing Markets

15017-EEF: Te Bao, and Xiaohua Yu, Memory and Discounting: Theory and Evidence

15018-EEF: Suari-Andreu, E., The Effect of House Price Changes on Household Saving Behaviour: A Theoretical and Empirical Study of the Dutch Case

15019-EEF: Bijlsma, M., J. Boone, and G. Zwart, Community Rating in Health Insurance: Trade-off between Coverage and Selection

15020-EEF: Mulder, M., and B. Scholtens, A Plant-level Analysis of the Spill-over Effects of the German *Energiewende*

15021-GEM: Samarina, A., L. Zhang, and D. Bezemer, Mortgages and Credit Cycle Divergence in Eurozone Economies

16001-GEM: Hoorn, A. van, How Are Migrant Employees Manages? An Integrated Analysis

16002-EEF: Soetevent, A.R., Te Bao, A.L. Schippers, A Commercial Gift for Charity

16003-GEM: Bouwmeerster, M.C., and J. Oosterhaven, Economic Impacts of Natural Gas Flow Disruptions

16004-MARK: Holtrop, N., J.E. Wieringa, M.J. Gijsenberg, and P. Stern, Competitive Reactions to Personal Selling: The Difference between Strategic and Tactical Actions

16005-EEF: Plantinga, A. and B. Scholtens, The Financial Impact of Divestment from Fossil Fuels

16006-GEM: Hoorn, A. van, Trust and Signals in Workplace Organization: Evidence from Job Autonomy Differentials between Immigrant Groups

16007-EEF: Willems, B. and G. Zwart, Regulatory Holidays and Optimal Network Expansion

16008-GEF: Hoorn, A. van, Reliability and Validity of the Happiness Approach to Measuring Preferences

16009-EEF: Hinloopen, J., and A.R. Soetevent, (Non-)Insurance Markets, Loss Size Manipulation and Competition: Experimental Evidence

16010-EEF: Bekker, P.A., A Generalized Dynamic Arbitrage Free Yield Model

16011-EEF: Mierau, J.A., and M. Mink, A Descriptive Model of Banking and Aggregate Demand

16012-EEF: Mulder, M. and B. Willems, Competition in Retail Electricity Markets: An Assessment of Ten Year Dutch Experience

16013-GEM: Rozite, K., D.J. Bezemer, and J.P.A.M. Jacobs, Towards a Financial Cycle for the US, 1873-2014

16014-EEF: Neuteleers, S., M. Mulder, and F. Hindriks, Assessing Fairness of Dynamic Grid Tariffs

16015-EEF: Soetevent, A.R., and T. Bružikas, Risk and Loss Aversion, Price Uncertainty and the Implications for Consumer Search

16016-HRM&OB: Meer, P.H. van der, and R. Wielers, Happiness, Unemployment and Self-esteem

16017-EEF: Mulder, M., and M. Pangan, Influence of Environmental Policy and Market Forces on Coal-fired Power Plants: Evidence on the Dutch Market over 2006-2014

16018-EEF: Zeng,Y., and M. Mulder, Exploring Interaction Effects of Climate Policies: A Model Analysis of the Power Market

16019-EEF: Ma, Yiqun, Demand Response Potential of Electricity End-users Facing Real Time Pricing

16020-GEM: Bezemer, D., and A. Samarina, Debt Shift, Financial Development and Income Inequality in Europe

16021-EEF: Elkhuizen, L, N. Hermes, and J. Jacobs, Financial Development, Financial Liberalization and Social Capital

16022-GEM: Gerritse, M., Does Trade Cause Institutional Change? Evidence from Countries South of the Suez Canal

16023-EEF: Rook, M., and M. Mulder, Implicit Premiums in Renewable-Energy Support Schemes

17001-EEF: Trinks, A., B. Scholtens, M. Mulder, and L. Dam, Divesting Fossil Fuels: The Implications for Investment Portfolios

17002-EEF: Angelini, V., and J.O. Mierau, Late-life Health Effects of Teenage Motherhood

17003-EEF: Jong-A-Pin, R., M. Laméris, and H. Garretsen, Political Preferences of (Un)happy Voters: Evidence Based on New Ideological Measures

17004-EEF: Jiang, X., N. Hermes, and A. Meesters, Financial Liberalization, the Institutional Environment and Bank Efficiency

17005-EEF: Kwaak, C. van der, Financial Fragility and Unconventional Central Bank Lending Operations

17006-EEF: Postelnicu, L. and N. Hermes, The Economic Value of Social Capital

17007-EEF: Ommeren, B.J.F. van, M.A. Allers, and M.H. Vellekoop, Choosing the Optimal Moment to Arrange a Loan

17008-EEF: Bekker, P.A., and K.E. Bouwman, A Unified Approach to Dynamic Mean-Variance Analysis in Discrete and Continuous Time

17009-EEF: Bekker, P.A., Interpretable Parsimonious Arbitrage-free Modeling of the Yield Curve

17010-GEM: Schasfoort, J., A. Godin, D. Bezemer, A. Caiani, and S. Kinsella, Monetary Policy Transmission in a Macroeconomic Agent-Based Model

17011-I&O: Bogt, H. ter, Accountability, Transparency and Control of Outsourced Public Sector Activities

17012-GEM: Bezemer, D., A. Samarina, and L. Zhang, The Shift in Bank Credit Allocation: New Data and New Findings

17013-EEF: Boer, W.I.J. de, R.H. Koning, and J.O. Mierau, Ex-ante and Ex-post Willingness-to-pay for Hosting a Major Cycling Event

17014-OPERA: Laan, N. van der, W. Romeijnders, and M.H. van der Vlerk, Higher-order Total Variation Bounds for Expectations of Periodic Functions and Simple Integer Recourse Approximations

17015-GEM: Oosterhaven, J., Key Sector Analysis: A Note on the Other Side of the Coin

17016-EEF: Romensen, G.J., A.R. Soetevent: Tailored Feedback and Worker Green Behavior: Field Evidence from Bus Drivers

17017-EEF: Trinks, A., G. Ibikunle, M. Mulder, and B. Scholtens, Greenhouse Gas Emissions Intensity and the Cost of Capital

17018-GEM: Qian, X. and A. Steiner, The Reinforcement Effect of International Reserves for Financial Stability

17019-GEM/EEF: Klasing, M.J. and P. Milionis, The International Epidemiological Transition and the Education Gender Gap

2018001-EEF: Keller, J.T., G.H. Kuper, and M. Mulder, Mergers of Gas Markets Areas and Competition amongst Transmission System Operators: Evidence on Booking Behaviour in the German Markets

2018002-EEF: Soetevent, A.R. and S. Adikyan, The Impact of Short-Term Goals on Long-Term Objectives: Evidence from Running Data

2018003-MARK: Gijsenberg, M.J. and P.C. Verhoef, Moving Forward: The Role of Marketing in Fostering Public Transport Usage

2018004-MARK: Gijsenberg, M.J. and V.R. Nijs, Advertising Timing: In-Phase or Out-of-Phase with Competitors?

2018005-EEF: Hulshof, D., C. Jepma, and M. Mulder, Performance of Markets for European Renewable Energy Certificates

2018006-EEF: Fosgaard, T.R., and A.R. Soetevent, Promises Undone: How Committed Pledges Impact Donations to Charity

2018007-EEF: Durán, N. and J.P. Elhorst, A Spatio-temporal-similarity and Common Factor Approach of Individual Housing Prices: The Impact of Many Small Earthquakes in the North of Netherlands

2018008-EEF: Hermes, N., and M. Hudon, Determinants of the Performance of Microfinance Institutions: A Systematic Review

2018009-EEF: Katz, M., and C. van der Kwaak, The Macroeconomic Effectiveness of Bank Bail-ins

2018010-OPERA: Prak, D., R.H. Teunter, M.Z. Babai, A.A. Syntetos, and J.E. Boylan, Forecasting and Inventory Control with Compound Poisson Demand Using Periodic Demand Data

2018011-EEF: Brock, B. de, Converting a Non-trivial Use Case into an SSD: An Exercise

2018012-EEF: Harvey, L.A., J.O. Mierau, and J. Rockey, Inequality in an Equal Society

2018013-OPERA: Romeijnders, W., and N. van der Laan, Inexact cutting planes for two-stage mixed-integer stochastic programs

2018014-EEF: Green, C.P., and S. Homroy, Bringing Connections Onboard: The Value of Political Influence

2018015-OPERA: Laan, N. van der, and W. Romeijnders, Generalized aplha-approximations for two-stage mixed-integer recourse models

2018016-GEM: Rozite, K., Financial and Real Integration between Mexico and the United States

2019001-EEF: Lugalla, I.M., J. Jacobs, and W. Westerman, Drivers of Women Entrepreneurs in Tourism in Tanzania: Capital, Goal Setting and Business Growth

2019002-EEF: Brock, E.O. de, On Incremental and Agile Development of (Information) Systems

2019003-OPERA: Laan, N. van der, R.H. Teunter, W. Romeijnders, and O.A. Kilic, The Data-driven Newsvendor Problem: Achieving On-target Service Levels.

2019004-EEF: Dijk, H., and J. Mierau, Mental Health over the Life Course: Evidence for a U-Shape?

2019005-EEF: Freriks, R.D., and J.O. Mierau, Heterogeneous Effects of School Resources on Child Mental Health Development: Evidence from the Netherlands.

2019006-OPERA: Broek, M.A.J. uit het, R.H. Teunter, B. de Jonge, J. Veldman, Joint Condition-based Maintenance and Condition-based Production Optimization.

2019007-OPERA: Broek, M.A.J. uit het, R.H. Teunter, B. de Jonge, J. Veldman, Joint Condition-based Maintenance and Load-sharing Optimization for Multi-unit Systems with Economic Dependency

2019008-EEF: Keller, J.T. G.H. Kuper, and M. Mulder, Competition under Regulation: Do Regulated Gas Transmission System Operators in Merged Markets Compete on Network Tariffs?

2019009-EEF: Hulshof, D. and M. Mulder, Renewable Energy Use as Environmental CSR Behavior and the Impact on Firm Profit

2019010-EEF: Boot, T., Confidence Regions for Averaging Estimators

2020001-OPERA: Foreest, N.D. van, and J. Wijngaard. On Proportionally Fair Solutions for the Divorced-Parents Problem

2020002-EEF: Niccodemi, G., R. Alessie, V. Angelini, J. Mierau, and T. Wansbeek. Refining Clustered Standard Errors with Few Clusters

2020003-I&O: Bogt, H. ter, Performance and other Accounting Information in the Public Sector: A Prominent Role in the Politicians' Control Tasks?

2020004-Fisch, C., M. Wyrwich, T.L. Nguyen, and J.H. Block, Historical Institutional Differences and Entrepreneurship: The Case of Socialist Legacy in Vietnam

www.rug.nl/feb