THE VIET NAM PROVINCIAL COMPETITIVENESS INDEX

PCI 2017

Measuring economic governance for business development

VCCI

USAID FROM THE AMERICAN PEOPLE

PCI Since 2005

Behind the Window Frame of Spring
By Nguyen The Hung

THE VIET NAM PROVINCIAL COMPETITIVENESS INDEX 2017

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FOREWORD

The 2017 Provincial Competitiveness Index (PCI) report is part of an on-going collaboration between the Vietnam Chamber of Commerce and Industry (VCCI) and the U.S. Agency for International Development (USAID). Vietnamese policymakers and the private business community have capitalized on the report's insights. The PCI research team is proud to have played a part in the dramatic changes that have enhanced business development and growth in Vietnam. Through its work, the PCI has influenced policy priorities and reform choices, generating momentum for policymakers to improve their reform efforts and even positively alter the daily work and management of local officials.

The PCI has accomplished these feats by providing independent, unbiased information on the Vietnamese business environment in each province, which has served as an important reference for both the government's economic initiatives and investors' decisions. As the "collective voice" of the business community, the PCI has actively promoted direct and indirect dialogue between local government officials and enterprises. PCI data and analysis empower businesses, especially small and medium-sized enterprises (SMEs), to speak out about the obstacles they face, even when they involve sensitive issues. Over the years, the PCI has proven to be an important contributor to Vietnam's anti-corruption battles and served as an effective conduit for innovative reform ideas.

The 2017 PCI report projects a promising outlook for the Vietnamese economy. Economic governance, as measured by the economic index, has reached an all-time high. The average province is significantly better governed today than when PCI's investigation first began. As the report shows, nearly every single province has achieved significant improvements in its average PCI score.

At the national level, Chapter 1 illustrates sizable reductions in bribery and burdensome regulations faced by private enterprises, demonstrating that the new administration's anti-corruption and regulatory reform efforts are paying off. Chapter 2 demonstrates that Vietnam remains a trusted destination for foreign investors. Foreign business leaders have not only noted the diminished costs of corruption and regulation, but also point to

improvements in infrastructure and connectivity as drivers of their positive perceptions of the country's business environment.

In this year's special investigation in Chapter 3, the PCI report argues that responsibility for speeding Vietnamese development and boosting the nation's competitiveness rests on the shoulders of the government at all levels as well as upon businesses and business leaders. Private business leaders need to improve their management sophistication and quality to keep pace with international standards. Along the way, the report provides the first detailed statistics on the management quality and decision-making capacity of business leaders in the country. These numbers will serve as an important guide for future choices about economic reform, training, and international integration.

We sincerely hope that the 2017 PCI report will be more than just an informative read, but will inspire the same refreshing innovation conveyed in Nguyen The Hung's stunning painting "Behind the Window Frame of Spring" on the cover of this year's report.

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The PCI was developed under the overall leadership of Vu Tien Loc, Chairman and President of VCCI, Chief Commander of PCI Project and Dau Anh Tuan, General Director of VCCI's Legal Department, Director of PCI Project and benefited from assistance and input provided by Michael Greene, USAID/Vietnam Mission Director. Michael Trueblood, Director of Economic Growth and Governance for USAID/Vietnam, and Nguyen Thi Cam Binh, Program Management Specialist of USAID/Vietnam, provided review comments and editing support for this report as well as strong managerial support for this program.

Edmund Malesky, Professor of Political Economy at Duke University, led the development of the PCI's research methodology and was the primary author for the presentation of its analytical findings. Professor Malesky was supported by a PCI research team. Phan Tuan Ngoc, graduate student at Duke University, authored Chapter 2. Pham Ngoc Thach and Le Thanh Ha of the VCCI Legal Department were involved in data collection, index construction, and data analysis. The PCI research and report was supported by Nguyen Thi Thu Hang and Nguyen Ngoc Lan of VCCI.

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ABBREVIATIONS AND ACRONYMS

BOT	Build – Operate – Transfer
BSS	Business Support Services
CPV	Communist Party of Vietnam
DDCI	Departmental and District Competiveness Index
FIEs	Foreign Invested Enterprises
GDP	Gross Domestic Product
GII	Global Innovation Index
GTD	General Tax Department
HCMC	Ho Chi Minh City
JETRO	Japan External Trade Organization
LLCs	Limited Liability Companies
LSOEs	Local State Owned Enterprises
LURC	Land Use Right Certificate
MBA	Master of Business Administration
MNCs	Multinational Companies
MPI	Ministry of Planning and Investment
OECD	Organization for Economic Cooperation and Development
PAPI	Viet Nam Governance and Public Administration Performance Index
PCI	Provincial Competitiveness Index
SMEs	Small and Medium Size Enterprises
SOEs	State Owned Enterprises

UCT	Unmatched Count Technique
UNDP	United Nations Development Programme
USAID	U.S. Agency for International Development
VCCI	Vietnam Chamber of Commerce and Industry
WTO	World Trade Organization

EXECUTIVE SUMMARY

The 13th Provincial Competitiveness Index (PCI) Report

The PCI Research team in the Vietnam Chamber of Commerce and Industry (VCCI) designed the PCI to assess the ease of doing business, economic governance, and administrative reform efforts by Vietnam's provincial and city governments. The 2017 PCI is the 13th iteration of the report, based on rigorous surveys of the perceptions of domestic and foreign firms. The PCI strives to augment the collective voice of investors in Vietnam regarding governance in the provinces where they invest and the country as a whole.

This Executive Summary is divided into two main sections. In the first section, we describe the seven surveys and datasets we use to create the index and analyze governance reforms in Vietnam. As the PCI has grown, we have added more and more precise tools. In the midst of reading the report, readers often conflate these very different sources of information. Here, we step back and delineate our data sources and the purposes for which we use them.

In the second section, we describe our primary research products. Over time, the PCI research endeavor has diversified beyond our signature index of economic governance for private businesses. Each year, we also survey foreign investors, gauge business confidence, rank infrastructural quality, and pursue one unique and urgent research topic. In such a big report, it can be easy to lose sight of these individual research findings. Consequently, in section 2, we summarize our core findings and conclusions from each research component.

This year's readers will be particularly excited about our survey module to measure management quality, which we devised for this year's Chapter 3, the section of the report we devote annually to rigorous analysis of critical policy issues. We find that firms with good managers who employ cutting-edge management practices in their Vietnamese operations have significantly higher productivity and growth and are much less likely to rely on corruption in their business strategies.

I. PCI Survey and Datasets

Analysis in the report is based on seven datasets that PCI collects and adds to each year as part of its research enterprise:

- *Annual survey of over 8,000 existing domestic, private businesses.* In 2017, 8,292 domestic private firms in all 63 provinces answered the full survey. Firms are selected using random sampling to mirror provincial populations. Stratification

is used to make sure that firm age, size, legal type, and sector are accurately represented. The total uncorrected response rate for the survey is 29 percent, which experts deem extremely high for surveys of business leaders. Moreover, the Chief Executive Officer (CEO) or General Director filled out 70 percent of all surveys. Throughout the report, we refer to these data as the "PCI survey."

- *Annual survey of over 2,000 newly established enterprises.* This year, we identified 9,774 businesses in all 63 provinces that started operations in 2016 and 2017. Among these new entrants, enumerators were able to verify locations and contact information of 4,887 firms and from this group 2,003 responded, leading to an overall response rate of 41 percent with 93 percent of these answered by the CEO or General Director. The research teams use these answers exclusively to calculate the first PCI subindex on experiences with business registration and licensing. In the report, we call this the "New Business Survey."

- *Annual survey of over 1,500 foreign invested enterprises (FIEs).* This section reports on data collected from the 21 provinces and cities with the highest concentration of foreign direct investment (FDI). These firms are also selected using stratified random sampling. The unadjusted PCI-FDI response rate is 30 percent with only limited variation by province. Over 80 percent of respondents hold the positions of General Director or are the top-level manager of their company in Vietnam. The survey includes FIEs from 47 different countries with the highest concentration from Asia, especially South Korea (505), Japan (439), and Taiwan (215). We refer to this throughout as the "PCI-FDI survey."

- *Provincial-level panel data on 63 provinces between 2006 and 2017.*[1] This dataset records average levels on 360 measures of economic governance and business performance since the beginning of PCI for each province. The research teams use these data to track progress over time on governance reforms and the economic outcomes of those endeavors. We refer to this throughout as "PCI panel data."

- *Core PCI dataset.* These are data collected for each respondent of the PCI domestic survey between 2006 and 2017. These data contain 95,682 individual responses to questions asked each year in the annual PCI survey. Over 1,078 unique variables are covered.

- *Core PCI-FDI dataset.* This covers data for each respondent of the PCI-FDI survey between 2010 and 2017. These data contain 12,263 individual FIEs' answers to over 160 questions asked annually in the annual PCI survey.

1 *In statistics, panel data contain observations of multiple phenomena obtained over multiple time periods for the same provinces or respondents.*

- *Panel data on domestic, private firms*. Data on 781 firms that have answered the PCI every year since 2006.

II. Research Products

Each year, the PCI research report delivers six intellectual products to assist Vietnamese businesses, policy-makers, local government officials, development practitioners, and academic researchers. Below, we describe each of the outputs and the key findings for 2017 from each one.

i. *The Signature Provincial Competitiveness Index (PCI)*. Since 2005, this index has ranked Vietnam's 63 provinces based on economic governance areas that affect private sector development (see Figure 1.4 in Chapter 1).

   o What does the index measure? The overall PCI index score comprises ten sub-indices. A province that is considered to perform well on the PCI is the one that has: 1) low entry costs for business start-up; 2) easy access to land and security of business premises; 3) a transparent business environment and equitable business information; 4) minimal informal charges; 5) limited time requirements for bureaucratic procedures and inspections; 6) minimal crowding out of private activity from policy biases toward state, foreign, or connected firms; 7) proactive and creative provincial leadership in solving problems for enterprises; 8) developed and high-quality business support services; 9) sound labor training policies; and 10) fair and effective legal procedures for dispute resolution and maintaining law and order.

   o How is the index created? The index is produced in a three-step sequence, referred to as the "three Cs": 1) Collect business survey data and published data sources, 2) Calculate ten sub-indices and standardize them on a 10-point scale, and 3) Calibrate the composite PCI as the weighted mean of ten sub-indices with a maximum score of 100 points (see Section 1.5 in Chapter 1 for a full discussion of the methodology).

   o How does the index address changes in economic reform policies? The PCI re-evaluates its methodology and recalibrates the index every four years. As we did in 2009 and 2013, we conducted an extensive review process in 2017 that began by engaging our advisory board as well a large number of potential PCI respondents, which led to methodological refinements. While altering the methodology poses problems for measuring improvements over time, the

dynamic nature of the Vietnamese economy and ongoing reform efforts require these periodic adjustments. (see Appendix A for all changes made in this year's methodology).

- Which are the top provinces according to this year's PCI? The top performer in the PCI 2017 rankings is the northern province of Quang Ninh, home of the picturesque Ha Long Bay and a province that has consistently ranked in the top five since 2013. Da Nang City, which had held the top position for the prior 4 years, and Dong Thap round out the "Excellent" tier. Four provinces (Long An, Ben Tre, Vinh Long, and Quang Nam) all achieved "Very Good" status.

ii. *The Core PCI.* To measure economic governance over time, we developed a second tool, which we call the "Core PCI,"[2] constructed from a smaller set of forty-one indicators that have remained fixed for twelve years (2006-2017). The Core PCI entirely follows the 2006 PCI methodology and is never recalibrated, so each indicator and subindex remain comparable over the entire PCI - unlike the signature PCI index, which is recalibrated every four years.

- *Improvement over time.* According to the Core PCI, there has been dramatic improvement in governance over time. In 2017, the Core PCI reached a score of 60.2, the highest mark achieved since we began the exercise in 2005. In fact, only one of Vietnam's 63 provinces failed to advance over the years we have been tracking the index (see Figure 1.9, Chapter 1).

- *Biggest provincial reformers.* Looking at provincial achievement, the largest improvements were recorded by Bac Lieu in the Mekong Delta, Ha Tinh in the North Central Coast, and Thai Binh in the outskirts of the Red River Delta. Two of this year's best provinces also score high on the improvement list, including Quang Ninh and Long An.

- *Reform progress by subindex.* From 2006 to 2017, the most significant improvements were observed in Entry Costs, followed by Proactive Leadership, Labor Training, and Business Support Services. Worrisome stagnation remains in the Transparency and Legal Institutions indices. And declines appear evident in Access and Security of Land Tenure.

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2 *For the List of Indicators of the Core PCI, See Annex 2, E-Version of the 2017 PCI Report.*

- *Key governance trends to watch.* Beyond these broader changes (described in Section 1.5, Chapter 1), we also highlight four critical trends that reflect progress on policies begun by the new Vietnamese leadership in 2016.
  - *Perceptions of corruption are declining.* Over the past two years, the central government has embarked on a large anti-corruption initiative. While high profile arrests have grabbed the focus of the news media, less attention has been paid to institutional changes meant to prevent corrupt activity, including greater transparency and civil service reforms to encourage accountability. After increasing for several years, 2017 shows statistically significant declines in three core indicators of corruption: 1) the share of firms believing informal charges are common; 2) the estimated bribe payments by firms as a share of revenue; and 3) whether commissions are necessary to win government procurement contracts. These findings are consistent with declining estimates of corruption in the PCI-FDI survey and annual UNDP Provincial Administrative Performance Index (PAPI) survey.

  - *The burden of administrative procedures is declining.* In early 2017, the Vietnamese government issued a sweeping set of initiatives to reduce the burden of administrative procedures. These reforms appear to be bearing fruit. For the first time in a half a decade, we are witnessing some improvement – only 30 percent of firms report spending over 10 percent of their time on government procedures. Digging deeper, 72 percent of respondents in the median province now believe the local bureaucrats are effective, 52 percent believe paperwork is simple, and 92 percent that report that fees are posted publicly. All three measures are at all-time highs.

  - *Access to land and security of business premises are worsening.* Land for business operations is becoming increasingly difficult to acquire and those who have it feel less secure. The share of businesses that purchased land and have a Land Use Rights Certificate (LURC) for their main business premises dropped slightly between 2016 and 2017, and is far below the figures recorded in 2012 and 2013. Firms complained that after they identified suitable land for their business, the constraints placed on purchasing, such as compensation requirements for farmers on the land or development obligations placed on them by the province, were too onerous (44 percent). About one third of firms (32 percent) argued that land planning was insufficient or poor, leading to plots that were far away from existing infrastructure or in inhospitable locations, such as adjacent to polluting businesses or too close to residential zones. Finally, a quarter of firms answered that information on available land was too limited.

- *Security Environment is Stable but Businesses Raise Concerns.* The final trend to watch comes from a new battery of questions placed in this year's PCI report to measure crime. One worrisome feature of Vietnam's middle-income status is that rapid growth and urbanization, along with increasing inequality, may have spurred increases in crime, particularly theft and burglary. Over the years, the PAPI of citizens survey has reported increasing crime rates in a number of provinces. These concerns have affected firms, and consequently, the PCI advisory board asked us to begin to study the issue and measure the effect of crime and the response of local authorities.

  In this year's report, we find that most firms (56 percent of respondents) report that the security situation in their province is good, but some express concern. Fifteen percent of businesses report that they were victims of theft in the past year, which caused material damage. The median value of lost or stolen goods was about 15 million VND ($667), but several businesses experienced damages of over 500 million VND ($22,000). For small firms, these crimes constitute a substantial portion of their annual revenue. Larger firms were more likely to be targeted and recorded greater losses.

iii. *The PCI Infrastructure Index* ranks the quality of infrastructure and connectivity in each province. The infrastructure index is not included in the calculation of the PCI scores. However, it serves as a useful reference for businesses as well as policy makers (see Figure 1.11, Chapter 1).

- o Why is infrastructure not included in the signature PCI? The PCI research team has determined it is unfair to include infrastructure in the overall PCI ranking for three reasons: i) initial endowments were dramatically different across provinces, making it very difficult for some rural provinces to catch up; ii) provinces are not solely responsible for infrastructure within their borders, as many investments are funded through central government initiatives; and iii) the team strongly believes improvement of infrastructure is best achieved through regional cooperation and does not want to encourage duplicative and damaging competition in port or airport construction.

- o What does the infrastructure index measure? This index is built upon the survey results of firms' perceptions about infrastructure quality across provinces and cities and published data from government sources. It includes four subindices, measuring: i) industrial zone quality; ii) roads; iii) public services (telecommunications, energy); and iv) information technology. The methodology of the index has remained the same since we began it in 2006.

- Which provinces have the best infrastructure? Binh Duong, Da Nang, Ba Ria Vung Tau, Dong Nai, and Bac Ninh rate as the locations with the highest quality infrastructure.

- Has infrastructure quality changed over time? In nearly every province there has been a consistent improvement in overall infrastructural quality over time. After a decline between 2011 and 2014, the infrastructure index is on an upswing and has reached a new high point of 64.4.

- Industrial zone quality is growing. The biggest improvements occurred in assessments of industrial zones. Forty-six percent of respondents expressed satisfaction with industrial zone quality and coverage, compared to 41 percent in 2016. Fifty-five percent of industrial zone land in the median province is now being utilized.

- Utility access and quality on the rise. Utilities, such as energy and telephones, also experienced improvements. One hundred percent of businesses in the PCI now have access to telephones and electricity at affordable prices. With regard to public services, in 2017, 78 percent of businesses in the median province (up from 77 percent in 2016) rated the quality of telephone service as good or very good, which is followed by power supply with 78% firms expressing their satisfaction, up from 69% in 2016. Internet expansion is also appreciated by respondents with 62% expressing satisfaction, up from 57 percent in 2016. Moreover, 82 percent of businesses now have email addresses and use them for business activity.

- Road and bridge quality need improvement. The greatest concerns continue to be about road and bridge quality. In 2016, 42 percent of respondents expressed satisfaction with roads. This number declined slightly to 41 percent in 2017.

- Zones of prosperity. A strong correlation exists between governance and infrastructure. In general, well-governed places tend to have higher quality infrastructure, though there are exceptions. Further, the best economic performance is found in locations that have the underlying infrastructure for businesses to prosper as well as above-average governance, as measured by the PCI. Unsurprisingly, the wealthiest and fastest-growing provinces in the country are in this group, including Da Nang, Binh Duong, Bac Ninh, BRVT, Dong Nai, and Vinh Phuc (see Figure 1.15, Chapter 1).

iv. *PCI Business Thermometer.* Each year, the respondents to the PCI survey answer a question about their investment plans for the next year. We then record and plot the share of respondents planning to "increase the size of their operations." The measure has become an elegant indicator of optimism and confidence felt by the business community regarding its economic prospects (see Figure 1.2, Chapter 1).

- o Relationship between optimism and business output. There is a pronounced correlation between reported expansion rates from the PCI survey and growth in the private sector's contribution to GDP. Although the time series is relatively short, we can clearly see that the private sector contribution grew and declined in lockstep with the PCI business thermometer.

- o Optimism is growing. According to this measure, the level of business enthusiasm has been steadily recovering since 2013. Fifty-two percent of the PCI 2017 domestic survey respondents said that they planned to increase the size of their operations over the next two years, four percentage points above last year's level.
  - Forty percent of enterprises answered that they would continue operations at their present size, while the number of firms planning on scaling down or closing the business was an extremely low 8 percent.

- o Foreign investors also more positive. Sixty percent of FIEs plan to increase the size of their operations in the coming years.
  - Thirteen percent of the surveyed foreign firms actually increased their investments in the past year, while 62 percent hired more employees.

v. *Analysis of PCI- FDI Survey.* Each year in Chapter 2 of the report, we present the findings from the PCI-FDI survey regarding governance improvements and challenges that influence the performance of FIEs in Vietnam. This year's highlights include:

- o Characteristics of foreign investors: The typical FDI enterprise in Vietnam remains small and export-oriented. They are usually subcontractors to larger multinational producers. New FIEs are increasingly likely to be registered as domestic operations to take advantage of the 2014 Investment Law that waives the Investment Registration Certificate (IRC) for such firms. Sixty-six percent of foreign enterprises are in the manufacturing sector, with the three leading sub-sectors being fabricated metal products, rubber and plastics products, and computer, electronic and optical products.

- The 2017 PCI-FDI survey offers several causes for optimism. In addition to growing business confidence, FIEs also report reductions in regulatory burdens, signs of decreased corruption, and improved labor relations. Crucially, many of these positive changes can be tentatively but directly attributed to administrative reforms in some areas as well as attempts to address excessive inspections, and anti-corruption efforts.

- Entry regulations for foreign investment. The 2016 PCI report recognized the positive impact of the 2014 Enterprise Law and the 2014 Investment Law in easing the regulatory burden in entry procedures for FIEs. The improvements continued into 2017.
  - The average wait time for the initial investment license dropped from 58 days in 2010 to 47 days in 2016 and 37 days in 2017.
  - The average wait time for the business registration certificate went from 35 days in 2010 to 20 days in 2016 and 18 days in 2017.
  - The share of FIEs considering entry regulations to be the most burdensome administrative measures dropped from 27 percent in 2015 to 24 percent in 2016 and 23 percent in 2017.

- Post-Entry Regulations. The 2016 PCI report highlighted post-entry regulations as an area for improvement. Recent regulatory measures such as Resolution 19-2017/NQ-CP on "Improving the Business Environment and National Competitiveness toward 2020" and Directive 20/CT-TTg on "Rectifying Inspection Activities to Prevent Redundant, Overlapping and Unnecessary Inspections" have led to positive initial improvements.
  - The share of foreign enterprises where managers have to spend more than five percent of managers' work time on bureaucratic procedures dropped from 72 percent in 2016 to 66 percent in 2017.
  - The share of FIEs enduring harassment – defined as eight or more inspection visits a year – declined to from 4.6 percent in 2016 to 3.4 percent in 2017.
  - The most problematic procedures in 2017 relate to customs, taxes and registration. Thanks to administrative reforms, social insurance is no longer among the most burdensome procedures for FIEs. The share of foreign enterprises naming social insurance as the most troublesome dropped from 27 percent in 2016 to 20 percent in 2017.

- Corruption has become less prevalent in certain areas for FIEs.
  - The rate of respondents admitting to paying bribes during customs procedures decreased from 56.4 percent in 2016 to 53 percent in 2017.

- The prevalence of firms encountering bribery in land procedures dropped from 22.6 percent in 2016 to 17.5 percent in 2017.
- The costs of informal fees to businesses also appeared to be in decline.
- Petty corruption shows signs of becoming more predictable, resulting in less uncertainty for firms.

o Labor quality requires policymakers' urgent attention. For many FIEs, local workers' skill level fails to meet their needs. Foreign enterprises still encounter difficulties in recruiting talented employees.
- Fifty-five percent of FIEs find it "difficult" and 19 percent find it "very difficult" to recruit skilled technicians.
- Thirty-six percent of respondents consider it "difficult" and 28 percent find it "very difficult" to fill supervisor and manager positions.
- Only 31 percent of FIEs think that the local labor quality meets their needs.
- Foreign investors have become less confident in the quality of vocational training provided by provincial governments and have significantly increased spending on in-house training.

o Strikes. Strikes have become less common after a spike in 2014. The number of work days lost caused by the average strike also declined. In 2017, among firms that experienced interruptions in production, the median work days lost decreased from to 1.5 from 2 in 2014.

vi. *Special Investigation on Management Quality.* For the PCI research team, the most enjoyable feature of every report is Chapter 3. Every year, the team chooses a relevant policy concern and leverages the team's full arsenal of data, analytics, and visualization into addressing it. These results are reported in Chapter 3. In past years, we have studied the environmental consequences of business development (PCI 2016), unique challenges for Vietnam's SMEs (2015), business perceptions and understanding of the Trans-Pacific Partnership (PCI 2014), and the impact of business participation on regulatory quality and compliance (PCI 2013). For the 2017 report, the PCI team investigated whether the talent and skills of Vietnam's business managers affects the performance of their companies as well as their perceptions of governance.

o Vietnam's missing middle: Among the most critical developmental challenges Vietnam faces today is the inability of private companies to develop the productivity and scale to compete in international markets. Although the number

of private firms entering Vietnam's domestic market is growing, the sector has actually experienced sharp declines in average capital and labor size. The average Vietnamese firm now has fewer than twenty employees and only 1.2 billion VND ($54,000) in fixed capital. Fourteen percent engage in manufacturing as their primary economic activity; eleven percent export either directly or indirectly through vendors; and six percent sell goods or services to foreign firms operating in the country. At exactly the time when industries should be consolidating and Vietnamese companies should be emerging to compete in the international arena, they are shrinking both in the scale of their fixed investment and employment growth.

- Beyond institutional constraints. The bulk of work on these dilemmas, especially research by the PCI team, has focused on the constraints to growth posed by factors external to firms, including reducing regulations, improving infrastructure, increasing access to finance and land, and reducing barriers caused by lack of transparency and corruption. There is evidence that all of these factors play a role. Nevertheless, improvements over time on many of these issues have not delivered any true Vietnamese champions to compete in the international marketplace.

- Does management quality matter? In year's special analysis, we take a different approach, focusing instead on factors internal to Vietnamese businesses that they can fix themselves without having to rely on the decisions of policy-makers. In particular, we look at the quality of management of Vietnam's domestic enterprises. We build our analysis of management quality off Nicholas Bloom's influential research program at Stanford University.

- Measuring management quality. Following Bloom's approach, we inserted four questions into both the PCI domestic and foreign surveys to measure management quality along three dimensions: 1) performance monitoring (information collection and analysis); 2) target setting (the use of short- and long-run targets); and 3) incentives (rewarding high-performing employees and retraining or removing underperformers). To benchmark Vietnam's private firms, we compare them to foreign firms operating in Vietnam, which answered the same battery of questions.

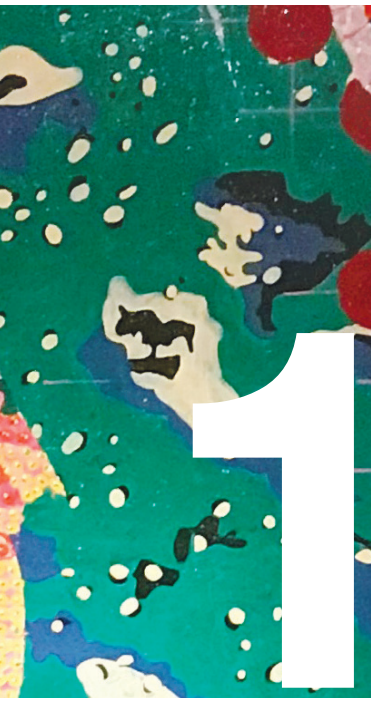
- Who are Vietnam's best managers? Management quality is associated with education, background, and types of business engaged in by firms. Vietnam's best managers have MBAs, did business overseas or managed SOEs before entering the private sector, and sell primarily to foreign firms or engage in export. By contrast, Vietnam's worst managers have high school educations, entered the private sector in the informal sector or with low level employment in SOEs, and sell primarily to the domestic market, particularly government.

- Management quality is associated with better performance. Firms with good managers have higher growth rates in both employment and fixed capital investment. For instance, we find that if a firm were to obtain a one-point increase in management quality, it would experience a 1.06 percent increase in average annual capital growth. Good managers also are more likely to be optimistic about future expansion plans on the PCI Business Thermometer. Among domestic enterprises, 54 percent of firms with good managers plan to expand their business over the next two years, compared to only 46 percent of enterprises with below-average managers.

- Good managers are less corrupt. The best managers have the least need for corruption to succeed in Vietnam's market. Across a range of different measures of participation in bribery and business malfeasance, companies with good managers are much less likely to engage in corruption, spend significantly less money on bribery or informal payments, and are far less likely to see corruption as a social norm in the Vietnamese business environment and as a constraint on their success. A one-point improvement in management quality is associated with a 3 percent reduction in the probability of bribing at registration, a 5.5 percent reduction in the probability of giving gifts during inspections, and 1 percent reductions in the probability of bribing while accessing land or appearing in court.

- Good managers are better able to take advantage of governance reforms. The finding that firms employing good managers are less corrupt and perceive the business environment to be more hospitable than those with bad managers sheds light on another puzzle that the PCI team has encountered over the years. Why have verifiable governance reforms enacted by provincial leaders not been appreciated by businesses in their jurisdictions? One reason appears to be that good managers are more willing to seek out information on policy changes and take advantage of those changes in their business operations. Bad managers, by contrast, often are unaware and at times blame provincial leaders for their own business problems.

- Management quality can be improved. The clear policy implication is that a training program focusing on developing basic management skills would be helpful for advancing the business success of Vietnam's firms and reducing their reliance on corruption. There are a number of high-quality business schools in Vietnam that could provide tailored executive courses along these lines.



1 ANALYSIS OF SIGNATURE PCI INDEX AND DOMESTIC ENTERPRISES

The 2017 PCI continues to serve as the trusted voice of the business community, jointly reflecting the opinions of private companies regarding governance quality and the business environment in 63 provinces and cities across Vietnam. It has been 13 years since the Vietnam Chamber of Commerce and Industry (VCCI), first conducted the PCI survey. Over this time, support for and confidence in the survey has grown, reflected by the increasing responsiveness of firms. The number of private enterprises participating in this survey again surpassed 10,000. Specifically, 8,242 domestic private firms with an additional 2,003 newly established enterprises (registered in 2016 and 2017), answered the 2017 PCI survey, sharing their experiences in dealing with administrative procedures as well as their perceptions of economic governance quality and the effectiveness of the local government bodies with which they worked. [1]

1 *For the Foreign Investment Survey, the number of responding firms was 1,765.*

The 13th Provincial Competitiveness Index (PCI): The PCI is designed to assess the ease of doing business, economic governance, and administrative reform efforts by Vietnam's provincial and city governments in order to promote private sector development. The 2017 PCI is the 13th iteration of the report, which is based on a rigorous survey of the perceptions of domestic firms. The PCI augments the voices of private entrepreneurs in Vietnam regarding economic governance in their province and the country.

The overall PCI index score comprises ten sub-indices reflecting economic governance areas that affect private sector development. A province that is considered to perform well on the PCI is the one that has: 1) low entry costs for business start-up; 2) easy access to land and security of business premises; 3) a transparent business environment and equitable business information; 4) minimal informal charges; 5) limited time requirements for bureaucratic procedures and inspections; 6) minimal crowding out of private activity from policy biases toward state, foreign, or connected firms; 7) proactive and creative provincial leadership in solving problems for enterprises; 8) developed and high-quality business support services; 9) sound labor training policies; and 10) fair and effective legal procedures for dispute resolution and maintaining law and order.

Methodology: We review the full methodology in Section 1.5. In brief, PCI produces the index in a three-step sequence, referred to as the "three Cs": 1) Collect business survey data and published data sources, 2) Calculate ten sub-indices and standardize them on a 10-point scale, and 3) Calibrate the composite PCI as the weighted mean of ten subindices with a maximum score of 100 points.

As we reported last year, the PCI re-evaluates its methodology and recalibrates the index every four years. As we did in 2009 and 2013, this year we engaged in an extensive review process that began by engaging our advisory board as well a large number of potential PCI respondents, which led to methodological refinements.[2] While altering the methodology poses problems for measuring improvements over time, the dynamic nature of the Vietnamese economy and the ongoing reform efforts require the effort.

When we began research on the PCI in 2004, Vietnam was a low-income country with GDP per capita of $699 and just over 100,000 formal, private enterprises throughout the country. Today, Vietnam is a middle-income member of the World Trade Organization with a per capita GDP of $2,200, surpassing India's level, and with over 450,000 private enterprises.

2 *In the final section of this chapter, we describe the PCI methodology and the changes made this year in great detail.*

Consequently, every province in Vietnam has experienced radical structural change in a very short period, bringing a host of new economic problems and constraints to private sector development. Indeed, much has been written on the middle income trap.[3]

A PCI that did not adapt and respond to these new challenges would soon become useless to Vietnamese policymakers, who need metrics to benchmark the outcomes of their current policies. Many of the problems the PCI studied intensely in 2006 and 2009 have been resolved through central government legislation, initiatives of provincial leaders, and adaptation by private sector entrepreneurs. Business registration, which used to take months and required multiple documents and stamps, can now be completed in a handful of days, or, in some provinces, in less than a day. Local State Owned Enterprises (LSOEs) no longer fundamentally distort provincial business environments, crowding out private investment.

At the same time, new challenges are emerging that require attention. As we report in Section 1.3, theft and burglary as threats to business success were unheard of ten years ago, but this year, nearly 14 percent of businesses say they have been victims of such crimes. Additionally, as we study in detail in Chapter 3 of the report, competing in the global economy requires technological innovation and management acumen that are beyond the reach of most Vietnamese small and medium size enterprises (SMEs). There is a need for provinces to provide training and other services to overcome these deficits.
A further need for recalibration stems from decreasing variation in PCI scores. After each methodological iteration, we see a slow convergence in scores over time, making it difficult to differentiate performance tiers. The first reason for this is the fact that it is easier for low-ranked provinces to catch up then it is for high-ranked provinces to forge ahead. There is much to gain through relatively easy administrative reforms, such as reducing waiting periods and publicly posting fees and regulations. Institutional changes to reduce corruption or strengthen the court system require more time and face greater obstacles. As a result, we tend to see decreasing variation as low-ranked province increase their scores, while the top tier stays stuck around a PCI score of 70.

Figure 1.1 provides an illustration of this dilemma. As part of this year's methodological review, we asked all respondents to rank progress on a wide range of reform objectives. As we have documented in the PCI index, respondents believe the most progress has been made on business registration and licensing, factors measured in Subindex 1 on Entry Costs (72 percent agree). Right behind that, as we highlight in Section 1.3 on infrastructure, 69.3 percent agree that electricity access has shown much progress. This parallels the

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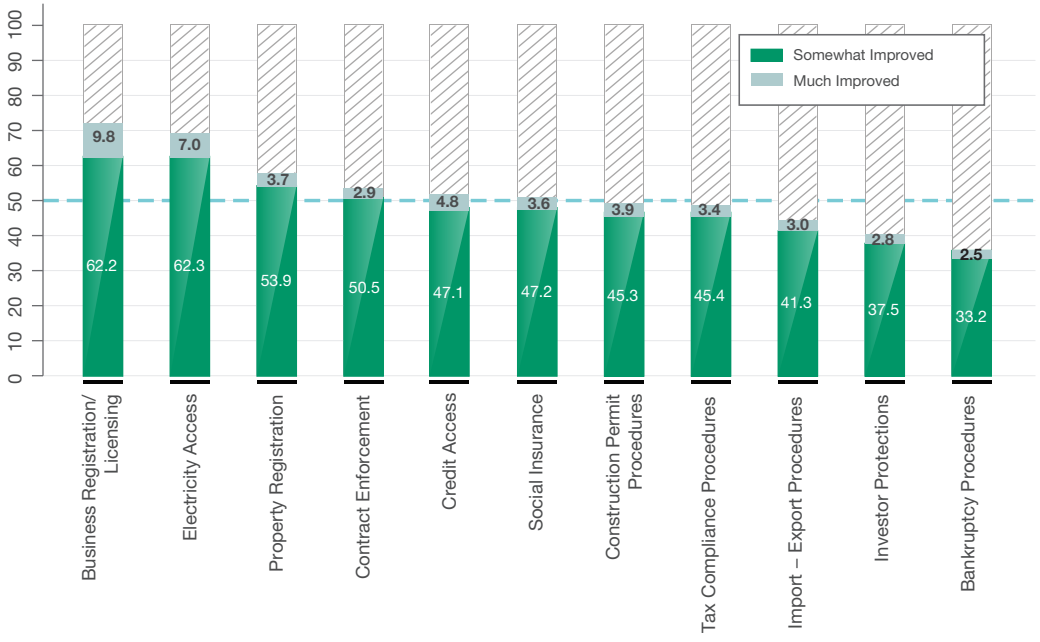
3 *Barry Eichengreen, Donghyun Park, and Kwanho Shin, "Growth Slowdowns Redux: New Evidence on the Middle-Income Trap," (National Bureau of Economic Research, 2013), 184; Homi Kharas and Harinder Kohli, "What Is the Middle Income Trap, Why Do Countries Fall into It, and How Can It Be Avoided?," Global Journal of Emerging Market Economies 3, No. 3 (2011).*

nation's progress as a whole on this front; 98 percent of Vietnamese households now have access to electricity.[4] Fifty-eight (58) percent of firms believe property registries are now developed, indicating moderate progress. These reforms, however, are relatively easy in the sense they simply require expanding existing services or removing irrelevant bureaucratic steps. By contrast, reforms that require difficult changes in legal institutions, such as strengthening investor protections or modifying bankruptcy procedures, require more work.

Figure 1.1. Opinions on Economic Reform Progress



Source: PCI Survey Question K3, "From your firm's observation and experience, how do you rate the changes in the following areas in your province in 2017 as compared the previous years?"

A second issue has to do with the management principle of "Campbell's Law," which explains how using social indicators in policy can distort the meaning of the indicators over time, as those measured focus attention on improving their scores.[5] In the best-case scenario, which we have observed repeatedly in the past 13 years, such benchmarking encourages policy reforms and real substantive improvements by leaders. Problems can arise, however, when those measured (e.g. provincial leaders) concentrate on improving

4 *Phu Viet Le, "Electricity Price, Residential Electricity Demand, and Renewable Energy Development Policies in Vietnam," (2017).*

5 *William R Shadish, Thomas D Cook, and Laura C Leviton, Foundations of Program Evaluation: Theories of Practice (Sage, 1991); Donald T Campbell, "Assessing the Impact of Planned Social Change," Evaluation and Program Planning 2, No. 1 (1979).*

their scores on specific indicators (i.e. web site quality), while neglecting progress on resolving broader governance obstacles that the indicator is meant to track (e.g. facilitating greater transparency of local policy to increase predictability and reduce the risk of business investments). Under these conditions, we may record what appear to be improvements in the indicators at the same time as businesses complain about how difficult it is to access information. In other words, sometimes leaders pursue the letter of the law but neglect to follow its spirit. This leads to a gradual undermining of the utility of the indicator to evaluate the effect of policy on business performance.

In this year's methodological revisions, we address both of these sources of convergence in three ways, discussed in more detail in Section 1.5. First, we drop indicators obviated by reforms or that have lost their original meaning. Second, we add indicators to capture new challenges in the business environment and better emphasize the fundamental constraints facing private business. Third, we reorganize the sub-indices, so the collection of variables within each subindex better captures the spirt of the reforms we hope to encourage.

After each recalibration, we maintain the methodology for the next four years. The indicators, the formulas for constructing sub-indices, the algorithm that weights each subindex, and the cut-off points grouping provinces into performance tiers remain the same. Consequently, from 2017 until 2021, it will be possible to compare performance directly from year-to-year, just as it was during the previous iterations (2005 to 2008), (2009 to 2012), and (2013 to 2017). We return to the discussion of methodology in Section 1.5. For those wishing to explore longer time-series of governance data, we continue the "Core PCI," which is a smaller collection of indicators that have been maintained for the entire thirteen years (see Section 1.5).

The rest of the chapter proceeds in four sections. First, we review the PCI Thermometer measure of business confidence. Second, we present the 2017 PCI ranking and analyze its change and stability over time. Third, we discuss the 2017 infrastructure index, its improvement, and relationship with governance. Fourth, we highlight four key trends emerging from our time series data that Vietnamese analysts should watch carefully, as they have profound implications for understanding the achievements of the current administration as well as future economic development.

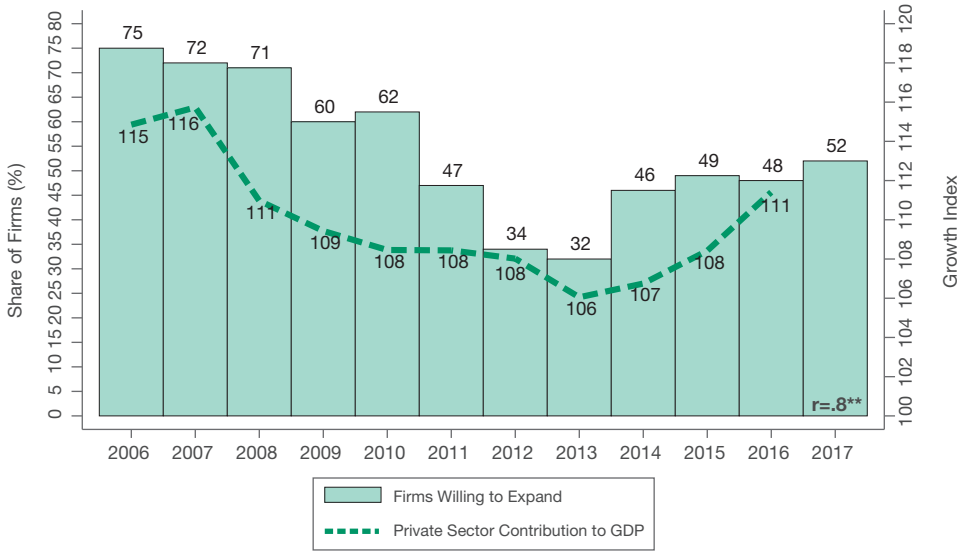
1.1. BUSINESS CONFIDENCE

Each year, the respondents to the PCI survey answer a simple question about their investment plans for the next year. We then record and plot the share of respondents planning to "increase the size of their operations." The measure has become an elegant indicator of optimism and confidence felt by the private business community regarding its economic prospects.

Figure 1.2 presents the PCI Business Thermometer, illustrating that the level of business enthusiasm has been steadily recovering since 2013. Fifty-two percent of PCI 2017 survey respondents said that they planned to increase the size of their operations over the next two years, four percentage points above last year's level. Forty percent of enterprises answered that they would continue operations at their present size, while the number of firms planning on scaling down or closing the business was an extremely low 8 percent.

Figure 1.2 also demonstrates the strong correlation between reported expansion rates from the PCI survey and growth in the private sector's contribution to GDP as measured.[6] Although the time series is relatively short, we can clearly see that the private sector contribution grew and declined in lockstep with the PCI business thermometer. When private sector confidence was at its lowest in 2013, the private sector contribution to GDP also reached its lowest annual growth of 6% (106 on the Growth Index). This relationship bodes well for 2017 and 2018, as private sector confidence is clearly on the rise. We should expect an upswing in private sector investment and output.

Figure 1.2. PCI Business Thermometer over Time



Source: GSO Multiple Years and PCI Survey Question A12, "Which statement best characterizes your firm's investment plans over the next 2 years?" Figure reports the percentage of firms that responded that they will increase or considerably increase operations.

6 *General Statistical Office, "Statistical Handbook," (Hanoi, VietnamMY).*

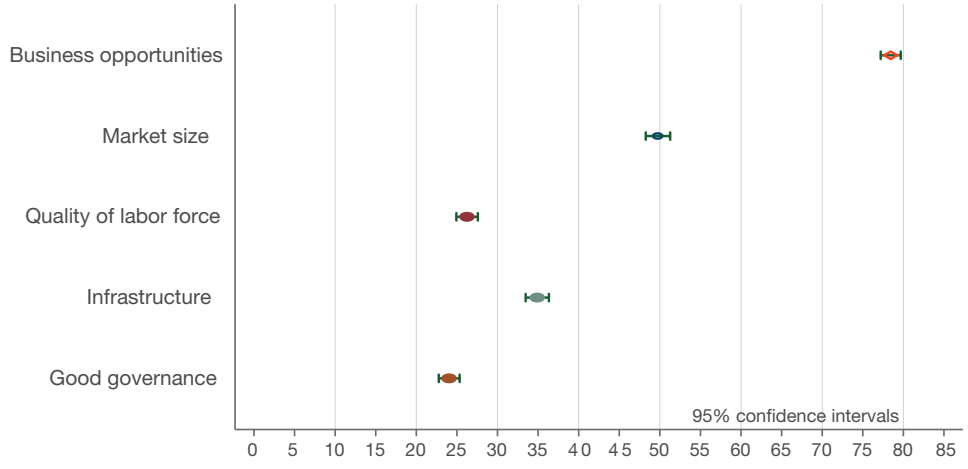
What is driving this optimism? In a follow up question, we asked private firms planning to expand to new locations to delineate the key drivers behind their expansion decisions. In other words, why did they select these provinces and cities for their investments? Figure 1.3 displays the results of this question. The symbols display the share of firms that responded yes to each item.[7]

Fascinatingly, this year, governance is the least important factor in investment decisions. Firms are primarily concerned about new business opportunities (80 percent) and the size of the potential demand for their products (50 percent). This is why urban centers, such as the five national-level cities, rank near the top of the investment reception list, despite the fact that they are not the most well-governed locations. Following those, private investors care about infrastructure quality (35 percent), which explains our motivation for creating a separate ranking of infrastructure in Section 1.3. It is also remarkable that the quality of human capital, measured in Subindex 9 of the PCI and economic governance in general rank the lowest. Twenty-five percent of investors selected these two attributes.

While these numbers may be small comparatively, 25 percent of PCI respondents represents 2,500 firms, which is not a trivial contribution to employment or tax revenue. Furthermore, as we have noted in previous PCI reports, governance becomes critically important on the margins, because of the way investors sequence their locational selections. Usually, investors first select a subset of location possibilities that have suitable market conditions and infrastructure for their business. These are primary considerations because investors simply cannot run profitable enterprises without them. A manufacturing firm cannot survive without adequate infrastructure to deliver its products to customers without delay or damage. Once the subset of suitable locations is selected, however, firms then must make hard decisions. Here is where labor quality and governance become important, differentiating between locations that are equivalent on structural conditions. That is why, as we show in Figure 1.15 below, the greatest investment and GDP growth over the past decade have been in locations that offer the best mix of good infrastructure and good governance.

7 *Ninety-five percent confidence intervals display the sampling error around each response item. When these confidence intervals do not overlap, it indicates that the differences are statistically meaningful and did not occur by chance.*

Figure 1.3. Drivers of Expansion Decisions



Source: PCI Survey Question K1.1, "Please explain why your firm would choose the new location? My firm's choice is made on the account of… (Check all that apply)." Figure reports the percentage of firms that responded to each item.

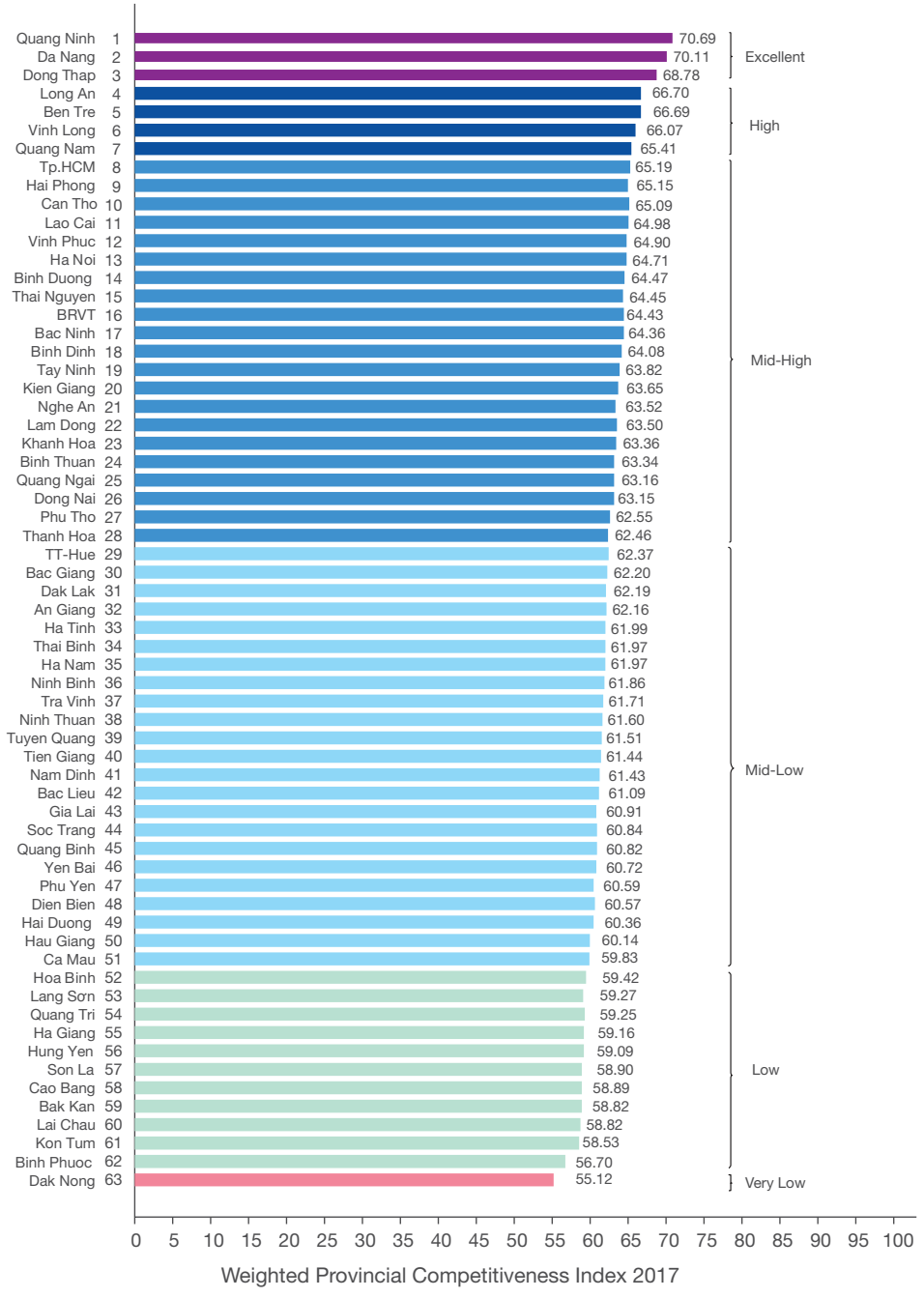
1.2. THE 2017 PROVINCIAL COMPETITIVENESS INDEX

Business optimism is also reflected in the annual Provincial Competitiveness Index (PCI). This year, we recorded the highest median PCI score since we began measurement in 2005.

Figure 1.4 presents the composite PCI 2017 ranking. Taken as a whole, we can see quite a few interesting developments in this year's results. The five provinces listed as the best performers in PCI 2017 are Quang Ninh (70.7 points), Da Nang (70.1 points), Dong Thap (68.8 points), and Long An (66.7) and Ben Tre (66.7). Figure 1.5 displays the information on a map of the country. This allows us to indentify clusters of high performance in the Mekong Delta, in the South Central Coast, and the provinces bordering Ho Chi Minh City. Careful readers will note that the performance tiers have changed from previous PCI iterations. As part of our methodological revisions, we made the decision to dispense with the old performance tiers, which were based on the largest statistical "break points" that we could indentify in the scores.[8] This year, we identity performance tiers by their standard deviation, which is a helpful measure of the average distance of each province from the mean provincial PCI score. See Section 1.5 for a deeper discussion of our motivation for this change.

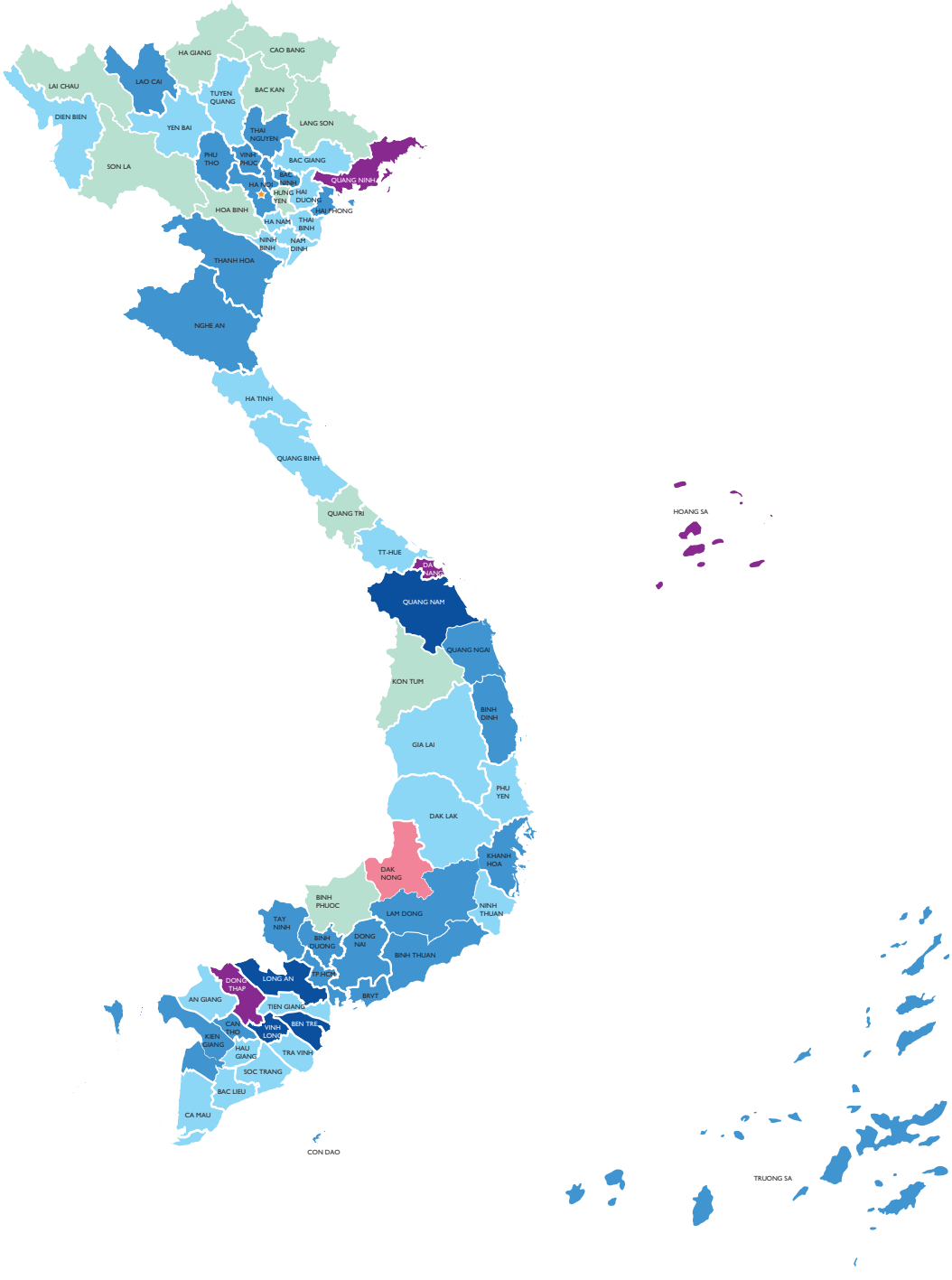
8 *Jushan Bai, "Estimation of a Change Point in Multiple Regression Models," The Review of Economics and Statistics 79, No. 4 (1997).*

Figure 1.4. Final 2017 Provincial Competitiveness Index Ranking



Source: PCI Survey 2017. Authors' Calculations. See Table 1.2 for subindex weights. For the list of indicators used in creating the Index, see Appendix 1, e-version of the 2017 PCI report on the website www.pcivietnam.vn

Figure 1.5. Map of 2017 Rankings



The top performer in the PCI 2017 rankings is Quang Ninh, a province that has consistently ranked in the top five since 2013. In the past five years, Quang Ninh has focused on administrative reforms through the operations of its Center for Public Administration and the Investment Promotion Agency. These institutions concentrate decision-making in a single entity and streamline administrative procedures to shorten waiting periods and reduce transaction costs for investors and businesses. The benefit of the organizational reform is reflected in the fact that Quang Ninh tops the list in the *Entry Costs Subindex* this year, with only 6 percent of firms waiting over a month to complete the necessary procedures for commencing operations. Furthermore, 80 percent of enterprises in Quang Ninh agree that registration procedures are transparently posted, guidance and instruction on procedures is clear and adequate, and the staff is professional, knowledgeable and friendly in handling procedures of business registration and re-registration.

The overall effectiveness of administrative reforms, measured by the *Time Costs Subindex*, also demonstrates the positive review from the business community about Quang Ninh through a number of specific indicators: Local government officials are effective (75 percent agree), friendly (70 percent agree), and complete their procedures in less than the required time stated in regulations (76 percent agree).

The Quang Ninh leadership has not been especially innovative in their governance reforms, but they have been effective in employing supervisory tools borrowed from other localities to improve the efficiency of operations at all administrative levels in the province through the construction and annual launch of the their own Departmental and District Competiveness Index (DDCI), which was initiated in 2015. The DDCI allows them to monitor and hold sub-provincial leaders accountable for their performance.[9]

The benefits of the DDCI are visible in the answer to the PCI survey question, "Do you agree with the following statement, 'there are good initiatives at the provincial level but they are not well implemented by departments of central ministries?'" In 2014, 80 percent of firms in Quang Ninh agreed that there was poor implementation by district administrations. In 2017, only 64 percent of firms agreed with this statement, which is the second lowest share in the country. Relatedly, agreement with the statement "Provincial leaders have good policies, but they are not well implemented at district level" fell to 58 percent in 2017 from 64 percent in 2014. According to officials from the province, one way they have held subordinates accountable is by leveraging social networks, especially the *Facebook* "fan page" of the DDCI. This allows them to learn about problems in implementation early from firms and deal with the flare ups before they become more widespread.

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9 *The Initiative of Departmental/District level Competitiveness Index (DDCI) originated in Lao Cai in 2013, and was replicated in Vinh Phuc and Kien Giang in 2014, which were in turn followed by many other provinces and cities such as Tuyen Quang, Bac Giang, Bac Ninh. The PCI Research Team now estimates there are over 20 provinces producing their own DDCI.*

Avoiding formal business dialogues, the Quang Ninh government has actively supported the model of "Biz Café" hosted monthly by the Provincial Business Association in cooperation with provincial departments and sectors to connect and support enterprises, especially SMEs. At the Biz Café, businesses interact in informal sessions with officials to discuss a single issue area that has been slated for discussion by a board composed of provincial leaders and representatives of business associations. Open discussion is promoted and finding solutions by the end of the session is emphasized. Using information from these sessions to prepare training sessions and plan trade fairs and service offerings, Quang Ninh has increased its subindex ranking Business Support Services to 8.52 points, ranking third in the country, behind the major cities of HCMC and Hanoi.

Despite turmoil in the province's leadership this year, businesses in Da Nang continue to hold a positive assessment of the government's transparency and regulatory procedures, propelling it to the second position in the PCI with a score above 70. Da Nang's score helpfully illustrates our observation regarding plateauing reforms among top provinces. Da Nang has improved over time, but its overall change rate as measured by the core PCI is among the lowest in the country between 2006 and 2017 (see Figure 1.9). Some of this has to do with starting from a much higher base of governance, but it also indicates that Da Nang has had more success concentrating on easy reforms, such as reducing entry costs, and a more difficult time building institutions that reduce informal charges or facilitate dispute resolution. As an example, Policy Bias is Da Nang's lowest score on the 10 sub-indices and has declines over time.[10]

The originator of the "Biz Café" model, Dong Thap continues to hold the third place in the PCI 2017 rankings. This sets a new record for the province of ten consecutive years in the top five of the PCI. Dong Thap ranks at the top of a range of sub-indices, including: *Land Access and Tenure Security, Transparency*, and *Time Costs*. Long An climbed back to the top five of PCI rankings nationwide for the first time since 2011, ranking first in two sub-indices: *Proactive Leadership* and *Legal Institutions*. Ben Tre for the first time found itself in the top five PCI performers with significant improvement in the *Proactive Leadership* and *Business Support Service* sub-indices.

The next five provinces in the top 10 of the 2017 PCI are Vinh Long, Quang Nam, HCMC, Hai Phong and Can Tho. This is the first top ten appearance for Hai Phong, marking its achievement with the leading position in the Labor Training Subindex in PCI 2017. Hai Phong has always maintained high scores in labor training, but this is the first time that its businesses ranked it at the top of the subindex. Hai Phong achieved this honor by beginning a series of monthly dialogues between state agencies and enterprises in 2016

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10 The Policy Bias subindex measures whether privileges given to SOEs, FIEs and connected firms cause difficulties and reduce the likelihood of a level playing field for private, domestic firms.

to provide guidance and support for governance reforms and promptly remove difficulties for the business community. The survey results of PCI 2017 demonstrate that 80 percent of firms are satisfied with the responses of the city's leadership.

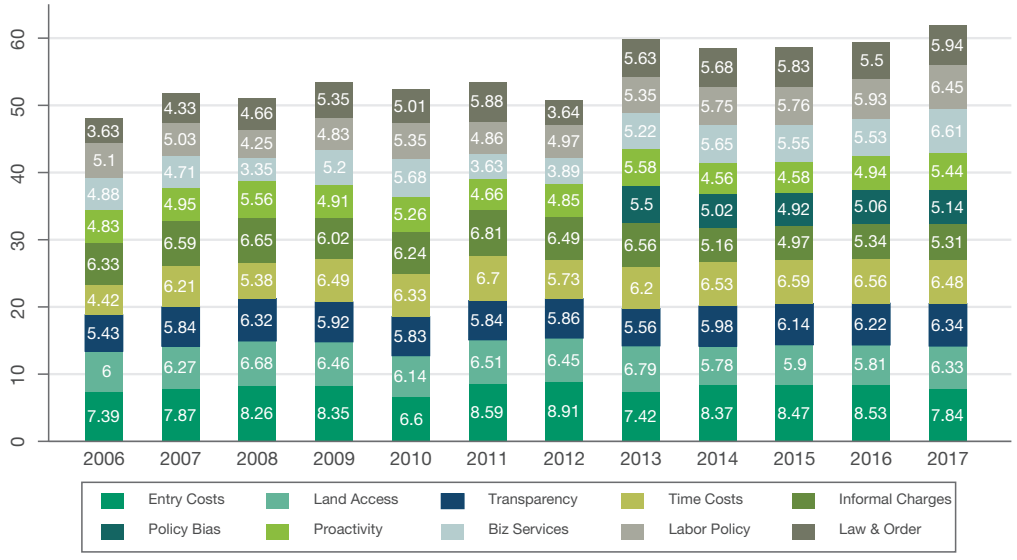
Similarly, since 2016, Can Tho has asked its agencies and authorities to block Mondays on leaders' schedules for receiving firms' visits and listening to their feedback. The 2017 PCI indicates that this strategy is working for Can Tho. Seventy-two percent of enterprises said that their problems were resolved promptly after the meetings and dialogues (compared to a national average of 67 percent); 94 percent received local authorities' responses and/or feedback to the firms' questions; and 84 percent of businesses were satisfied with local authorities' responses or their ways of handling the issue (compared to a national mean of 77 percent).

Subindex Performance

Figure 1.6 provides the score for the median province in all ten sub-indices over time. A word of caution is necessary in reviewing this graph. One cannot compare the changes in index scores directly between 2016 and 2017. Some of the improvements and declines are artificial, caused by the changes in indicators, index construction, and weighting that we discuss in Section 1.5, as opposed to real changes in economic governance.

Figure 1.6, therefore, is best for studying the relative contribution of each of the sub-indices to the final PCI. Each subindex is scored on a 10-point scale, allowing for direct comparisons. As in previous years, we can see that progress on reducing constraints to business entry remains the highest (7.84), while more effort needs to be expended on reducing policy bias toward state owned enterprises (SOEs) and Foreign Invested Enterprises (FIEs) and enhancing the proactivity of local leaders, which score 5.14 and 5.44 respectively.

Figure 1.6. PCI by Subindex over Time

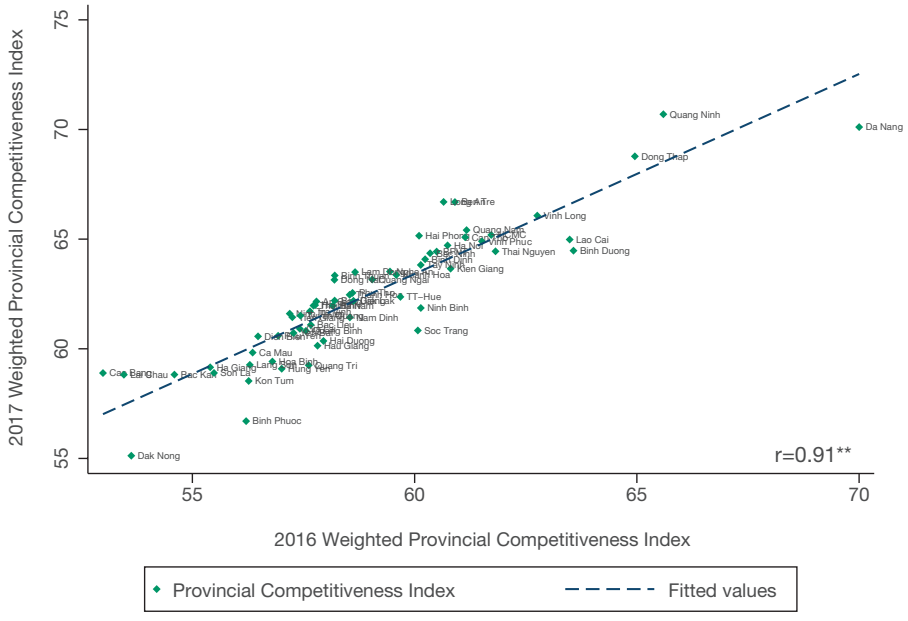


Source: PCI Survey 2017. Authors' Calculations. See Table 1.2 for subindex weights. For the list of indicators used in creating the sub-indices, see Appendix 2, e-version of the 2017 PCI report on the website www.pcivietnam.vn

Stability over Time

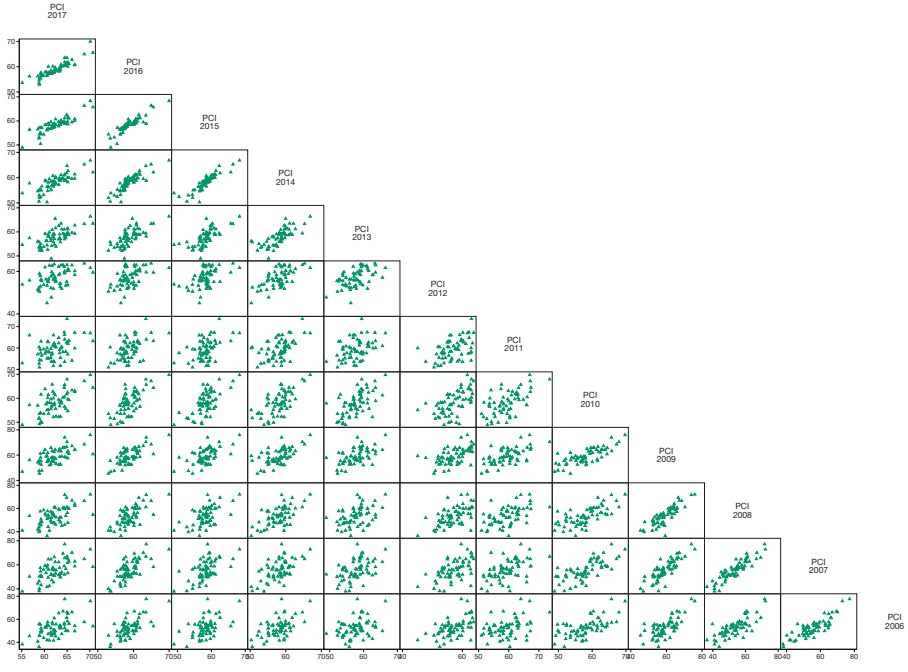
Despite the substantial methodological changes to the index documented in Section 1.5, the ability of the PCI to identify high and low performing provinces is remarkably stable over time. Figure 1.7 presents a scatterplot showing the correlation between scores in 2016 and 2017. The relationship is nearly perfect (r=.91), indicating that governance, even when measured slightly differently, is quite stable. Provinces can and do advance up the index, but the best provinces tend to remain at the top and the worst provinces at the bottom. Figure 1.8 goes even further by showing the strong correlations in all iterations of the PCI going back to 2006. The bottom line is that the PCI scores can be relied upon as consistent benchmarks of performance.

Figure 1.7. Relationship between 2016 and 2017 PCI



Source: PCI Survey 2016 & 2017. Authors' Calculations.

Figure 1.8. Overall Consistency in PCI Scores



Source: PCI Survey Multiple Years. Authors' Calculations.

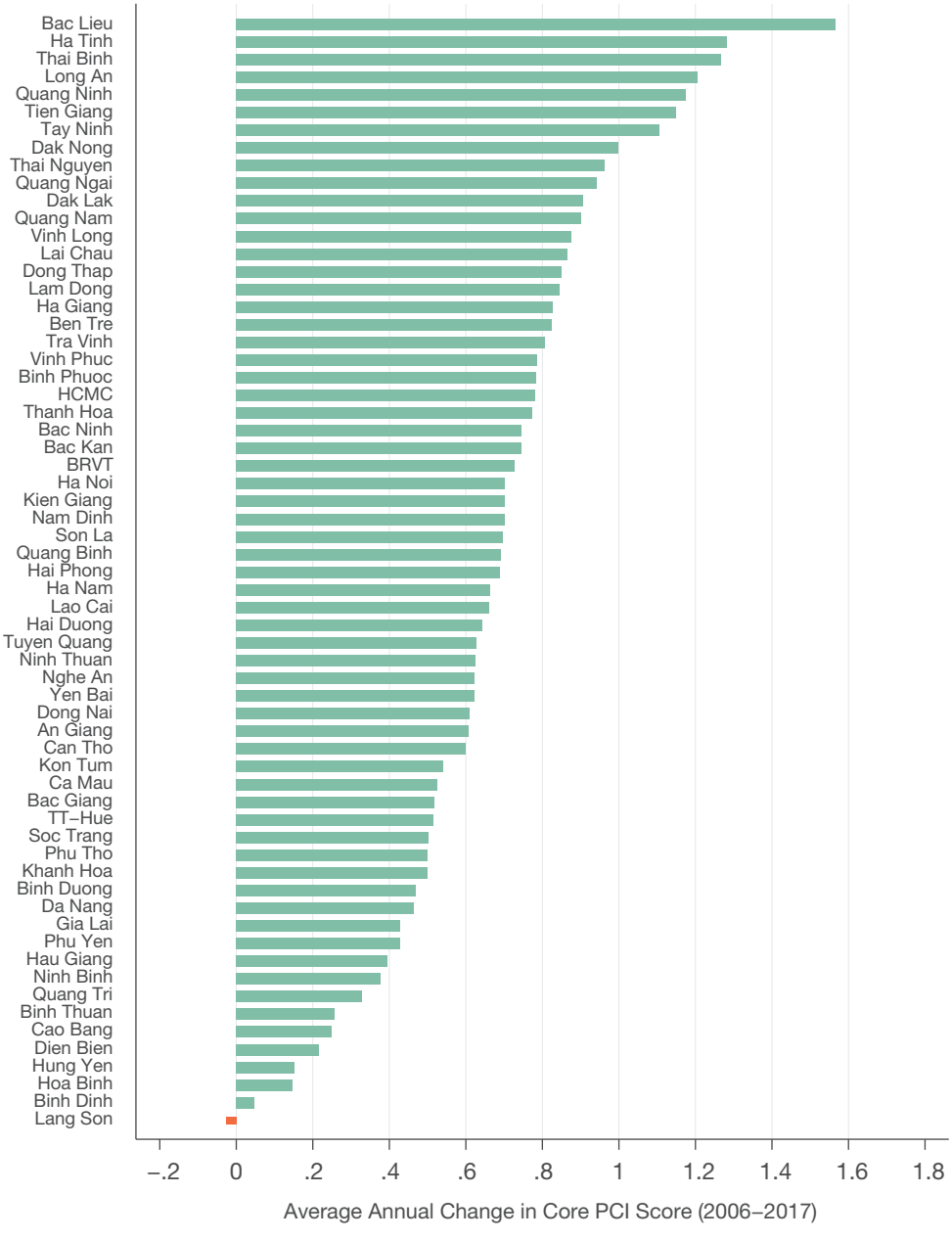
Governance Improving

To measure improvement in economic governance over time, the PCI has developed a second tool, which we call the "Core PCI,[11] which is constructed from a smaller set of forty-one indicators that have remained fixed for twelve years (2006-2017). The Core PCI is constructed entirely following the 2006 PCI methodology, so it remains entirely comparable overtime.

Figure 1.9, which plots the average annual increase in the 100-point Core PCI, shows there has been dramatic improvement. Only one province, Lang Son, has failed to advance over the years we have been tracking the index. The largest improvements over the time period were recorded by Bac Lieu in the Mekong Delta, Ha Tinh in the North Central Coast, and Thai Binh in the outskirts of the Red River Delta. Two of this year's best provinces also score high on the improvement list, including Quang Ninh and Long An.

11 For the List of Indicators of the Core PCI, see Annex 3, E-version of the 2017 PCI Report.

Figure 1.9. Improvement in Core Index between 2006 and 2017



Source: PCI Survey Multiple Years. Authors' Calculations. For the list of indicators used in Core Index, see Appendix 3, e-version of the 2017 PCI report on the website www.pcivietnam.vn2017 PCI report on the website www.pcivietnam.vn

Figure 1.10 depicts the improvement trend over time using a box plot. Box plots are an extremely useful method for depicting both average scores and variation over time. To read these, one begins in the middle of the central box. The line across the middle depicts the median score (50th percentile) or middle-ranked (32nd ranked province) on the measure in the given year. The lower and upper edges of the box provide the scores at the 25th (16th ranked province) and 75th percentile (48th ranked province), respectively. The ends of the range bar provide the lowest and highest values that are not outliers by standard statistical definitions. The dots outside the range bars are the outliers, provinces that scored extraordinarily low or high in a given year.[12]

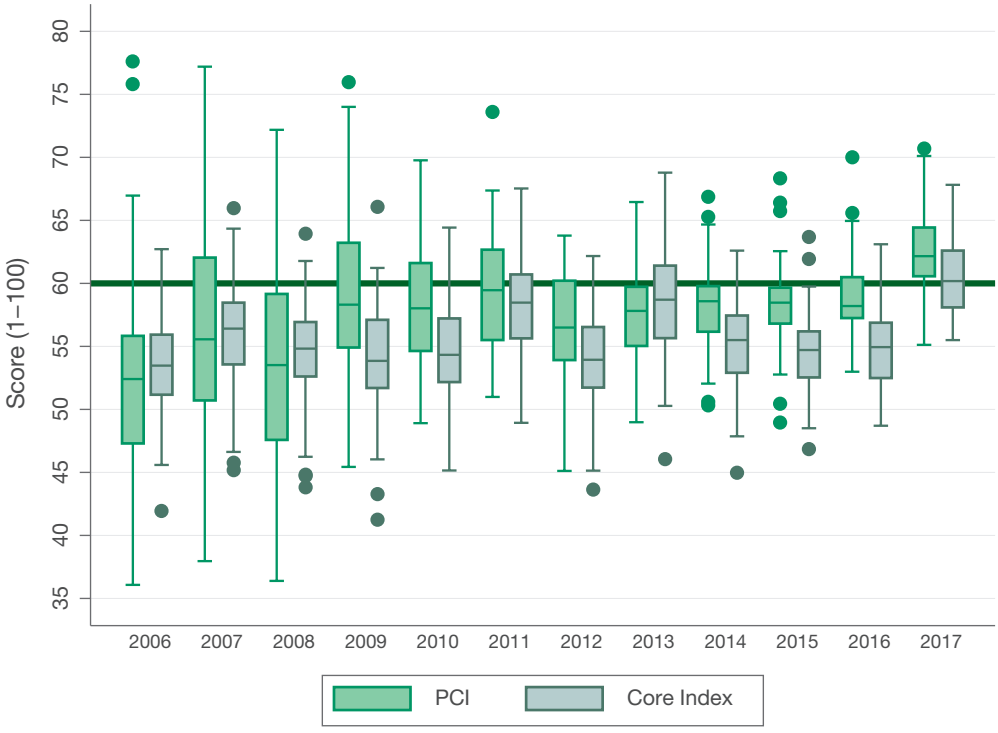
In Figure 1.10 we provide box plots over time for two different measures. The green boxes show the final, weighted PCI from Figure 1.3. The orange boxes provide the Core PCI, which uses only the original indicators from 2006 and maintains them over time.

The first thing to notice is that for both measures, 2017 represents the highest median score achieved since the beginning of the project. In fact, for both measures, this is the first time that median province has passed 60 points (62.2 on the PCI and 60.2 on the consistent index). This is a critically important finding, as it shows that the increase in the PCI is due to more than just our methodological adjustments. The core PCI clearly shows that a large portion of the increase represents real, measurable increases in actual governance.

The second thing to notice is the declining range and box sizes for the PCI over time, which denote the convergence of scores that we discussed in the introduction. The 16th and 48th ranked provinces are getting closer and closer together, which is a result of increased learning in the lower tail of the PCI distribution. In 2017, due to the revised methodology, however, we see a slight increase in the variance compared to the year before (from 8.57 to 8.66). This indicates that the recalibration worked somewhat in correcting the reduced variation and ratcheting effect of Campbell's Law.

12 *Usually, three standard deviations above the mean. See Appendix 1.1 of a standard deviation*

Figure 1.10. Box Plots of PCI and Core PCI over Time

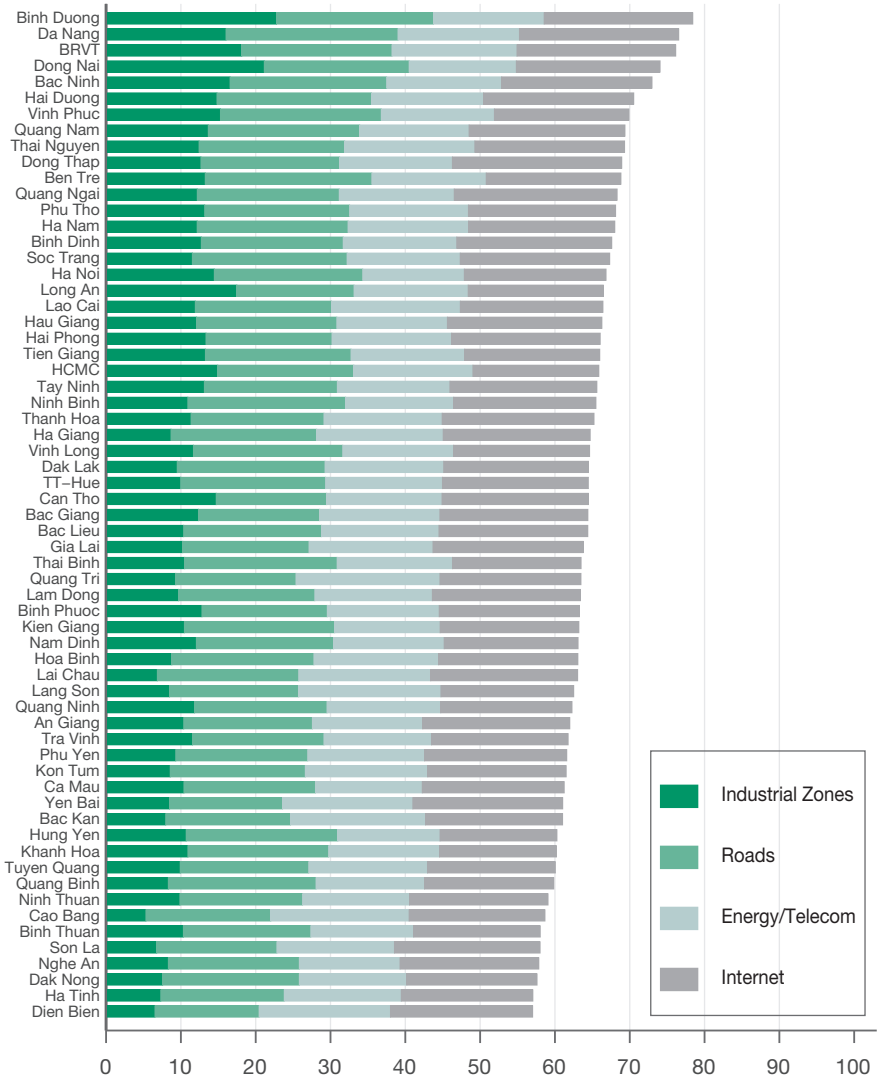


Source: PCI Survey 2017. Authors' Calculations. See Table 1.2 for subindex weights. For the list of indicators used in creating the Index and Core Index, see Appendix 1 & 3, e-version of the 2017 PCI report on the website www.pcivietnam.vn

1.3. THE 2017 INFRASTRUCTURE INDEX

This section presents the PCI Infrastructure Index 2017 for the 63 provinces and cities of Vietnam (Figure 1.11). The infrastructure index is not included in the calculation of the PCI scores. However, it serves as a useful reference for businesses as well as policy makers. This index is built upon the survey results of firms' perceptions about infrastructure quality across provinces and cities and published data from government sources, and includes four subindices of: (1) industrial zones; (2) roads; (3) public services (telecommunications, energy); and (4) information technology. In 2017, Binh Duong, Da Nang, Ba Ria Vung Tau, Dong Nai, and Bac Ninh were rated as having the best infrastructure.

Figure 1.11. The 2017 Quality of Infrastructure Index



Source: PCI Survey 2017. Authors' Calculations. For the list of indicators used in creating the Infrastructure Index, see Appendix 4, e-version of the 2017 PCI report on the website www.pcivietnam.vn

Infrastructural Improvements over Time

Improvements in infrastructure cannot be achieved overnight; they require tremendous resources as well as concerted efforts by both the central and local governments. Nevertheless, in nearly every province there has been a consistent improvement over time. Figure 1.12 demonstrates this by depicting a trace map plotting the trend lines for all 63 provinces in Vietnam in light gray. The purple line captures the median infrastructure

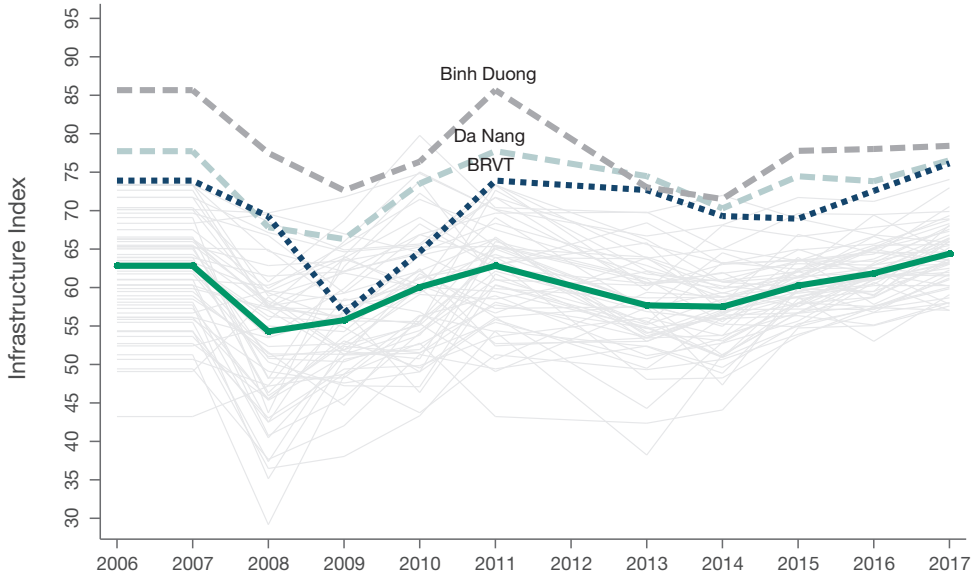
score each year going back to 2006. The dashed lines at the top show the trajectories of the three highest-ranking provinces in the 2017 index (Binh Duong, Da Nang, and Ba Ria Vung Tau).

The first thing to notice about the graph is the upward sloping green line, depicting the median score. After a decline between 2011 and 2014, the index is on an upswing and has reached a new high point of 64.4.

A second feature is the remarkable consistency at the top of the index. There have been tiny fluctuation with Ho Chi Minh City and Vinh Phuc sometimes joining the top five for a short while. Nevertheless, Binh Duong, Da Nang, and Ba Ria Vung Tau rank in the top every year going back to 2011.

The third thing to notice is the convergence in the infrastructure scores. As with the PCI, we are seeing a dramatic reduction in the dispersion each year. This can be observed by looking at in how close the top and bottom trace lines are to each other. We can clearly see why - the bottom provinces are improving and increasing in their scores. The top provinces, however, have remained at or near their current levels of infrastructure for most of the timeframe under investigation.

Figure 1.12. Trace Map of Infrastructure Improvements across All 63 Provinces



Gray lines depict trajectories of all 63 provinces.
The solid green line represents the median score in each year.

Source: PCI Survey Multiple Years. Authors' Calculations. For the List of Indicators Used in Creating the Infrastructure Index, See Appendix 4, E-version of the 2017 PCI Report on the Website www.pcivietnam.vn

Figure 1.13 looks at changes over time in the different infrastructure sub-indices. Three of the four sub-indices showed significant improvements in 2017. Only transportation infrastructure (roads and bridges) was below its 2016 score. However, this is a minor decline and still far above the score recorded in 2015.

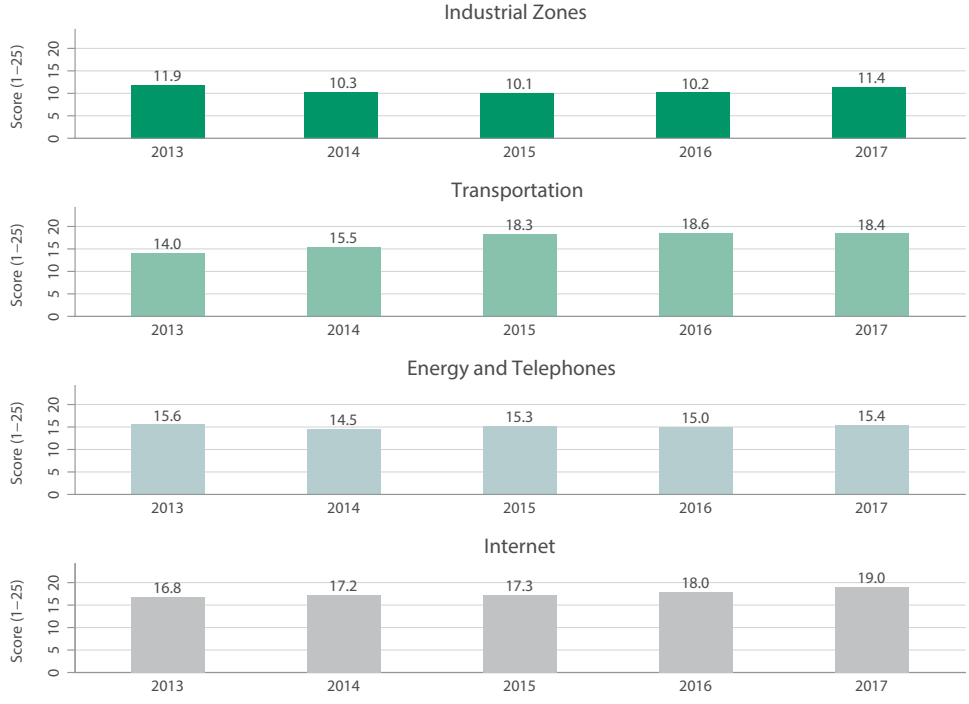
The biggest jump occurred in assessments of industrial zones. In 2017, 46 percent of respondents expressed satisfaction with industrial zone quality and coverage, compared to 41 percent in 2016. Consequently, coverage has increased. Fifty-five percent of industrial zone land in the median province is now being utilized.

Utilities, such as energy and telephones, also experienced improvements, 100 percent of businesses in the PCI now have access to telephones and electricity at affordable prices. With regard to public services, in 2017, 78 percent of businesses in the median province (up from 77 percent in 2016) rated the quality of telephone service as good or very good. This is the public service receiving the highest level of satisfaction among firms in the survey. The power supply ranked second with 74 percent of the firms being satisfied (up from 69 percent in 2016). In addition, outages have reduced dramatically over time. Hours of lost telephone service and lost power in the month before the PCI survey are down to six and five hours respectively. This is far lower than the twelve hours we measured in 2013 and the eight hours recorded last year. Furthermore, 75 percent of firms acknowledged that they were informed ahead of time about telephone and power cuts, giving them time to prepare and make adjustments. In 2016, only 50 percent of businesses reported such early notification.

Internet expansion is also appreciated by respondents with 62 expressing satisfaction, up from 57 percent in 2016. Moreover, 82 percent of businesses now have email addresses and use them for business activity.

The greatest concerns continue to be about road and bridge quality. In 2016, 42 percent of respondents expressed satisfaction with roads. This number declined slightly to 41 percent in 2017. Moreover, the share of asphalt roads in the median province remains stubbornly stuck at 94 percent. Major thoroughfares in some provinces are still made out of dirt or gravel and are subject to flooding.

Figure 1.13. Change over Time in Infrastructure Subindices



Source: PCI Survey 2017. Authors' Calculations. For the list of indicators used in creating the sub-indices, see Appendix 2, e-version of the 2017 PCI report on the website www.pcivietnam.vn

Relationship between Infrastructure and Governance

Figure 1.14 shows the strong correlation between governance and infrastructure. In general, well-governed places tend to have higher quality infrastructure, though there are exceptions. For instance, Quang Ninh is a location that is not endowed with excellent infrastructure, but has made up for it with high quality governance. Hai Duong, by contrast, has excellent infrastructure but does not appear to offer governance concomitant with its resources.

In general, the best economic performance is found in the graph's Northeast quadrant. These are places that have the underlying infrastructure for businesses to prosper and combine them with above average governance, as measured by the PCI. Unsurprisingly, the wealthiest and fast growing provinces in the country are represented in that quadrant, including Da Nang, Binh Duong, Bac Ninh, BRVT, Dong Nai, and Vinh Phuc.

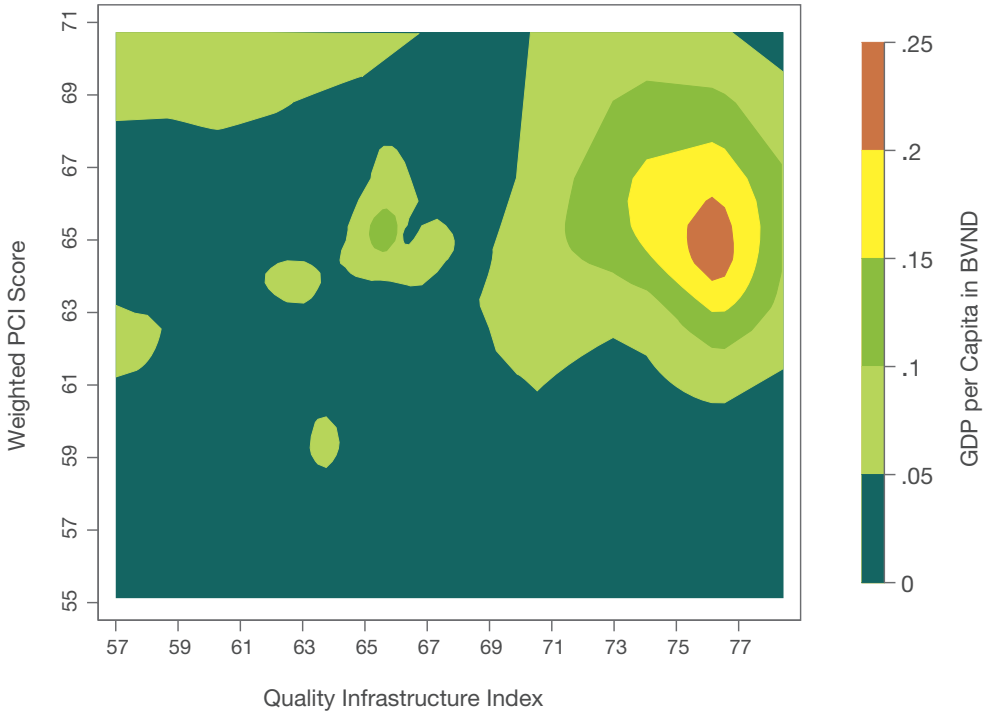
Figure 1.15 drives this point home by using a heat map to show variation in GDP per capita (measured in billions of VND) between 2013 and 2017. As in Figure 1.14, we plot

infrastructure on the x-axis and the weighted PCI on the y-axis. Next, we show the average GDP per capita for each of the areas represented on the graph. Warm colors, such as orange and yellow, represent the richest provinces in the country, green represents middle-class provinces, and dark olive green represent the poorest regions. It is immediately obvious that the wealthiest and fastest growing locations are those that excel in both governance and infrastructure (the northeast quadrant of Figure 1.14), while the poorest places are those that underperform in both these measures (the southwest quadrant).

Figure 1.14. Association between Infrastructure and Governance

Source: PCI Survey Multiple Years. Authors' Calculations.

Figure 1.15: Heat Map of GDP per Capita in Relation to Governance and Infrastructure (2013-2017)



Source: GSO (2013-2016). PCI Survey (2013-2017). Authors' Calculations.

1.4. TRENDS TO WATCH

With the new administration in its second year, it is good time to analyze many of the initiatives that were started in 2016. Have the major policy reforms borne fruit? Are firms benefitting from the changes? In this section, we highlight four trends to watch over the coming months. These include: 1) Declining corruption; 2) Improving administrative procedures; 3) Declining land access and property protections; and 4) Crime as an increasing concern for business.

Corruption Declining

The Vietnamese leadership has pursued a comprehensive anti-corruption policy over the past year. Many readers are familiar with several high-profile arrests and investigations in 2017. Less well known, however, is that these have been part of a broader set of administrative reforms that rest on three pillars: *i) monitoring; ii) access to information; and iii) changing bureaucratic incentives.*

The new leadership is experimenting with a number of new approaches to monitoring malfeasance, including greater activity on the part of government and party inspectorates. In fact, one of the first acts of the new government in 2016 was to officially appoint VCCI to use surveys, such as the PCI and UNDP PAPI instrument,[13] to monitor changes in corruption with a battery of more specific questions. Article 4, Clause D of Resolution 35 reads: "The Vietnam Chamber of Commerce and Industry will conduct surveys, and statistically analyze the total costs of formal charges and informal charges for businesses, compared with businesses in the region and internationally, and propose solutions."[14]

Second, under the new administration, the National Assembly has approved a number of important legislative documents that strengthen citizen roles and interests in governance and public administration. It passed the *Law on Access to Information* and are preparing by-laws to put the law into effect beginning in 2018.[15] The approach is similar to the Chinese Open Governance Initiative (OGI) in mandating that a range of government documents, such as legal and normative documents, budgets, and land and infrastructure plans be placed online at every level of government. In addition, the new law contains provisions allowing citizens to request information not specifically outlawed, and mandates that agencies reply within a specific time frame. Scholars have shown the effectiveness of the Chinese OGI in reducing misuse of public funds, and Vietnamese authorities seem to be heading in the same direction.[16]

Finally, the new leadership is experimenting with a range of civil service reforms. At the sixth plenum of the 12th Communist Party of Vietnam (CPV) on October 11, 2017, the Party elucidated a set of reforms to reduce corruption and increase accountability. These included streamlining party institutions by eliminating the overlapping executive functions of the Party Secretary and People's Committee Chairman at the district and commune levels of government. According to Resolution 18 of the 6th CPV Plenum, the goal is to reduce the civil service by 10 percent and simultaneously increase the competitiveness and remuneration of remaining officials. The hope is that, by strengthening the meritocracy and increasing the rewards of office, civil servants will be incentivized to reduce corruption. Skepticism remains about whether higher bureaucratic salaries will actually reduce corruption, but the National Assembly acted on the plenum's guidance and passed a

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13 VFFCRT CECODES, "The Viet Nam Governance and Public Administration Performance Index (PAPI)," (Hanoi: United Nations Development Program, 2016).

14 Government of the Socialist Republic of Vietnam. "Resolution 35-NQ-CP on Support and Development of Enterprises by 2020," May 2016. http://thuvienphapluat.vn/van-ban/Doanh-nghiep/Nghi-quyet-35-NQ-CP-ho-tro-phat-trien-doanh-nghiep-2020-2017-311331.aspx

15 National Assembly of the Socialist Republic of Vietnam. 2016. "Law on Access to Information". April 2016. https://thuvienphapluat.vn/van-ban/Bo-may-hanh-chinh/Luat-tiep-can-thong-tin-2016-280116.aspx

16 Jonathan R Stromseth, Edmund J Malesky, and Dimitar D Gueorguiev, China's Governance Puzzle: Enabling Transparency and Participation in a Single-Party State (Cambridge University Press, 2017).

resolution (with 94 percent affirmative votes) that will allow Ho Chi Minh City to pilot the reforms. Draft resolutions are in place to streamline the Ho Chi Minh City bureaucracy and increase the salaries of civil servants.[17]

In short, the 2017 anti-corruption efforts, while clearly touching on political tensions, appear to be part of a broader strategy. Rather than simply arresting top officials, the recent legislation includes institutional reforms aimed at warding off future corrupt behavior through better monitoring, access to information, and bureaucratic incentives.

Of course, it is still far too early to know if these efforts will lead to long-lasting change. However, we can observe whether there has been an effect on the immediate perceptions of PCI respondents. Figure 1.16 studies three questions from the PCI survey that have appeared in every iteration since 2006, allowing us to track corruption perceptions over time. The first two panels track estimates of petty corruption, specifically whether firms believe others in their line of business pay bribes and the estimated size of those bribes. The third question looks at grand corruption by asking whether the small set of firms that compete for government procurement contracts feel the necessity of offering commissions, the Vietnamese euphemism for kick-backs, in order to be eligible to win.

The first thing to notice about the graphs is that, while there are some fluctuations over time, perceptions of corruption have generally remained high. Between one half and two-thirds of firms believe that corruption is common; between seven and 12 percent pay exorbitantly high amounts of money in bribes; and well over half the firms believe kickbacks are necessary for succeeding in the government procurement process. In short, anti-corruption efforts have not made much of a dent in business perceptions of corruption.

Second, after declining marginally in the first half of the decade, all three indicators trended upward between 2014 and 2016.

Finally, there is some light on the horizon. The recently completed 2017 iteration of the PCI survey shows improvements on all three indicators in comparison with 2015. Trends are not down to their historic levels, which are anyway too high, but there appears to be movement in the right direction. Importantly, we notice the same trends in the PCI-FDI survey (see Chapter 2) and the PAPI survey of citizens. All sources report declines in the indicators of corruption.[18]

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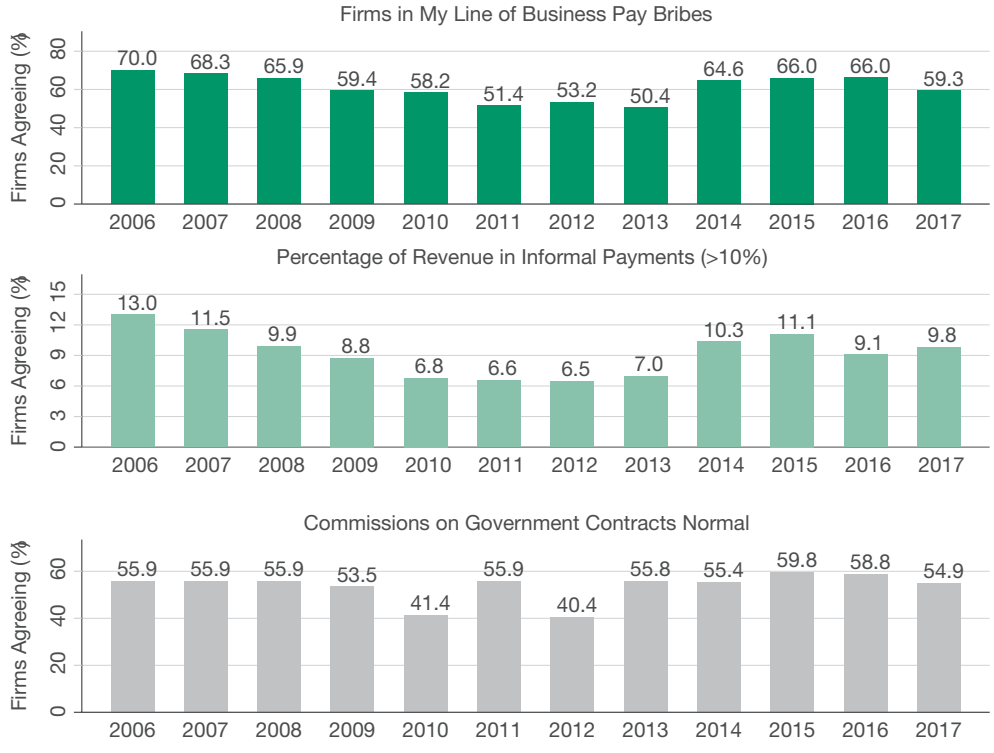
17 *TuoiTreNews. 2017. "Vietnam's Legislature Passes Resolution on Special Mechanisms for Ho Chi Minh City Development". TuoiTreNews. November 25, 2017. https://tuoitrenews.vn/news/society/20171125/vietnams-legislature-passes-resolution-on-special-mechanisms-for-ho-chi-minh-city-development/42807.html*

18 *CECODES, "The Viet Nam Governance and Public Administration Performance Index (PAPI)."*

Figure 1.16. Declining Corruption Indicators in PCI Index



Source: PCI Survey. Multiple Years. Authors' Calculations.
Panel 1: "Do you agree with this statement: "Firms in my line of business usually have to pay extra 'informal payments?'"
Panel 2: "On average, what percentage of income do firms in your line of business typically pay per year for informal charges to public officials?"
Panel 3: "Do you agree with the following statement? "Paying a "commission" is essential to improve chances of winning the contract?"

Administrative Procedures Improving

A related trend is the clear improvement in the efficiency and quality of administrative procedures. For years, the PCI research team has documented the waiting period and constraints for business entry, noting that procedures after businesses entered the market were still problematic. Such downstream procedures include obtaining new value-added tax (VAT) receipt books, applying for licenses for construction and business expansion, and the costs of regulatory compliance, including filing updates and time spent receiving inspections.

In early 2017, the Vietnamese government issued a sweeping set of initiatives to reduce the burden of administrative procedures. Government Resolution 01/NQ-CP issued on

January 1, 2017, formally requested that ministries, provincial administrations, and other agencies put together detailed plans for improving all aspects measured in the PCI, particularly in regard to regulation and administrative procedures.[19] The 2017 Resolution 19 followed, recommending efforts by provinces and government agencies to improve the business environment and national competiveness.[20] Finally, in meeting with Vietnamese businesses on May 17, 2017, Prime Minister Phuc announced that the theme for this year for the Vietnamese government was to be "Reducing Costs for Enterprises," emphasizing efforts to reduce the weight of administrative burdens.

At the same meeting, the Prime Minister signed Directive 20/CT-TTg, which officially forbade the inspection of an individual enterprise more than once year. In the case than an inspection coincides with audit plans by the State Audit Office, regulators and auditors must coordinate to avoid repetitive and costly inspections for firms. The directive also specified responsibilities of inspecting agencies in handling units and individuals responsible for overlapping inspections. Most importantly, the directive states that inspections may only take place after there is a clear detection of violations by the target firms.[21]

Figure 1.17 provides a trace map to chart the progress made on administrative reform. Here, we focus on a single question: what proportion of firms spend over ten percent of their day complying with bureaucratic requirements and administrative procedures? Again, the gray lines plot all of Vietnam's 63 provinces, while the green line shows the trend in the median score. In addition, we also plot the two provinces where firms recorded the highest (Can Tho, 45 percent) and lowest shares (Bac Ninh, 22 percent) of time spent addressing procedures.

The traceplot demonstrates clearly that administrative procedures worsened over the course of the past five years. In the median province in 2006, just over 20 percent of firms reported spending over ten percent of their day on procedures and inspections. This figure broadly declined up until 2012. Not coincidently, like corruption, over the 2012 - 2016 period we saw a continual rise in the share of time spent on procedures. Now, for the first time in a half a decade, we are witnessing some improvement.

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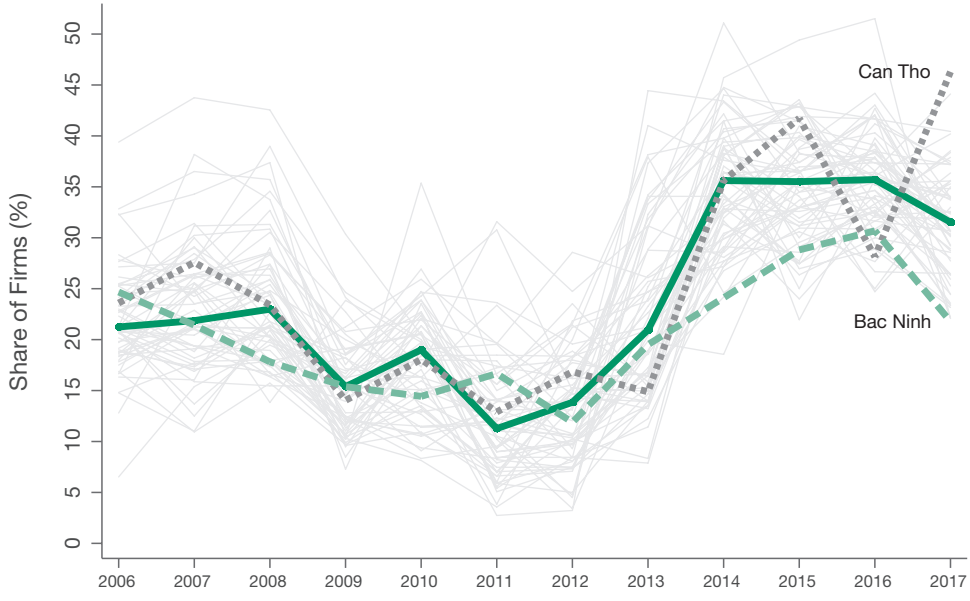
19 *Xuan Phuc Nguyen, "On Major Tasks and Solutions to Direct the Management of the Implementation of the Socio-Economic Development Plan and the State Budget Estimate for 2017", " in 01/NQ-CP, ed. Government of Vietnam (Hanoi, Vietnam2017).*

20 *"Tasks for Improving Business Environment and National Competitiveness," in 19/NQ-CP, ed. Government of Vietnam (Hanoi2017).*

21 *VLLF, "Prime Minsister Addresses Overlapping Business Inspections," Vietnam Law and Legal Forum (2017).*

Figure 1.17. Traceplot of Time Spent on Bureaucratic Procedures, 2006-2017



Gray lines depict trajectories of all 63 provinces.
The solid green line represents the median score in each year.

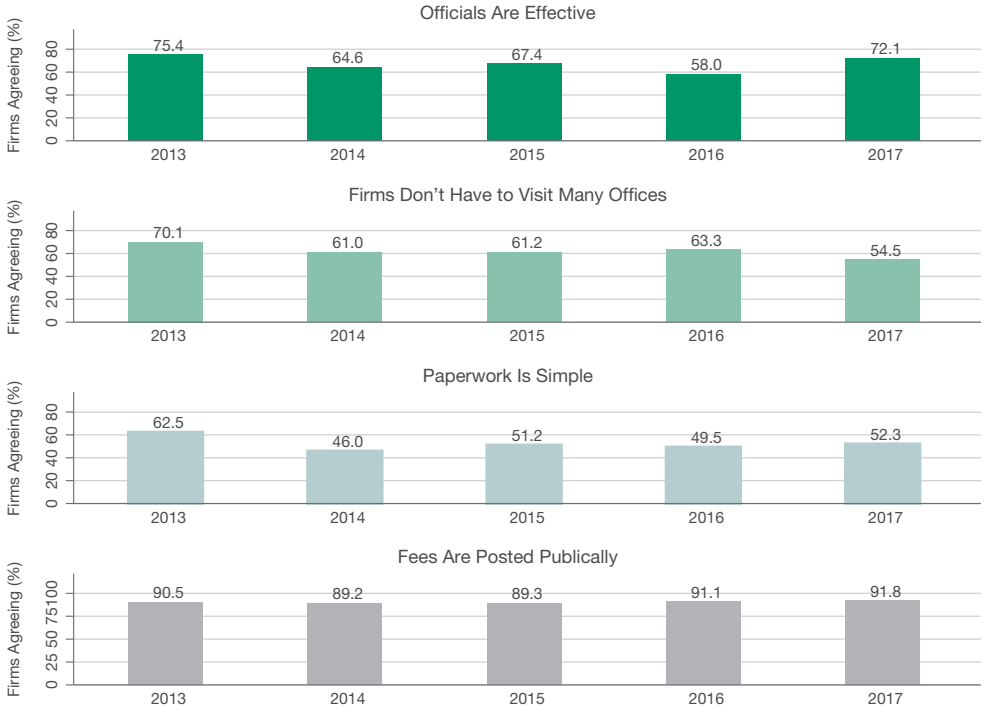
Source: PCI Survey Multiple Years (Section D). Authors' Calculations. "What percentage of senior management's time was spent to understand and comply with administrative procedures over the past year?"

Pushing deeper, Figure 1.18 looks at four appraisals of administrative procedures that were added to the PCI in 2013. These questions ask firms to assess the offices where they completed administrative procedures in the past year in four areas: 1) Were officials effective and efficient at providing the necessary approval or documentation? 2) Were visits to multiple offices necessary or could everything be completed in a single stop? 3) Was the paperwork simple and easy to complete? 4) Were the fees posted publicly, so formal payments were clear and predictable? Figure 1.18 presents the share of firms that agree with each question over time.

Consistent with Figure 1.17, agreement on all four indicators was relatively high in 2013, but fell precipitously up until 2016. Declines were particularly steep for ratings of the effectiveness of workers and the simplicity of paperwork. Firms clearly demonstrated frustration with the amount of effort they were putting into procedures and the ability of local bureaucrats to guide them through the process.

In 2017, however, we see a tremendous turnaround. Seventy-two percent of respondents in the median province believe the local bureaucrats are effective, 52 percent believe paperwork is simple, and 92 percent that report that fees are posted publicly. The one negative mark is that office visits have increased.

Figure 1.18. Indicators of Time Costs of Regulatory Compliance over Time



Source: PCI Survey. Multiple Years. Author's Calculations.
"To what extent, do you agree with following statements?
Panel 1. Government officials are effective in processing paperwork
Panel 2. Our firm does not have to make many trips to obtain stamps and signatures from state agencies to complete the procedures
Panel 3. Paperwork and procedures are simple
Panel 4. Fee rates are listed publicly at state agencies"

POSITIVE TRENDS

IMPROVING ADMINISTRATIVE PROCEDURES

72%

Local government officials are effective

59% 2015

67% 2017

Local government officials are friendly

67%

Agree "Time to complete APs is shorter than specified in regulations"

26% 2015

13% 2017

Share of firms receiving overlapping regulatory inspections

DECLINING CORRUPTION

66% 2016

59% 2017

of firms pay bribes

11.1% 2015

9.8% 2017

Percentage of firms paying over 10% of their revenue in informal charges

GOVERMENT AS FIRMS' PARTNER FOR DEVELOPMENT

35% 2015

45% 2017

Positive attitude of provincial government toward private sector

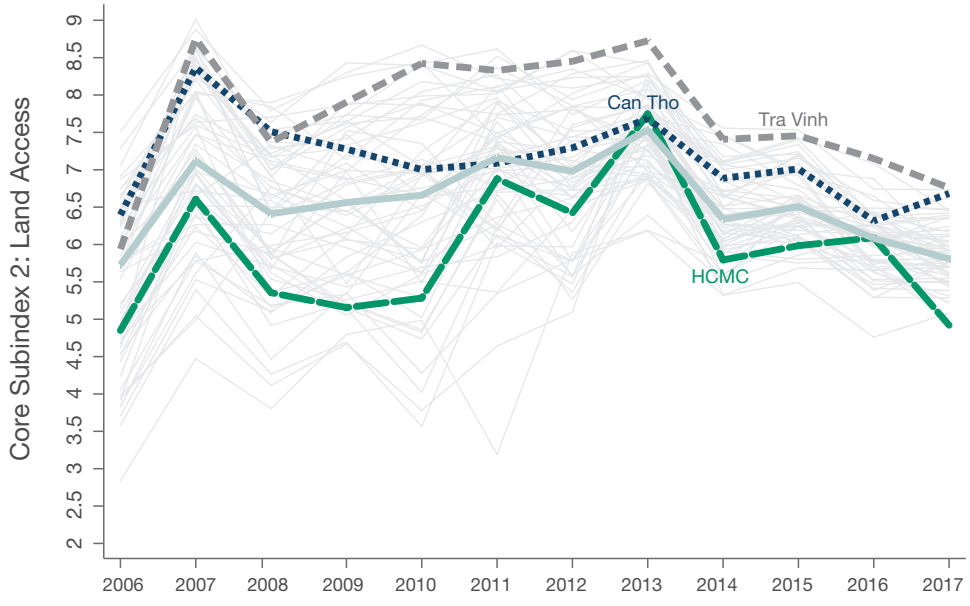
67%

firms agree that "Provincial authorities handle firms' difficulties raised in PPD dialogues quickly"

Land Access and Security Worsening

A worrisome trend this year can be seen in Figure 1.19, where we plot the declining perceptions of the Land Access and Security of Tenure. Again, we use a trace plot to show the individual subindex scores in the core PCI. Notice that while Can Tho has shown some improvement, the decline in HCMC has been steeper than the country as a whole.

Figure 1.19. Traceplot of Consistent Land Access and Security over Time



Gray lines depict trajectories of all 63 provinces.
The solid light green line represents the median score in each year.

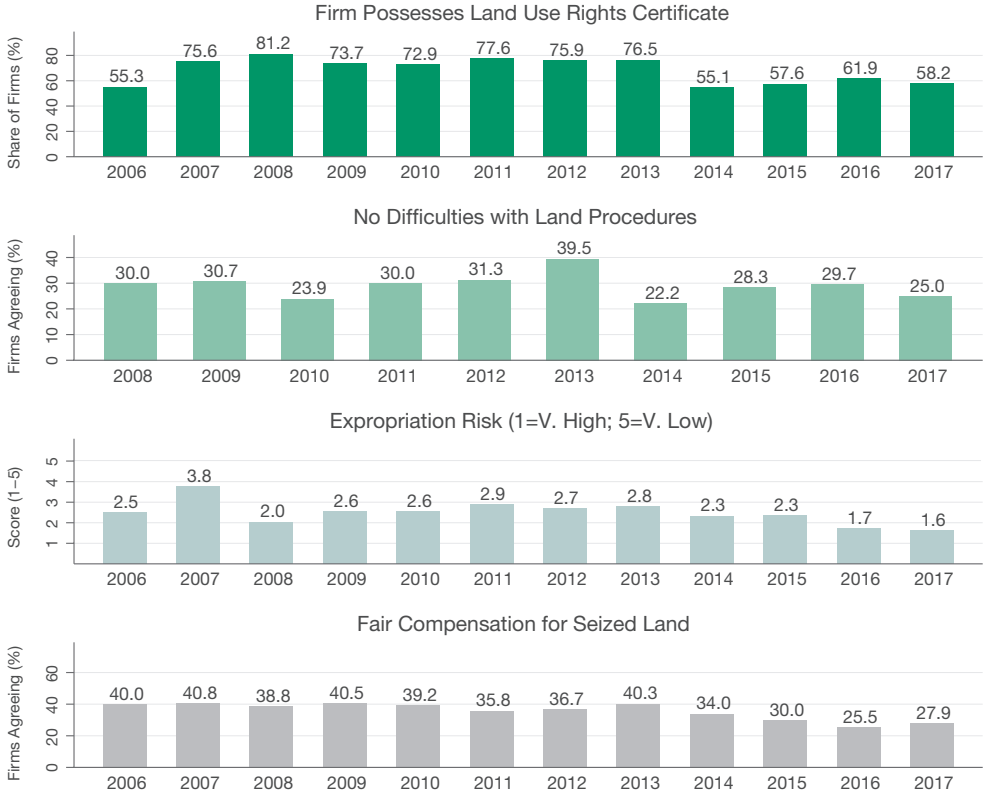
Source: PCI Survey Multiple Years. Authors' Calculations. For the list of indicators used in Core Index, see Appendix 3, e-version of the 2017 PCI report on the website www.pcivietnam.vn.

Figure 1.20 further shows that land for business operations is becoming increasingly difficult to acquire and that those who have it feel less and less secure. First of all, the share of businesses that purchased land and have a Land Use Rights Certificate (LURC) for their main business premises dropped slightly between 2016 and 2017, and is far below the figures recorded in 2012 and 2013.

To understand why land acquisition has become so difficult in recent years, we further asked firms that attempted to acquire new land what their biggest constraints were in expanding their business premises. Figure 1.21 shows the biggest problems did not include inadequate land in the province as some might expect; only 16 percent checked

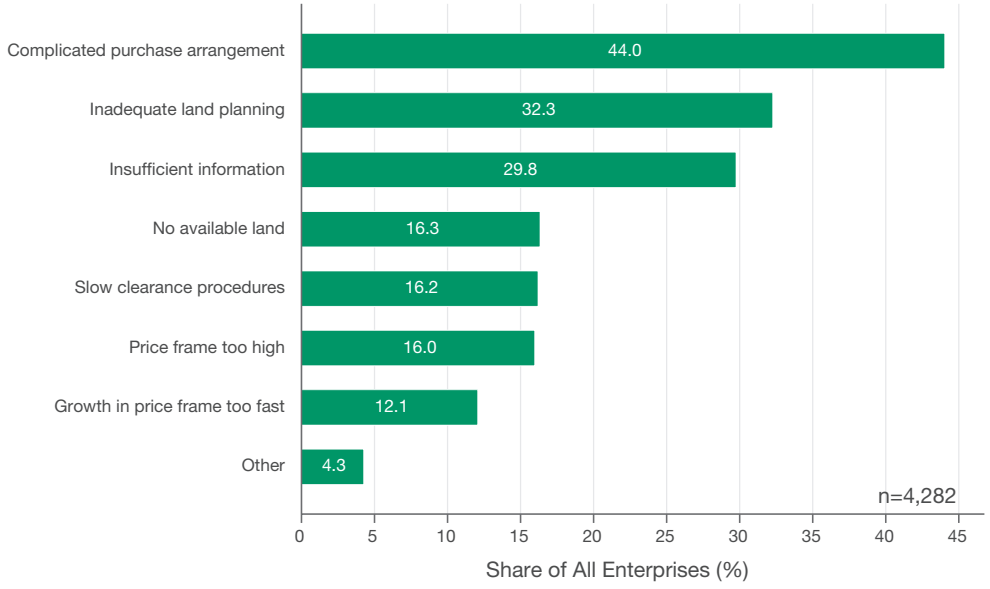
this figure. Rather, firms complained that after they identified suitable land for their business, the constraints placed on purchasing, such as compensation requirements for farmers on the land or development obligations placed on them by the province were too onerous (44 percent). About one third of firms (32 percent) argued that the land planning was insufficient or poor, leading to plots that were far away from existing infrastructure or in other inhospitable locations, such as adjacent to polluting businesses or too close to residential zones. Finally, a quarter of firms answered that information on available land was too limited.

Figure 1.20. Indicators of Land Access and Security over Time



Source: PCI 2017. Multiple Years. Authors' Calculations.
Panel 1: "Does your firm have a land use rights certificate (LURC)?" Only for firms on purchased land.
Panel 2: "Has your firm encountered any difficulties when implementing these procedures with provincial State agencies?" Only for firms on performing procedures.
Panel 3: "Please evaluate the risk that you land will be expropriated (seized/taken) for other purposes, change of planning, etc." 1. Very High; 2. High; 3. Moderate; 4. Low; 5. Very Low.
Panel 4: "Based on your observations of other cases in your province, do you believe that you or your firm will receive fair compensation for your business premises in case of expropriation?"

Figure 1.21. Reasons for Difficulty Acquiring Land



Source: PCI 2017. Multiple Years. Author's Calculations.
"What are the largest obstacles to private firms in acquiring land in your province?"

For businesses already in possession of land that were hoping to exchange or convert the property for alternative usage, the problems are even more severe. Only 25 percent of respondents reported difficulty-free procedures when trying to work with local land authorities on an exchange, purchase or state rental, down from 29.7 percent in 2016. This is one of the lowest scores recorded in the history of the PCI. Seventy-five percent of firms, by contrast, reported experiencing one or more of the seven problems reported in Table 1.1 below. The biggest problems are longer than expected processing periods for land (58 percent) and informal payments necessary to expedite the procedures (47 percent).

Table 1.1. Reasons for Difficulty with Land Procedures

Has your firm encountered any difficulties when implementing these procedures with provincial State agencies? What were they?	**Share of Firms** (Percent)
Land dossiers were processed longer than the listed or regulated period	58.2
Land dossier processing procedures were different from the listed or regulated procedures	19.0
Land prices were different from the listed or regulated price frame	7.1
Officials receiving dossiers and settling administrative procedures did not provide full and detailed instructions	31.3
Informal charge paid	47.1

Note: From question B6 in PCI survey. Based on the 1,618 firms that participated in a land procedure in the past year (2,144) and experienced some difficulty (1,618). Firms were allowed to select more than one difficulty.

The final two panels of Figure 1.20 show that security of business premises remains a problem and is worsening. On a five point scale, the median province records a score of 1.6, indicating an extremely high risk of expropriation by local authorities. This is the lowest score recorded in the 13-year history of the PCI. Such fears have tremendous negative implications for investment, as firms facing risks to their property rights are afraid to invest heavily on land they may lose. Even more worrisome is that firms believe that compensation is too low after land seizures. Only 28 percent of respondents in the median province believe that the compensation for lost land is fair. This is marginally above 2016, but the second lowest score recorded in the PCI.

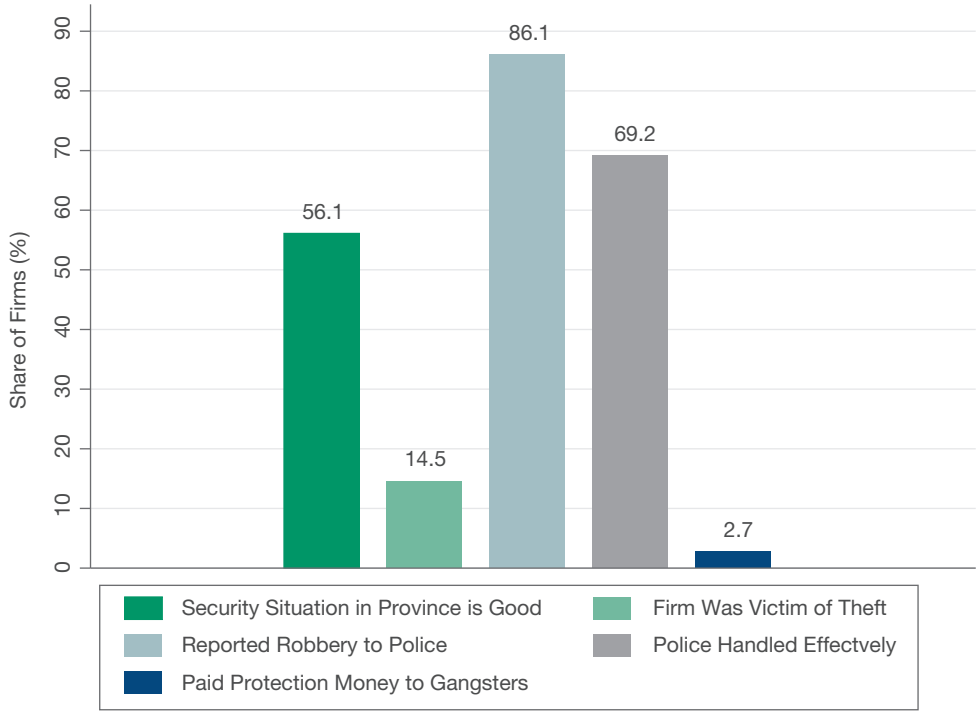
Interestingly, over the past few years, the PAPI report has documented the opposite trend for citizens. Citizens believe land expropriation is declining, although they are similarly concerned about adequate compensation. This negative correlation points to the trend of the government doing more to protect citizens, reversing a trend that favored businesses in previous years.

Security Environment is Stable but Businesses Raise Concerns

The final trend to watch comes from a new battery of questions placed in this year's PCI report to measure crime. One worrisome feature of Vietnam's middle-income status is that rapid growth and urbanization, along with increasing inequality, may have spurred increases in crime, particularly theft and burglary. Over the years, the PAPI survey has reported increasing crime rates in a number of provinces. These concerns have affected firms, and consequently, the PCI advisory board asked us to begin to study and measure the effect of crime and the response of local authorities.

In this year's report, we find that most of firms (56 percent of respondents) report that the security situation in their province is good (see Figure 1.22), but some express their concerns about this issue. Fifteen percent of businesses report that they were victims of theft in the past year, which caused material damage. The median value of lost or stolen goods was about 15 million VND ($667), but several businesses experienced damages of over 500 million VND ($22,000). For small firms, these crimes constitute a substantial portion of their annual revenue. Larger firms were more likely to be targeted and recorded greater losses.

Figure 1.22. Indicators of Crime in the 2017 PCI.



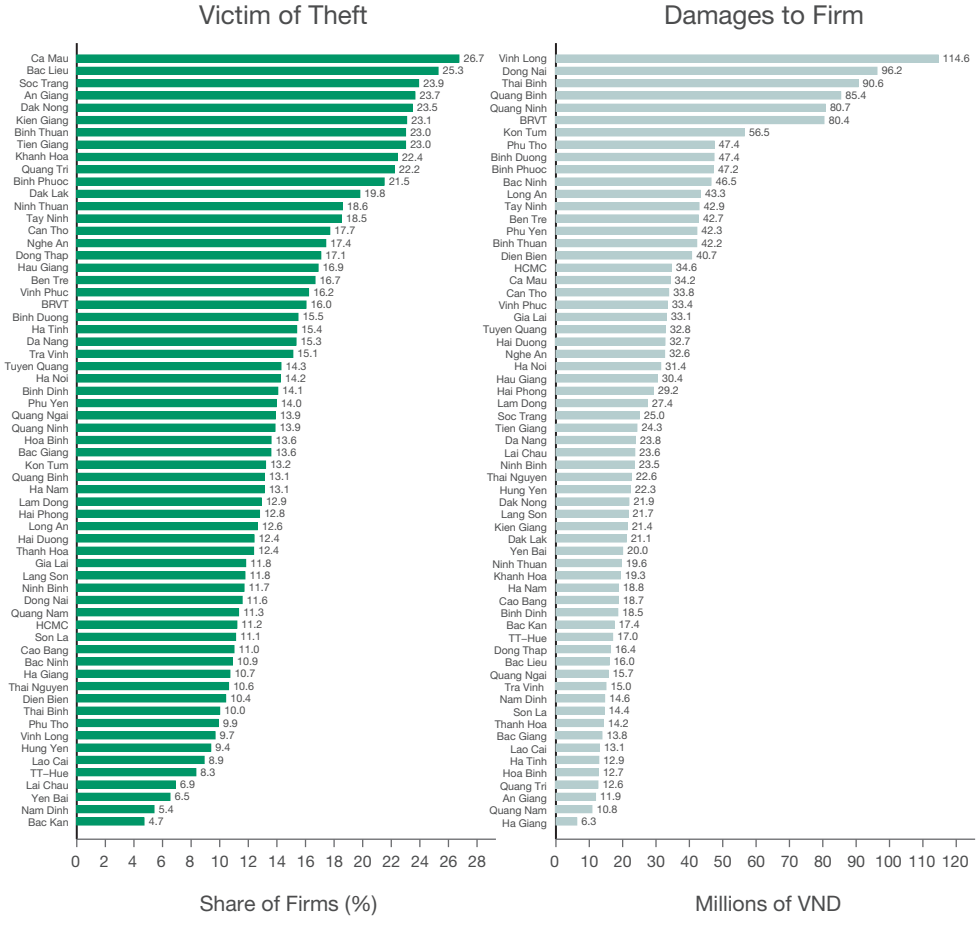
Source: PCI Survey 2017 (Section H2). Authors' Calculations.

- "Please provide your assessment of the security situation in your province? In other words, how well is your business protected from other burglary, break-ins, or other crimes to your business operations or personal life?"
- "Was your firm a victim of theft or break in last year?"
- "Did you report it to the local police?"
- "Did they handle your case effectively?"
- "Did your firm pay money to gangsters, mafia groups to ensure the safety of your business operations in the province?"

Figure 1.23 shows the regional distribution of crime rates. Crime appears to be worst in the deep Mekong Delta. The highest rates of theft were recorded in Ca Mau (26.7 percent), Bac Lieu (25.3 percent), Soc Trang (23.9 percent), and An Giang (23.6 percent). Kien Giang (23.1 percent) and Tien Giang (23 percent) are also in the top 10.

The good news is that most businesses believe the local police were responded appropriately. Eighty-six percent reported the crime immediately and close to 70 percent of that group believe the police handled the case effectively. Furthermore, there is little indication that the crime spree is spiraling out of control, forcing businesses to rely on outside criminal protection. Less than three percent of firms are currently paying protection money to criminal gangs.

Figure 1.23. Distribution of Crime Frequency and Cost by Province



Source: PCI Survey 2017 (Section H2). Authors' Calculations.

- "Was your firm a victim of theft or break in last year?"
- "If yes, please indicate the value of lost or stolen goods or equipment? .....MVND."

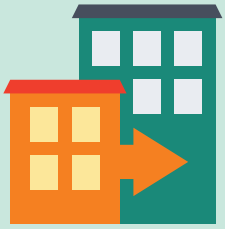
WORRISOME TRENDS

LAND ACCESS

40% 2013

25% 2017

Only 25% of firms face no difficulties with land-related procedures



2.8 2013

1.6 2017

High expropriation risk
(1= Very high; 5 = Very small)

TRANSPARENCY

3.14 2013

3.06 2017

Access to planning documents
(1 = Impossible ; 5 = Very easy)

70%

of firms said "Relationship is important or very important to get access to provincial documents"

Only **50%** firms found transparency in procurement bidding

2.61 2013

2.44 2017

Access to legal documents
(1 = Impossible ; 5 = Very easy)

LEGAL INSTITUTIONS

60% 2013

36% 2017

Willingness to use court when a business dispute arises

67%

of firms agree "Provincial court resolves economic cases quickly"

1.5. REVISED 2017 METHODOLOGY

To ensure that the PCI remains useful to policymakers, every four years the PCI team commits to reevaluate the headline index and revise the methodology, so that it appropriately captures the needs of the business environment. Because Vietnam is now a middle-income country, dealing with the unique challenges of years of rapid growth and urbanization, new indicators and weighting formulas were required to help the government track its progress in addressing these challenges. In addition, in this year's methodological revisions, we address the challenge of score convergence in four ways.

First, we drop indicators obviated by reforms or that have lost their original meaning. Second, we add indicators to capture new challenges in the business environment while better emphasizing the fundamental constraints facing private business. Third, we reorganize the sub-indices, so the collection of variables within each subindex addresses the spirt of the reforms we hope to encourage. Fourth, we update the subindex weightings to better convey policy priorities to local officials.

To understand these changes, it is helpful to review how these adjustments fit into the larger PCI methodology. In this section, we discuss the overall methodology, describing the parts where updates were required. A full list of modifications can be found in Appendix 1.1 at the end of this section.

The PCI team uses a three-step process to construct each year's index that we refer to as the 3 Cs: 1) Collection of data; 2) Construction of sub-indices; 3) Calibration and weighting of final index.

Collection

We utilize two general types of data to construct the sub-indices. The first is perceptions data drawn from the mail survey to private firms. This "soft" data is then combined with objective or "hard" data gathered from statistical yearbooks and other administrative sources available from government ministries. The hard data is used to address perception and anchoring biases in responses. After all, many SMEs may not have an adequate understanding of other locations to rate their home province on a five-point scale. A full list of hard data used in the index can be found in Appendix 1 in the e-version of the 2017 PCI report on the website www.pcivietnam.vn

Sampling: The PCI sample frame is the list of tax paying private firms from the General Department of Taxation (GTD). The updated list as of May 2017 provides information on 618,000 active tax paying private sector firms, which is quite a bit bigger than the 500,000 enterprises covered in the GSO Enterprise Survey As it was not feasible to survey every

firm on this list, a stratified sample of firms was generated that would be representative of the total population of firms. For this reason, the tax list of firms was then categorized into 45 stratifications across three dimensions:

1. Ownership type: a) Joint Stock; b) Limited Liability and c) Sole Proprietorship;
2. Sectors: a) Industry/Manufacturing; b) Construction; c) Services and Trade; d) Natural Resource Exploitation; e) Agriculture/Forestry/Aquaculture;
3. Age: Established a) before 2000; b) between 2000 and 2009; and c) since 2010.

A random stratified sample of 54,100 firms was then constructed by VCCI.[22] The total number of firms per province in this sample depended upon the total provincial population of private firms in the province (larger provinces like HCMC had larger target samples) and the response rate from last year's PCI (provinces with low response rate last year had larger samples this year).

After first identifying the list of operations, the PCI team then attempted to screen firms for correct addresses and phone numbers. We were able to reach 28,506 of the randomly sampled firms. Pre-screening for firms that are still in operation and at their correct address is a new feature that was added to the PCI survey in 2015. The correction was made after a random spot-check determined that bad addresses and defunct firms meant that about half of the PCI mail-out surveys were not being received.

Mailing of PCI Questionnaires. After checking to make sure that there were not fundamental differences in size, age, or sectors between the firms we could and could not reach, we then sent out 28,506 questionnaires to the randomly selected and contacted firms. To ensure that only valid responses were processed, only completed questionnaires sent via post or by email were accepted by VCCI. To encourage responses, firms returning a completed questionnaire were given the choice of one of eight VCCI business advisory books (e.g. on branding, business management, sales techniques, recent laws, etc.).

Follow-up Phone Calls. To maximize the response rate, VCCI trained and employed teams of 80 research assistants to then randomly call firms to confirm receipt of the questionnaire and to encourage them to complete the questionnaire. Every sampled firm was called, encouraged to fill out the survey, and offered guidance, whereby research assistants read a prepared script of advice on difficult questions. The order of the calls is randomly assigned by team leaders who work in the situation room, leading to random variance in when the surveys are delivered. Three teams compete for bonuses to see how many responses they can attract through their phone calls. It is important to note that the callers

22 *A randomly sampled backup list of 19,173 firms is also chosen to ensure that we have complete representation in all strata. These firms are used if no-response leads to under-representation in strata.*

insist that the survey be filled out by either the CEO, General Director, or a top manager familiar with all aspects of the company.

Phone Survey: In addition to the mail survey, PCI call teams also perform a separate telephone survey for new business entrants. For this survey, we select a separate random sample of 9,774 firms that registered in the past two years. This allows us to measure business entry procedures based on the recollections of those who just went through the process.

Response Rate. In 2017, VCCI received 8,292 responses, delivering a total uncorrected response rate of 29 percent.[23] According to the literature on strategy and policy, 30 percent is an extremely high response rate for surveys of business managers, but the corrected response is much higher. Seventy percent of responses were filled out by the CEO or General Director. Among new entrants, we were able to verify locations and contact information of 4,887 firms and from this group 2,003 responded, leading to a response rate of 41 percent with 93 percent answered by the CEO or General Director.

Who Answers the PCI Survey?

The intensive random sampling approach is the reason that the PCI sample so clearly resembles provincial and national data on the population of enterprises in their provinces. This means that the PCI results can be treated as an adequate representation of the actual views of the private sector at the national and provincial level. To demonstrate this point, the next few graphics depict the distribution of respondents in the PCI survey.

Figure 1.24 shows that the major sectors for PCI respondents are wholesale and retail trade (37.4) percent, manufacturing (16.2 percent), and construction (15.6 percent). By way of comparison, the GSO estimates for total activity in these sectors is 39 percent for wholesale and retail trade, 15.2 percent for manufacturing, and 13.8 percent for construction. The difference between PCI and GSO is that the PCI focuses exclusively on the private sector, while the GSO enterprise breakdowns include all state, foreign, and private establishments, including cooperatives.[24] Agricultural and natural resource exporters make up very small shares of both surveys. Looking specifically at manufacturers, the biggest industries for private sector activity are food processing (15.6 percent of total manufacturing), fabricated metal products (14.4 percent), and wood products (8.1 percent).

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23 Of these, 50 firms needed to be dropped because the questionnaires were insufficiently complete.

24 Office, "Statistical Handbook," 176-77.

Figure 1.25 provides further information about the distribution of PCI respondents. The vast majority (60 percent) are registered as limited liability companies (LLCs) with 21 percent registering as the joint-stock form and 18 percent as sole proprietorships. This represents a dramatic shift from early years, when sole proprietorship was the dominant form. Again, this is consistent with GSO data from the Enterprise Census.

Reflecting the private sector as a whole, PCI respondents are quite small (See Chapter 3, Figure 3.2). Roughly 85 percent have fewer than 50 employees and just under half (49 percent) have fewer than 10 employees. The PCI Survey further shows in Table 1.2 that PCI estimate for average employment size is about 25.4 employees, which is slightly higher than the GSO estimate of 17 employees.[25] Nevertheless, like GSO, the PCI also shows a consistent downward trend in the number of employees.

Similar figures are available for investment size. Fixed capital investment of the average private firm is also quite small. Eight-three percent of respondents have less than 5 billion VND invested ($222,000) and the median firm has 17.4 billion VND ($75,600). Once again, these estimates of small firms are consistent with GSO's own calculations.[26]

The final panel of Figure 1.25 shows the distribution by registration year. As we can see, most firms are quite young. Seventy-eight percent registered their businesses after 2005 and 46 percent did so after 2010. Very few firms (4.76 percent) participated in the Vietnamese economy before the 2000 Enterprise Law was adopted.

25 *Ibid., 179.*

26 *Ibid.*

Figure 1.24. Distribution of PCI Respondents by Sector

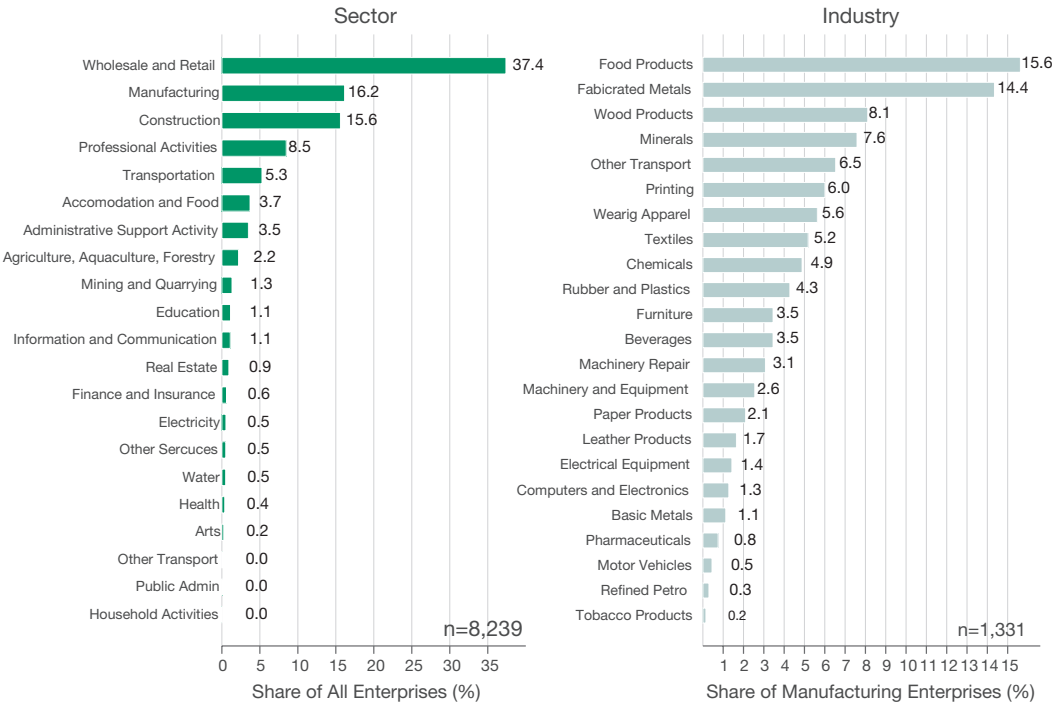

Figure 1.25. Distribution of PCI Respondents by Legal Form, Size, and Age

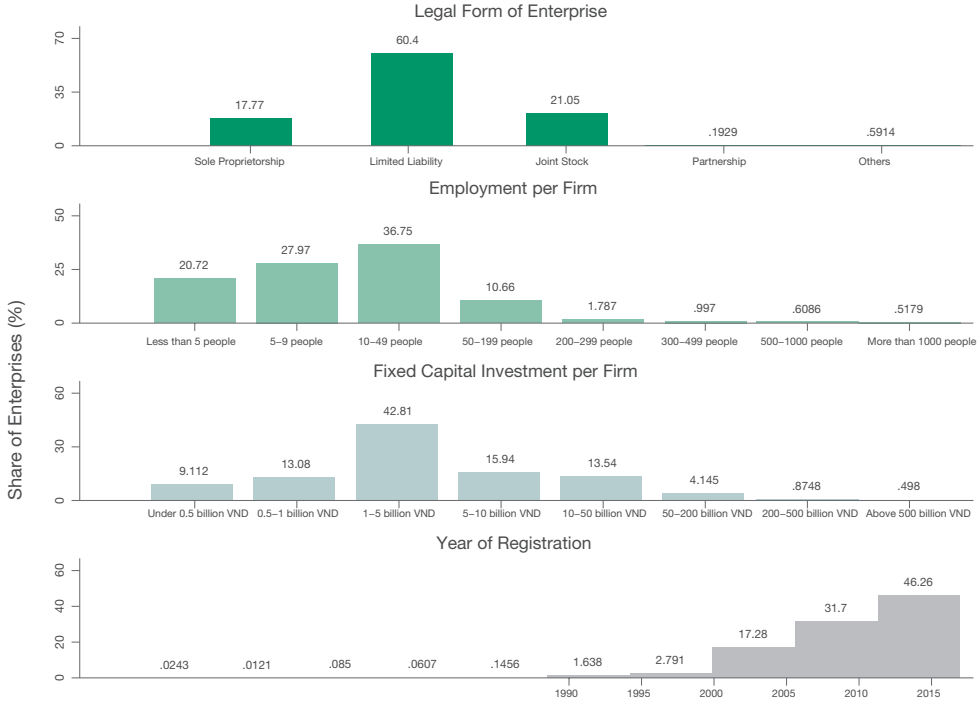

Table 1.2: Employment Size of Domestic Firms over Time

Year	Firm Adding Employees	Average Size (Employees)
2006	22.0%	31.61
2007	20.9%	33.16
2008	21.6%	40.57
2009	12.3%	45.91
2010	17.1%	47.63
2011	11.2%	45.44
2012	6.0%	26.33
2013	6.2%	28.95
2014	11.5%	26.83
2015	12.0%	26.63
2016	13.1%	26.64
2017	**11.7%**	**25.40**

Construction of the Subindices

Re-Scaling Indicators: An important strength of the PCI is that it compares provincial economic governance against best practices already found in Vietnam, not against some idealized standard. For this reason, each indicator is standardized to a ten-point scale, whereby the best and worst performing recorded scores from each respondent are awarded the values of 10 and 1 respectively, and the other respondents' assessments are rescaled to fit somewhere along the scale between these two scores.

In the equation below, r represents the index for each respondent; min and max represent the lowest and highest respective scores given in the province. If a high value represents negative governance, we simply subtract the re-scaled indicator score from 11 to reverse the scale.

$$IndicatorScore = 9 * \left(\frac{Score_r - Score_{\min}}{Score_{\max} - Score_{\min}} \right) + 1$$

Between 2005 and 2012, the PCI team first calculated summary statistics at the provincial level before rescaling and creating sub-indices. Beginning in 2013, the PCI team began calculating individual re-scaled values, sub-indices, and PCI scores for each individual answering the survey. Creating individual governance indices at the respondent level has the benefit of allowing us to calculate inequality in governance within every province. It

also permits re-aggregation, whereby we can analyze governance scores for particular economic sectors, type of enterprises, or sizes of firms.[27]

Creating Subindices: Using the existing literature on the business environment as a guide, as well as incorporating discussion by Vietnamese policy makers and economic analysts, indicators are grouped into the 10 sub-indices shown above. Considerable effort is made to ensure that these sub-indices corresponded with previous research on the obstacles to private sector entry and growth in Vietnam.

Once the indicators are standardized, an average (either weighted or simple) of all indicators is taken to create the subindex at the respondent level. As Table 1.3 shows, only two sub-indices are not divided first into dimensions of the theoretical concept under investigation – *Entry Costs* and *Proactive Leadership*.

Weighted averages are employed for two reasons. First, they are used to address different business environment concepts. For instance, Subindex 4 on *Time Costs of Regulatory Compliance* must differentiate between two distinct governance activities: 1) complying with procedures; and 2) undergoing inspections. Because the number of indicators measuring these concepts differs (seven for procedures and four for inspections) a simple average would accidentially weight procedures by nearly twice as much as inspections. Rather than letting the number of indicators determine weighting, we ensure that each concept receives equal weight by first creating a simple average at the dimension level and then averaging the two dimensions. This way, the burdens of these two activities each receive 50 percent weight in the index. Table 1.3 reports the dimensions for each subindex.

A second reason for weighted averages within sub-indices is to better incorporate hard data when we have it. To limit perception biases, hard data always receives 40 percent of the weight in the sub-indices where it is employed. The *Transparency, Business Support Services*, and *Law & Order* sub-indices all incorporate hard data in this manner.

Calibration of the Final PCI

A simple summation of the 10 sub-indices yields the unweighted index with a maximum possibility of 100 points. While this is clearly the easiest and simplest method of calculating the final PCI, it would be inappropriate as a policy tool for the simple reason that some sub-indices are more important than others in explaining private sector development. Hence, it is important to re-weight sub-indices based on their actual contributions to private sector development. To do this, the research team uses multivariate regression analysis to

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27 It also makes It easier to catch cheating by looking at deviations in provincial scores across respondents.

determine how each of the sub-indices impacts the key economic performance variables that researchers and practitioners in Vietnam have deemed the most important gauges of private sector development.[28]

- *The ratio of private enterprises (including Sole Proprietorships, Partnerships, Limited Liability Companies [LLCs] and Joint-Stock Companies) actively operating in the provinces to the number of citizens in the province.* The number of active enterprises allows for the identification of firms that completed registration procedures and have been successful enough to continue their business operations beyond the entry stage. The total number of active private firms (not including collectives) is divided by the number of provincial citizens (in thousands) to account for the fact that larger population centers may simply have a larger absolute number of firms.

- *Average private sector long-term investment per capita* is chosen to gauge the size of the risk entrepreneurs were willing to make. The assumption is that private entrepreneurs will be more willing to make sizable investments in conducive regulatory environments where they can accurately assess the long-term potential risks and benefits to their enterprise. Investments should remain small in areas where firms face a high risk of expropriation or corruption, or where subtle barriers are erected to prohibit their success.

- *Average profit per firm in millions of VND* is selected as a measure of the success of individual firms over the Post-Enterprise Law period. Profit of firms in a one-time period is a very good predictor of the potential for more investment in subsequent periods as more firms enter the market. Competitive provinces are more likely to create an environment in which entrepreneurialism is encouraged and rewarded by business profits, rather than by public largesse.

In each case, the research team regressed the above economic performance variables, controlling for the initial structural conditions of private sector development,[29] specifically:

- The distance from markets measured by the distance in kilometers from the provincial capital to Ha Noi or Ho Chi Minh City;

- Initial infrastructure endowment measured by telephones per capita in 1995 to determine their relative contributions (or "weights") to the sub-indices.

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28 All performance indicators were calculated using data from GSO (2016).

29 This is the same methodology used by authors of the Growth Competitiveness Index.

These weights were then rounded to the nearest 5 percent to deliver three basic classes of weights, as shown in Table 1.3.[30] The final column of Table 1.3 reports the results of the weighting exercise.

Subindices that have the largest association with private sector growth, investment, and profitability receive the highest weight class of 20 percent. Correspondingly, those that are not strongly correlated with private sector development outcomes receive the lowest weight class of 5 percent. The medium weight class of 10 percent is reserved for average correlations across the three outcome variables, or a large substantive effect on one outcome (e.g., profitability), but a minimal relationship with the other two.

The weights for 2017 remain broadly consistent with the 2013 calculation. *Transparency, Labor,* and *Business Support Services* (BSS) continue to be the most important sub-indices for provincial economic performance. The *Informal Charges* subindex remains a mid-ranked measure, but all the other sub-indices are now only weakly correlated with our three dependent variables.

30 *Once again, we selected three outcome variables that are critically important for monitoring private sector development (private enterprises per 1,000 citizens, investment per capita, and profit per enterprise). We regressed these on each subindex, controlling for structural factors (population density, surface area, distance from Ha Noi or HCMC in kilometers), infrastructure (measured by the percentage of paved roads in the province), and dummy (dichotomous) variables for the seven regions of Vietnam. Using regional dummy variables enables us to hold constant certain cultural, socioeconomic, and structural factors that are region-specific, so we can focus on the differences in governance among provinces. In essence, we are able to remove the variance in private sector outcomes accounted for by the unique difficulties faced by provinces in Northwest Vietnam and the Mekong Delta, as well as the special advantages of provinces in the North and Southeast. This allows us to isolate the size of the relationship we care about most—the direct association between each subindex of governance quality and our outcome variables. The t-values from these regressions were taken for each subindex. Using the size of the t-value is an intuitive approach as it includes the size of the substantive effect (measured by the regression coefficient) but standardized by the variance around that point prediction (measured by the standard error). As a result, sub-indices that receive higher weights are those that have large and statistically significant correlations with the three outcome variables.*

Table 1.3. Description of Subindex Dimensions and Weighting Approach

Subindex	Number of Indicators	Dimensions (Weight within Subindex)	Index Weight in PCI (%)
Entry Costs	10	No dimensions	5
Land Access and Security of Tenure	11	1. Access to Land (33.4%). 2. Security of Tenure (33.3%). 3. Land Transactions (33,3%).	5
Transparency	12	1. Access to Documentation (30%). 2. Equity of Information (30%). 3. Web Page Score (40%).*	20
Time Costs	11	1. Administrative Procedures (50%). 2. Inspections (50%).	5
Informal Charges	9	1. Petty Bribery (50%). 2. Grand Corruption (50%).	10
Policy Bias	14	1. Bias in Favor of State Owned Enterprises (33.4%). 2. Bias in Favor of Foreign Enterprises (33.3%). 3. Bias in Favor of Connected Firms (33.3%)	5
Proactive Leadership	9	No dimensions	5
Business Support Services	24	1. Availability of Services (33.4%).* 2. Provided by Private Sector (33.3%).* 3. Quality of Services (33.3%)	20
Labor Quality	11	1. Labor Recruitment (33.4%)* 2. Labor Training (33.3%)* 3. Labor Quality (33.3%)*	20
Law & Order	17	1. Confidence in Dispute Resolution (33.3%). 2. Quality of Courts (33.4%)* 3. Threat of Crime (33.3%)	5

*Includes hard data weighted at 40% of subindex or dimension.

Performance Tiers: In past years, we identfied performance tiers that were based on the largest statistical "break points" that we could indentify in the scores.[31] Because these structural breaks remained regardless of methodology or weighting strategy, we interpreted them as identifiers of true differences in governance tiers. With each recalibration, we would maintain the initial break points, allowing us to identify provinces that, through their governance reform efforts, were able to jump to a higher performance tier.

In 2017, by contrast, we identity performance tiers by the statistical concept of standard deviation, which is a helpful measure of the average distance of each province from the mean provincial PCI score.

Due to the convergence in the PCI over time, which we discussed in the introduction, it has been more and more difficult to statistically detect structural breakpoints. Improvement at the bottom of the index means that only two provinces would be classified as performing "very poorly" or "poorly" according to our original benchmarks (see Section 1.2). The meaning of the tiers was also becoming nonsensical. In last year's PCI, the median province received a score in the "High" performance tier. Because the top of the index has not improved as much as the bottom, we also see a cluster of provinces in the middle that have extremely close scores. Drawing reliable and meaninfgul distinctions in this group became increasingly difficult.

To combat these challenges, in this year's metholodgical revision, we chose to abandon the statistical breakpoint approach. Rather, we identify performance tiers by standard deviation, which is a measure of the average distance of each province from the mean.[32] In a standard, normal distribution, each standard deviation movement corresponds to the proportion of observations skipped over in the movement. 64.2 percent of all observations (provinces) are within one standard deviation of the mean (34.1 percent less than it and 34.1 greater). 95.4 observations are within two standard deviations of the mean, and 99.7 percent of observations are within three standard deviations of the mean. We show how these delineations apply to the PCI in Figure 1.26 below.

The new marks better identify provinces that are truly excelling compared with their peers, as well as those falling significantly behind. As with previous recalibrations, we will keep the 2017 breakpoints for the next 4 years, allowing us to chart progress over time.

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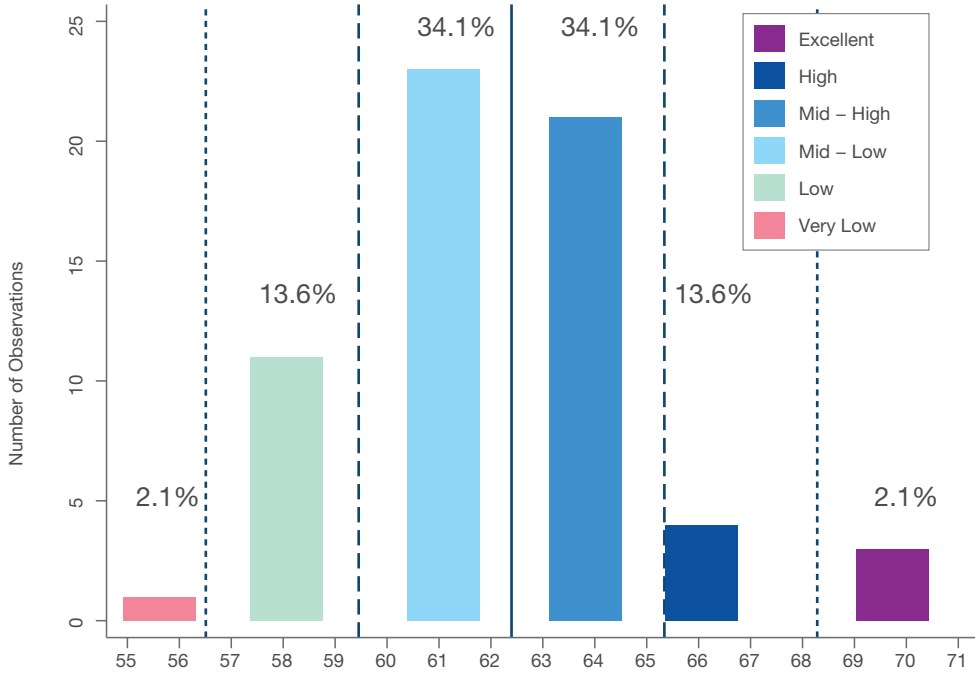
31 Bai, "Estimation of a Change Point in Multiple Regression Models."

32 $$SD = \sqrt{\frac{\sum_{i}^{n} \left(PCI_i - \overline{PCI} \right)^2}{n - 1}}$$

Figure 1.26 Defining PCI Performance Tiers



Source: PCI 2017
Solid Line=Mean; Dash=1 Standard Deviation; Short Dash=2 Standard Deviations

2 ANALYSIS OF FOREIGN INVESTED ENTERPRISES

Vietnam performed extremely well in attracting foreign direct investment in 2017. Newly registered FDI reached $35.88 billion, an increase of 44.4 percent from 2016 levels and the highest growth rate in over a decade. The Ministry of Planning and Investment (MPI) granted Investment Registration Certificates (IRC) to 2,591 new projects. This is not simply an artifact of inflated registered FDI numbers. Realized foreign investment also increased to $17.5 billion,[1] a figure that is even more impressive in the context of faltering global FDI. In 2017, FDI decreased by 16 percent around the world. Foreign investment to the United States decreased by one-third, while that to the United Kingdom dropped 90 percent due to Brexit.[2]

Foreign enterprises are now present in all 63 Vietnamese provinces and cities. Yet, some locations remain more popular than others. HCMC received $6.5 billion, more than 18

1 *Nguyen 2017*

2 *VTVNews 2018*

percent of the country's total. The second and third most popular provinces were Bac Ninh and Thanh Hoa, with $3.4 billion and $3.17 billion in registered FDI, respectively.

The year 2017 also marked the return of mega FDI projects to Vietnam, especially in energy production and distribution. These include the $2.79 billion Nghi Son 2 build-operate-transfer (BOT) thermal power project in Thanh Hoa, the $2.58 billion Van Phong 1 BOT thermal power plant in Khanh Hoa, the $2.07 billion Nam Dinh 1 BOT thermal power plant. Samsung also added $2.5 billion of capital to its Samsung Display Vietnam project in Bac Ninh. In Kien Giang, Japanese investors partnered with PetroVietnam and PetroVietnam Gas to build the Block B – O Mon Air Pipeline, which is valued at $1.27 billion.[3]

Foreign invested enterprises (FIEs) continued to play an instrumental role in the Vietnamese economy. Exports by the FDI sector were $155.24 billion, accounting for 73 percent of national exports. At $126.44 billion, FIEs' imports are equivalent to 60 percent of total imports into the economy.[4]

On the other hand, the role of foreign direct investment also worries those at the highest levels. In front of the National Assembly on October 31, 2017, Representative Pham Trong Nhan (Binh Duong) listed multiple causes for concern. These include the fact that many FIEs consistently reported losses over several years and thus contributed very little to government budget while continuing to expand their operations in Vietnam. Furthermore, Vietnam has not been able to facilitate technology and productivity spillovers – one of the main government rationales for attracting foreign capital – ranking below Thailand, Malaysia, Indonesia, and Cambodia in terms of technological transfer. Meanwhile, FIEs continue to receive many privileges and incentives that their domestic counterparts do not.[5]

With this backdrop, it is imperative that Vietnamese policymakers understand the challenges and opportunities of the FDI sector. In this chapter, we report on the performance and characteristics of FIEs in Vietnam in 2017. Furthermore, we evaluate the impact of the government's policy efforts to lessen the regulatory burden on foreign investors and combat corruption. Finally, we examine the FDI sector's perceptions of labor quality and labor relations in Vietnam.

This year's PCI-FDI survey includes 1,765 foreign enterprises from 21 provinces and cities with the highest concentration of FIEs. As with the survey of domestic firms, the PCI-FDI respondents were selected from the General Tax Department (GTD) list. While the PCI-FDI

3 *Nguyen 2017*

4 *Nguyen 2017*

5 *Le 2017*

survey is not the only profile of foreign investment in Vietnam, it is the largest and most comprehensive.[6]

The chapter is structured as follows: Section 2.1 looks at the performance of FIEs in 2017 and reports their levels of confidence and future expansion plans. Section 2.2 investigates characteristics of FDI enterprises including size, type, sector, customer base, suppliers, and country of origin. In Section 2.3, we examine the fruits of recent efforts to reduce regulatory burden on FIEs. Section 2.4 investigates the extent and persistence of corruption. Finally, Section 2.5 explores the mismatch between workers' skills and foreign investors' demands before describing recent improvements in labor relations. Section 2.6 concludes.

2.1. PERFORMANCE

In 2017, foreign direct investment slowly but surely continues its recovery from the slump of 2012-2013. Commercial activities have intensified among FIEs. As can be seen in Table 2.1, median sales reached $2.43 million, more than tripling the amounts reported in each of the previous two years. This revenue increase, however, went hand in hand with a median expenditure of $2.02 million, meaning that profitability suffered. The share of FIEs reporting profits decreased to 54.3 percent - the lowest in six years. At the same time, 37.9 percent of firms lost money, which is also a new record. It is unclear whether these numbers point to a temporary setback or indicate a more long-term trend. It is also possible that FIEs are going through an expansion phase where they invest in capital and labor, forgoing immediate profits for future growth. Indicators of business confidence, reported below, provide some evidence for the expansion stage hypothesis.

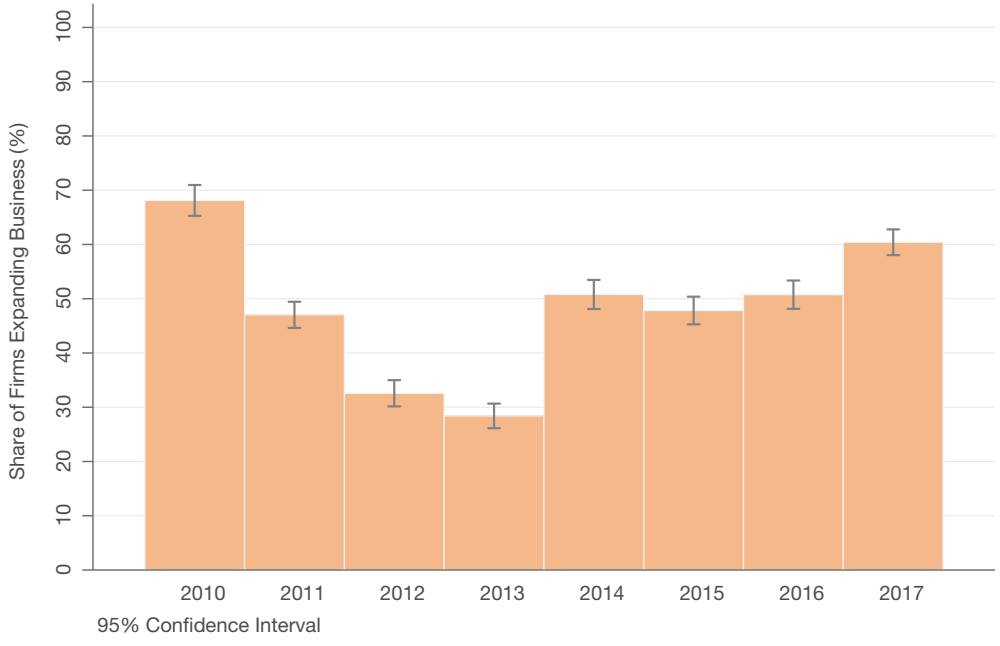
Table 2.1 - Performance of Foreign Firms over Time

Year	Firms Increasing Investment (%)	Firm Adding Employees (%)	Firms Reporting Profits (%)	Firms Reporting Losses (%)	Median Sales (Constant Millions of 2010 USD)	Median Expenditures (Constant Millions of 2010 USD)
2012	5.2	31.0	60.4	27.5	1.54	0.97
2013	5.1	30.0	63.6	24.1	1.45	0.94
2014	16.1	62.4	57.9	34.2	1.14	0.71
2015	11.4	62.4	55.1	37.6	0.69	1.42
2016	11.0	63.3	59.0	33.4	0.73	0.49
2017	13.2	62.4	54.3	37.9	2.43	2.02

6 *The unadjusted PCI-FDI response rate is 30 percent with only limited variation by province. Over 80 percent of respondents of general director or are the top manager of their company hold the position in Vietnam.*

Despite this profitability drop, foreign investors exhibited increased confidence in business prospects in Vietnam. There are two indicators of this optimism: 13.2 percent of firms reported increased investment in 2017, a slight improvement over the 11 percent of 2016. In addition, the share of firms that plans to expand business in Vietnam rose from 50 to 60 percent. As shown in Figure 2.1, this is approaching a level of ambition unseen since the apex of 2010.

Figure 2.1 - PCI-FDI Business Thermometer



Source: PCI Survey 2017 Question A.12 "Which statement best characterizes your firm's investment plans over the next 2 years?" Figure reports the percentage of firms that responded that they will increase or considerably increase operations.

2.2. CHARACTERISTICS

In the past, the PCI research team has described FIEs in Vietnam as typically small, export-oriented firms that subcontract to multinational companies.[7] This characterization held true again in 2017.

7 *PCI Report 2016, p. 56.*

2.2.1 Size

In fact, FIEs seem to be getting smaller, both in the size of their labor force and equity. As seen in Table 2.2, the proportion of small firms increased. Notably, the fraction of firms with fewer than five employees rose from 5.9 to 7.4 percent between 2016 and 2017. Firms with between five and nine employees grew to 10.9 percent. There is a clear continual trend toward increasing numbers of smaller FIEs in these two brackets. On the other hand, there is a slight offsetting increase in the number of large FIEs. The shares of firms with 1,000 and more employees and those with between 500 and 1000 employees are 5.8 and 6.4 percent, respectively. These represent a slight recovery from the corresponding indicators the year before.

Table 2.2 - Size of Foreign Firms over Time

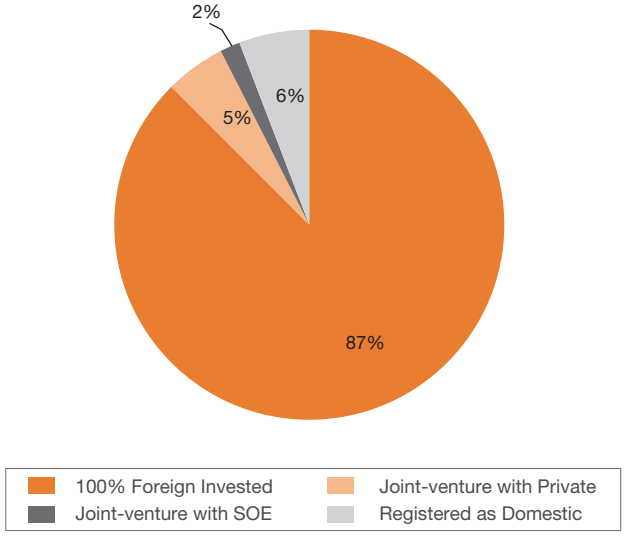
	Employment Size: Percent of firms with employment of:							
Year	**Less than 5** (%)	**5 to 9** (%)	**10 to 49** (%)	**50 to 199** (%)	**200 to 299** (%)	**300 to 499** (%)	**500 to 999** (%)	**1000 and over** (%)
2012	2.5	7.5	27.3	29.1	9.9	8.6	8.1	7.0
2013	3.6	5.5	28.1	30.5	9.5	8.0	8.3	6.4
2014	5.3	8.5	29.0	29.5	6.6	7.6	6.9	6.6
2015	5.7	9.3	31.0	27.7	6.4	7.0	6.8	6.1
2016	5.9	9.7	29.1	29.8	6.9	7.3	4.9	6.2
2017	7.4	10.9	31.0	26.2	7.3	5.0	5.8	6.4
	Equity Size: Percent of firms reporting equity of:							
Year	**Under 0.5 BVND** ($25,000) (%)	**0.5 to under 1 BVND** ($50,000) (%)	**1 to under 5 BVND** ($250,000) (%)	**5 to under 10 BVND** ($500,000) (%)	**10 to under 50 BVND** ($2.5 million) (%)	**50 to under 200 BVND** ($10 million) (%)	**200 to under 500 BVND** ($25 million) (%)	**500 BVND and over** ($50 million) (%)
2012	2.3	4.2	14.8	17.0	29.6	19.5	6.7	5.9
2013	2.5	4.1	15.3	19.3	31.4	16.4	6.1	4.9
2014	5.7	5.5	14.0	15.7	30.6	16.8	6.2	5.5
2015	6.1	6.1	17.4	16.9	25.8	15.8	6.3	5.7
2016	7.0	3.5	16.3	13.3	31.6	17.0	5.6	5.7
2017	7.9	5.7	16.7	15.1	27.3	16.8	4.7	5.9

The trend toward smaller firms is consistent with data on equity. The proportion of FIEs in the four lowest brackets in the second panel of Table 2.2 all increased between 2016 and 2017. Among FIEs, 7.9 percent had equity under $25,000, 5.7 percent had equity under $50,000 and 16.7 percent started with less than $250,000. In comparison, the corresponding numbers in 2012 were 2.3, 4.2 and 14.8. This could be an indicator of an increase in the number of support service firms in the FDI sector.

2.2.2 Type:

Firms with 100 percent foreign capital account for 87 percent of FIEs in Vietnam, a decrease of three percent from 2016. Only seven percent of respondents are in joint ventures with either privately-owned Vietnamese firms or SOEs. The share of firms registered as domestic operations is about six percent, as seen in Figure 2.2.

Figure 2.2- Legal Form of Foreign Invested Enterprises



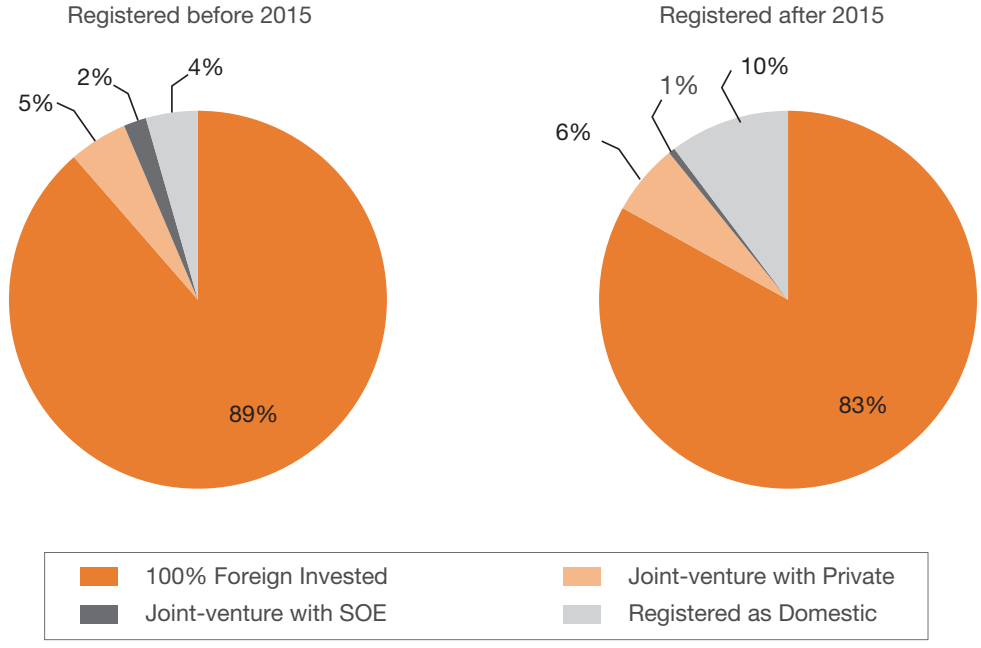
Source: PCI Survey 2017 Question A.8 « Which of the following categories best describe your company's current legal form?"

The 2016 PCI report predicted that the fraction of FIEs that registered as domestic operations would increase after the 2014 Investment Law.[8] The Vietnamese legal system considers firms with over 51 percent local ownership to be domestic investors and thus does not require an Investment Registration Certificate (IRC). The law officially came into effect on July 1st, 2015. There is evidence that foreign investors are already taking advantage of this quicker and less cumbersome system. Among respondents, domestic

8 *PCI Report 2016, p. 58*

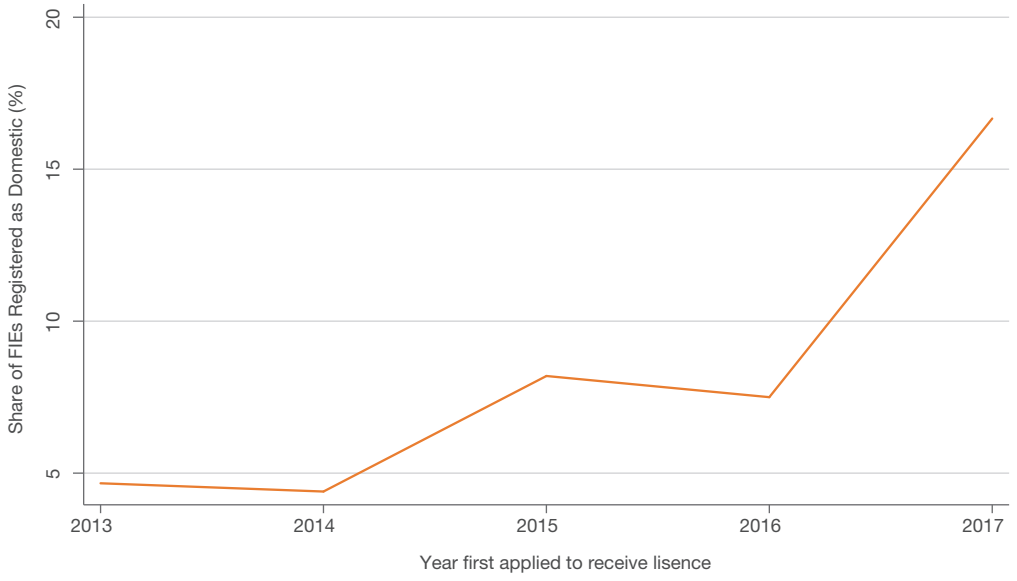
operations accounted for only 4 percent of firms applying for business licenses before 2015, but increased to 10 percent of those applying for a license after the National Assembly promulgated the Law (see Figure 2.3). A similar pattern emerges when looking at year-by-year changes. The share of domestic operations was 4.4 among FIEs that started in 2014, before increasing to 8.2 and 7.5 percent for 2015 and 2016, respectively. For newly registered FIEs in 2017, which admittedly is an extremely small sample size of twelve, the share of domestic operations rose to 16.67 percent (see Figure 2.4).

Figure 2.3 - Legal Form of Foreign Invested Enterprises before and after 2015



Source: PCI Survey (Multiple Years) Question A.8 "Which of the following categories best describe your company's current legal form?" and Question A.1 "In what year did your firm first apply to receive a license to invest in Vietnam?"

Figure 2.4 - Legal Form of Foreign Invested Enterprises After 2013

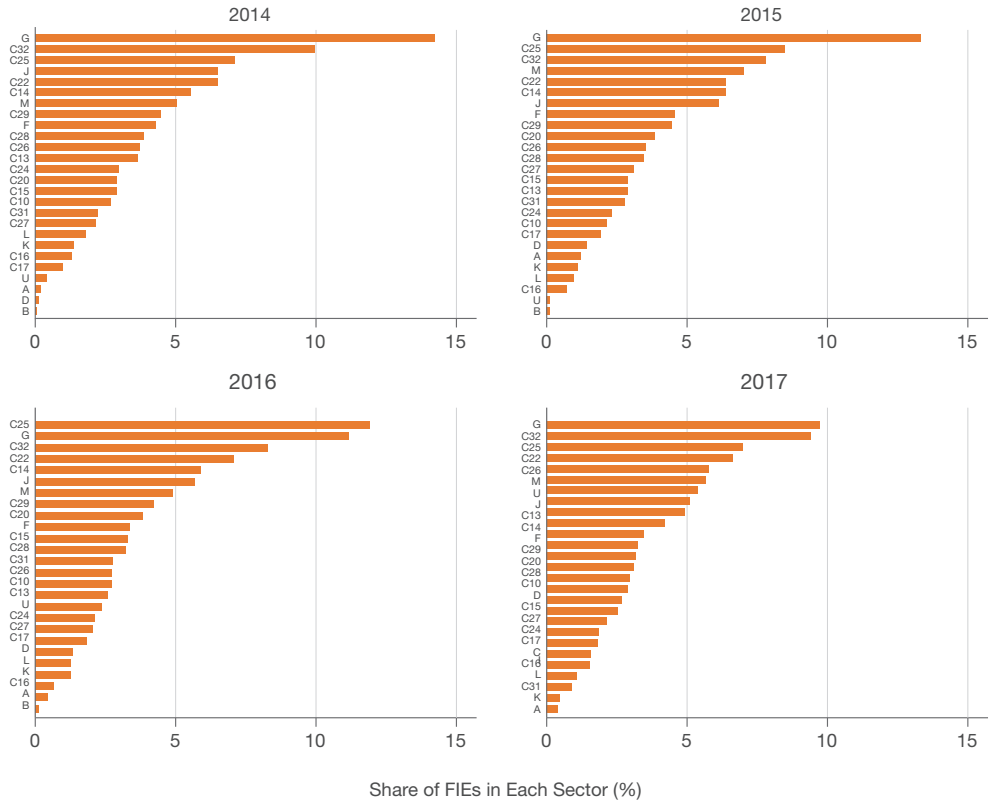


Source: PCI Survey (Multiple Years) Question A.8 "Which of the following categories best describe your company's current legal form?" and Question A.1 "In what year did your firm first apply to receive a license to invest in Vietnam?"

2.2.3 Sector:

FIEs in Vietnam have shown a tendency to diversify across business sectors over time, as can be seen in Figure 2.5. While firms specializing in wholesale and retail trade accounted for almost 15 percent of operations in 2014, in recent years that number has steadily dropped, falling below 10 percent in 2017.

Figure 2.5 - Sectoral Distribution of Foreign Enterprises



Source: PCI Survey (Multiple Years) Question A.6 “In which field does your firm mainly focus?” and Question A.7 “Please list the firm’s 3 main product lines or services in as much detail as possible”

ISIC: Sector Codes		Subdivisions of Sector C (Manufacturing): 2 Digit Level			
A	Agriculture, forestry and fishing	10	Manufacture of food products	25	Manufacture of fabricated metal products, except machinery and equipment
B	Mining and quarrying	12	Manufacture of tobacco products	26	Manufacture of computer, electronic and optical products
C	Manufacturing	13	Manufacture of textiles	27	Manufacture of electrical equipment
D	Electricity, gas, steam, and air-conditioning supply	14	Manufacture of wearing apparel	28	Manufacture of machinery and equipment n.e.c.
F	Construction	15	Manufacture of leather and related products	29	Manufacture of motor vehicles, trailers and semi-trailers
G	Wholesale and retail trade; repair of motor vehicles and motor cycles	16	Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	31	Manufacture of furniture
J	Information and communication	17	Manufacture of paper and paper products	32	Other manufacturing
K	Financial and insurance activities	19	Manufacture of coke and refined petroleum products	32	Other manufacturing
L	Real Estate Activities	20	Manufacture of chemicals and chemical products		
M	Professional, scientific and technical activities	22	Manufacture of rubber and plastics products		
U	Activities of extraterritorial organizations and bodies	24	Manufacture of basic metals		

Manufacturing continues to be the leading sector with 66 percent of FIEs in 2017. Within manufacturing, the leading sub-sectors are fabricated metal products (7 percent), and rubber and plastics products (6.7 percent). It is worth noting that apparel is no longer in third place, falling from 6 percent of FIEs in 2016 to 4.2 percent in 2017. It was displaced by the emerging sector of computer, electronic and optical products, which has seen a remarkable rise from 2.8 percent three years ago to 5.8 percent in 2017. This indicates a positive trend toward higher-value-added products among FIEs.

2.2.4 Customers:

FIEs overwhelmingly serve export markets, foreign entities in Vietnam, and the Vietnamese private sector. The shares of FIEs that supply to SOEs and state agencies are the lowest in recent years, at 10.7 percent and 4.3 percent, respectively, as outlined in Table 2.3. The data provides evidence that most FIEs in Vietnam tend to be links in multinational supply chains. More than 60 percent of FIEs export their products, with 33.7 percent sending goods to their home country and 26.6 percent selling to a third country. A high level of international linkages generally presents the host country with an opportunity to generate productivity spillovers from the FDI sector into the domestic economy, as was the case with South Korea, Taiwan, Thailand and Indonesia. Vietnam can only fully exploit this potential, however, by building vibrant supporting industries with domestic firms supplying the FIEs.

Table 2.3 - Customers of Foreign Invested Firms (Percent with at Least One Customer)

	Sales to Vietnamese State		Exports		Sales to Foreigners in Vietnam			Sales to Private Vietnamese		
Year	SOEs (%)	Agency (%)	Home (%)	Third Country (%)	Individual (%)	Both (%)	Enterprise (%)	Individual (%)	Both (%)	Enterprise (%)
2010	10.2	4.0	51.0	9.5		29.1			29.1	
2011	8.1	7.4	44.5	4.2		17.1			41.9	
2012	13.1	5.4	32.8	28.5		24.9			41.3	
2013	16.9	6.3	34.9	40.0		35.8			48.5	
2014	12.9	5.2	37.5	29.3		46.1			39.2	
2015	13.6	4.1	39.9	33.0		51.6			40.2	
2016	11.9	4.8	39.0	34.2	13.3		53.1	18.3		41.1
2017	10.7	4.3	33.7	26.6	11.6		56.0	18.3		41.0

A majority of FIEs also sell to other foreign entities located in Vietnam, especially to other firms (56 percent). While 41 percent of FIEs serve Vietnamese firms, only 18.3 percent supply to private Vietnamese citizens. Most FIEs supply other FIEs, with the common final destination being a foreign market.

2.2.5 Suppliers:

Who provides the intermediate inputs and services for FIEs? This question is important because, generally, the more domestic firms participate in the production chain by supplying to FIEs, the more likely it is that better technology and management techniques will spill over from FIEs to domestic suppliers. FIEs rarely acquire inputs from SOEs and

that trend continued in 2017, with only 10 percent of respondents supplied by SOEs (see Table 2.4). Household Vietnamese businesses do better, providing supplies or services to 16.1 percent of FIEs.

Table 2.4 - Suppliers of Foreign Invested Firms (Percent with at Least One Vendor)

Year	State Owned Enterprise (%)	Private Firm (%)	Household Business (%)	In-House (%)	Home Country Businesses (%)	Third Party (%)
2010	13.5	53.6	12.8	7.4	28.3	34.0
2011	7.6	30.4	7.4	8.6	15.9	18.6
2012	5.6	43.1	4.8	6.6	39.7	24.5
2013	9.5	47.9	10.1	12.8	45.6	34.0
2014	11.5	62.6	15.9	8.3	55.5	34.8
2015	11.9	68.9	19.3	8.5	58.0	38.3
2016	12.1	68.5	18.4	9.9	58.7	39.0
2017	10.0	62.5	16.1	6.9	49.2	26.6

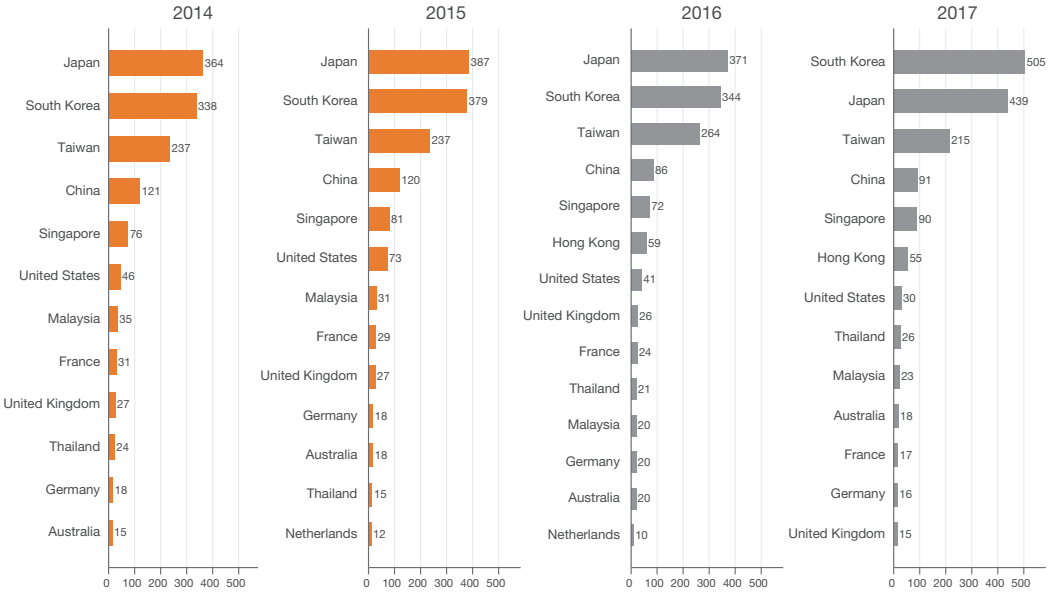
On the other hand, the share of FIEs with at least one private Vietnamese supplier has risen greatly in recent years. Despite dropping from 68.5 percent in 2016 to 62.8 percent in 2017, this number still indicates a consistent improvement over the 30.4 percent of 2011.[9] Despite this, almost half (49.2 percent) of FIEs still acquire necessary inputs from businesses in their home country, while 26.6 percent do so from third country suppliers.

2.2.6 Country of Origin:

East Asian investors, as usual, top the list in the PCI-FDI sample. Japanese, South Korean and Taiwanese FIEs continue to account for the majority of PCI respondents. The year 2017 has seen a remarkable increase in the number of South Korean FIEs surveyed. South Korean investors accounted for 505 respondents to this year's PCI, up from 344 in 2016, making it the largest country of origin in the current PCI-FDI sample.

9 *As we note in Chapter 3, only seven percent of PCI domestic respondents report selling to FIEs. The contrast between the two numbers likely indicates that a few large domestic firms are responsible for most of the sales to foreign companies.*

Figure 2.6 - Country of Origin of Foreign Invested Enterprises



Sizeable numbers exist for Western investors as well, with some slight declines from recent years. The sample contains 18 investors from Australia and 30 from the United States. There are also 17 FIEs from France, 16 from Germany, 15 from the United Kingdom and 9 from the Netherlands. The decline in the number of American FIEs in Vietnam is notable. It is important, however, to note that a great deal of U.S. investment is listed as originating in Hong Kong and Singapore for a variety of logistical and tax-based reasons; thus, the U.S. is probably understated in our sample.

2.3. REGULATORY BURDEN

In the 2016 PCI report, we divided Vietnam's regulations into two general categories: The first set covered regulations that govern entrance into the market, such as registration and licensing. The second set comprised post-entry regulations that govern the operations of investors. The 2016 data showed that, thanks to the 2014 Enterprise Law and the 2014 Investment Law, significant progress was achieved with regard to the first category. However, post-entry regulatory burden remained an area of concern for foreign investors.

2.3.1 Post-Entry Regulations

This year, Vietnamese policymakers continue to implement measures to reduce the regulatory burden on FIEs. In February 2017, the Government issued Resolution 19-2017/NQ-CP on "Improving the Business Environment and National Competitiveness toward 2020." The Resolution outlines specific goals regarding governance, competitiveness, innovation and e-government.[10] In May, the Prime Minister issued Directive 20/CT-TTg on rectifying inspection activities to prevent redundant, overlapping and unnecessary inspections that interfere with the operation of enterprises.[11] With these new measures, the post-entry regulatory burden has declined significantly, as reported by FIEs.

Having to allocate too much of managers' time to dealing with bureaucratic procedures can harm a firm's productivity by forcing managers and staff to waste time on non-core activities. Table 2.5 shows that, in 2017, the share of firms spending over 5 percent of managers' time on bureaucratic procedures decreased from 72 percent to 66 percent. While the median number of inspections that FIEs faced in 2017 remains two, the share of firms enduring harassment – defined as having eight or more visits a year – decreased from 4.6 percent to 3.4 percent. It is too early to draw any definitive conclusions, but policy measures aimed at improving the post-entry regulatory environment appear to be having an effect.

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10 *Government of the Socialist Republic of Vietnam. 2017. "Resolution 19-2017/NQ-CP on Improving the Business Environment and National Competitiveness toward 2020." February 2017. https://thuvienphapluat.vn/van-ban/Doanh-nghiep/Nghi-quyet-19-2017-NQ-CP-tiep-tuc-thuc-hien-nhiem-vu-giai-phap-chu-yeu-cai-thien-moi-truong-kinh-doanh-338606.aspx*

11 *Government of the Socialist Republic of Vietnam. 2017. "Directive 20 on Rectifying Inspection Activities of Enterprises." May 2017. https://thuvienphapluat.vn/van-ban/Doanh-nghiep/Chi-thi-20-CT-TTg-2017-chan-chinh-thanh-tra-kiem-tra-doanh-nghiep-349402.aspx*

Table 2.5 - Post-Entry Regulations for Foreign Firms

Year	Over 5% of Time Spent on Bureaucratic Procedures (%)	Inspections (Median)	Harassment (8+ Inspections)	Days for Exports to Clear Customs (Median)	Days for Imports to Clear Customs (Median)
2010	56.6	2.00	6.3	1.00	2.00
2011	68.1	2.00	2.9	1.50	2.00
2012	79.4	2.00	2.9	2.00	2.00
2013	77.8	2.00	2.6	2.00	2.00
2014	70.2	2.00	3.3	1.00	2.00
2015	69.8	2.00	2.9	1.00	2.00
2016	71.9	2.00	4.6	1.00	2.00
2017	66.2	2.00	3.4	1.00	2.00

Figure 2.7 shows which agencies the FIEs rank as having the most burdensome administrative procedures. Procedures related to taxes (28 percent) and customs (29 percent) remain the costliest for foreign investors in Vietnam. Social insurance, which ranked as the second most onerous procedural category in 2016, has improved significantly this year. This success can be traced to recent administrative reform efforts. Vietnamese social insurance agencies reduced the number of administrative procedures from 33 to 32 and drastically reduced the number of items required by 54 percent. A separate VCCI survey on social insurance in 2017 reported that foreign enterprises credit these reform efforts with significantly reducing their burden. [12]

12 *Mai Lam. 2017. « Cải cách hành chính BHXH: Các doanh nghiệp FDI thấy hài lòng ». Thời báo Tài chính Việt Nam. July 7, 2017. http://thoibaotaichinhvietnam.vn/pages/tien-te-bao-hiem/2017-07-07/cai-cach-hanh-chinh-bhxh-cac-doanh-nghiep-fdi-thay-hai-long-45220.aspx*

Figure 2.7 - Most Burdensome Administrative Procedures

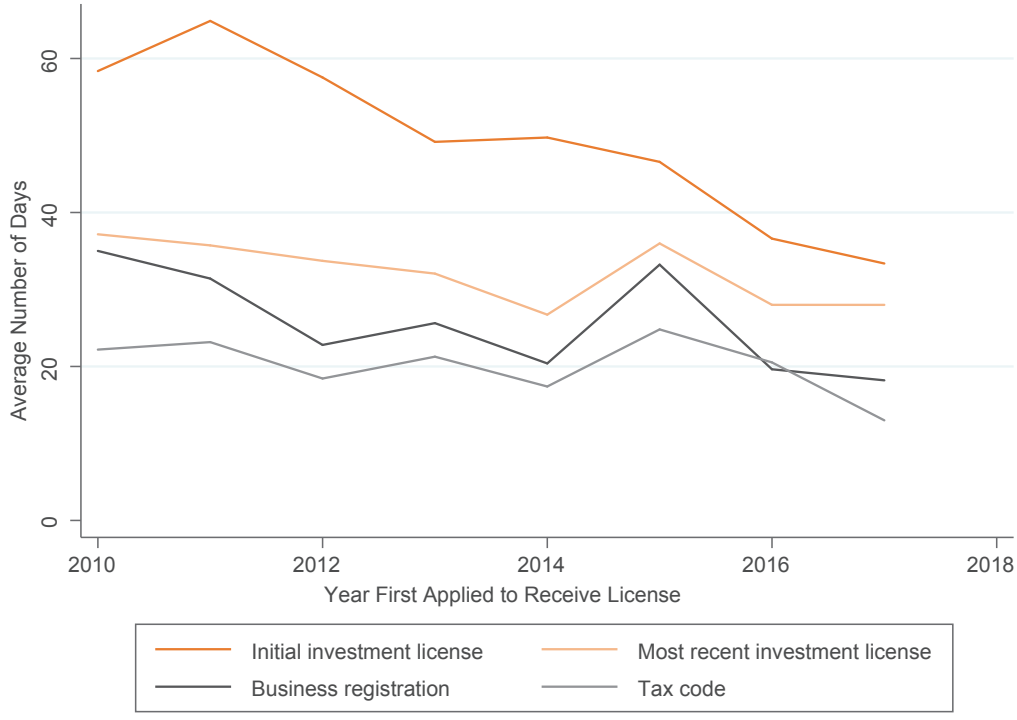
Source: PCI Survey (Multiple Years) Question D.2 "From your experience in the province, please indicate the troublesome administrative procedures (Multiple choices""

2.3.2 Entry Regulations

Regarding registration, progress achieved in past years continues. Decree 78 on November 1, 2015 expedited foreign firm entry by facilitating online registration, reducing required documentation, prohibiting registration authorities from requesting documents that are not required by law and cutting down on the timeline for receipt of an Enterprise Registration Certificate (ERC). In addition, the 2014 Investment Law shifted the country from a "positive list" to a "negative list" approach to regulating foreign investment. In other words, while FIEs could only operate in certain designated sectors before 2015, now they are free to enter all sectors that are not explicitly legally restricted. At the same time, the number of prohibited and conditional sectors was reduced. In the 2016 PCI report, we noted that, thanks to these changes, regulation of entry is no longer a tremendous burden for foreign investors. This trend continues in 2017. As shown by Figure 2.7, the share of FIEs considering registration to be the most burdensome administrative measure dropped from 27 percent in 2015 to 24 percent in 2016, and again to 23 percent this year.

The waiting time for the procedures to start a FIE in Vietnam has also steadily decreased in recent years, despite some setbacks in 2015. Acquiring the initial investment license, which took an average of 58 days in 2010 and 47 days in 2016, required only 37 days in 2017. The time needed to obtain the business registration certificate declined from 35 days in 2010 to 20 days in 2016 and 18 in 2017. The same trends appear in regard to the tax code and investment license renewal.

Figure 2.8 - Time Needed to Complete Entry Procedures



Source: PCI Survey (Multiple Years) Question B.1 "From the day you submitted the application to the day you received it, how long did it take for you to receive your…"

2.3.3 Regulatory Burden: Key Takeaways

In sum, policymakers continued to make great progress on lessening regulatory burdens on FIEs. Improvements in streamlining entry regulations, which were recognized in last year's PCI report, have been maintained. The government's efforts to address excessive inspections in 2017 also appears to have had an immediate impact. A particularly bright spot is social insurance, where recent procedural reforms are recognized and appreciated by foreign investors.

2.4. EXPERIENCE WITH CORRUPTION

In accordance with duties assigned to the PCI team under Resolution 35, this section assesses corruption faced by foreign enterprises. To provide a more fine-grained measurement of corruption in Vietnam, the PCI-FDI survey asked several questions about illicit activities. These includes bribes paid during entry, in pursuit of government contracts, while performing customs activities, in the process of regulatory enforcement, and while courts are adjudicating contract disputes.

Corruption is inherently difficult to measure: Firms may be unwilling to be candid in surveys about their corrupt dealings with bureaucrats for fear of looking bad, the threat of legal consequences, or concerns over revenge and harassment. This is especially true of firms from countries that have signed the OECD's Anti-Corruption Agreement, as they can be held legally liable in their home countries for bribes paid in Vietnam. In cases where they also benefit from corruption and consider the bribes as unofficial payments to "partners," firms would not want to expose bureaucrats with whom they work to punishment and removal. To deal with this problem, since 2012, the PCI has employed the Unmatched Count Technique (UCT), or list question, which asks respondents about corruption in an indirect way and provides them with additional anonymity.

2.4.1 General Corruption

Under the new administration, FIEs report a significant decrease in corrupt behavior. While 59 percent thought that regulations are an excuse for bribery in 2015, the share declined to 50 percent in 2016 and further to 45 percent in 2017. Reductions in illicit activity also occurred in other areas of business. In 2016, 46 percent of firms admitted to paying informal charges to inspectors. That number dropped slightly to 45 percent in 2017.

Table 2.6 shows that a very high number - 66.5 percent - of FIEs paid bribes during customs procedures in 2015. Recent administrative reform efforts appear to have somewhat alleviated the problem. Only 56.4 percent reported customs-related unofficial payments in 2016 and only 53 percent did so in 2017, which indicates sustained improvement on this front. The prevalence of informal charges during land procedures also declined to 17.5 percent in 2017 from 22.6 percent in 2016. Remarkably, domestic enterprises also reported decreased levels of bribery across these measures, which further supports our conclusion that bureaucratic corruption is on a downward trend.[13]

13 *See Chapter 1 of This Report*

Table 2.6 - Some Questions about Corruption in the PCI Survey

	Type of Informal Charge					
Year	Regulations are an Excuse for Bribery (%)	Paid informal charges to Inspectors (%)	Bribe during Customs Procedures (%)	Bribe during Land Procedures (%)	Bribes Were a Deterrent to Using Court's (%)	Service Delivered after Bribe Payment (%)
2010	32.0		64.9		9.3	48.0
2011	23.9		52.9		5.2	46.1
2012	24.2		56.2		13.1	54.7
2013	44.0		58.6		14.5	59.0
2014	59.9		66.2		21.9	58.2
2015	58.8		66.5		23.9	59.1
2016	49.7	45.8	56.4	22.6	18.7	45.3
2017	44.6	44.9	53.0	17.5	18.9	50.3

	Cost of Informal Charges (Amount/Annual Income)					
Year	0%	<1%	1-2%	2-5%	5-10%	>10%
2010	21.8	40.4	16.7	11.4	7.0	2.6
2011	30.2	33.7	20.0	7.7	6.7	1.6
2012	30.0	41.0	17.4	8.3	2.6	0.8
2013	19.7	48.5	18.3	8.7	3.1	1.7
2014	18.7	42.7	20.4	11.8	4.5	1.9
2015	16.4	44.5	18.2	12.8	6.4	1.8
2016	25.9	43.9	15.2	8.8	4.1	2.1
2017	31.3	41.1	14.4	6.8	3.8	2.6

The overall burden of informal fees also saw a slight decline. In the second panel of Table 2.6, the share of FIEs with costs of informal charges at 0 percent of their annual income increased from 25.9 percent in 2016 to 31.3 percent in 2017.

Academic research on corruption suggests that bribery is less harmful when it is predictable.[14] One measure of predictability is whether public officials actually deliver the services after receiving bribes, instead of harassing the firms for additional payments. Among respondents to the PCI-FDI survey who paid bribes in 2017, 50.3 percent had the expected service delivered, up from 45.3 percent in 2016.

14 *See, For Example Edmund J. Malesky and Krislert Samphantharak (2008), "Predictable Corruption and Firm Investment: Evidence from a Natural Experiment and Survey of Cambodian Entrepreneurs", Quarterly Journal of Political Science: Vol. 3: No. 3, pp 227-267.*

2.4.2. Experience with Corruption: Key Takeaways

In conclusion, bureaucratic corruption declined in recent years, especially in procedures related to land and customs, which can be attributed to administrative reforms in those areas. However, it remains to be seen whether these are long-term systemic improvements. As we explain further in Chapter 3, in areas without large-scale regulatory and procedural shake-ups, such as inspections and government procurement, data shows that the culture of informal payments still permeates the business environment. While FIEs that have already entered Vietnam may accept this as part of the game, a reputation for corruption will deter other foreign investors. This is especially true with investors bound by laws prohibiting the bribery of foreign officials, such as those from the United States and OECD countries.

2.5. LABOR QUALITY AND LABOR RELATIONS

2.5.1 Labor quality

To maximize the benefits accrued from FDI, Vietnam cannot continue to rely on the advantages of cheap labor at a time when competitors in the region are quickly catching up. Labor quality must be improved to attract higher-value industries such as computers, electronics, and motor vehicles. However, foreign investors' satisfaction with the skill level of Vietnamese workers, already starting from a low base, has shown little sign of improvement in recent years. The 2014 PCI report alerted policymakers to an increase in the mismatch between domestic labor skills and foreign businesses' demands. In this report for 2017, we revisit the issue of labor quality and find that progress has stalled.[15]

The unfulfilled needs among FIEs for technicians and managers illustrate the extent of this mismatch. According to a 2015 survey by the Japan External Trade Organization (JETRO), 80 percent of respondents needed technicians and 89 percent would need technicians in the future.[16] Three years later, in 2017, the PCI-FDI survey shows that good technicians are still a rarity, with 55 percent of firms finding it "slightly difficult" and 19 percent considering it "difficult" to recruit this type of worker. As Figure 2.9 clearly demonstrates, the situation is even worse when it comes to other skill-intensive positions such as supervisors and managers. For the latter, 36 percent of respondents consider the search "difficult" and 28 percent find it "very difficult".

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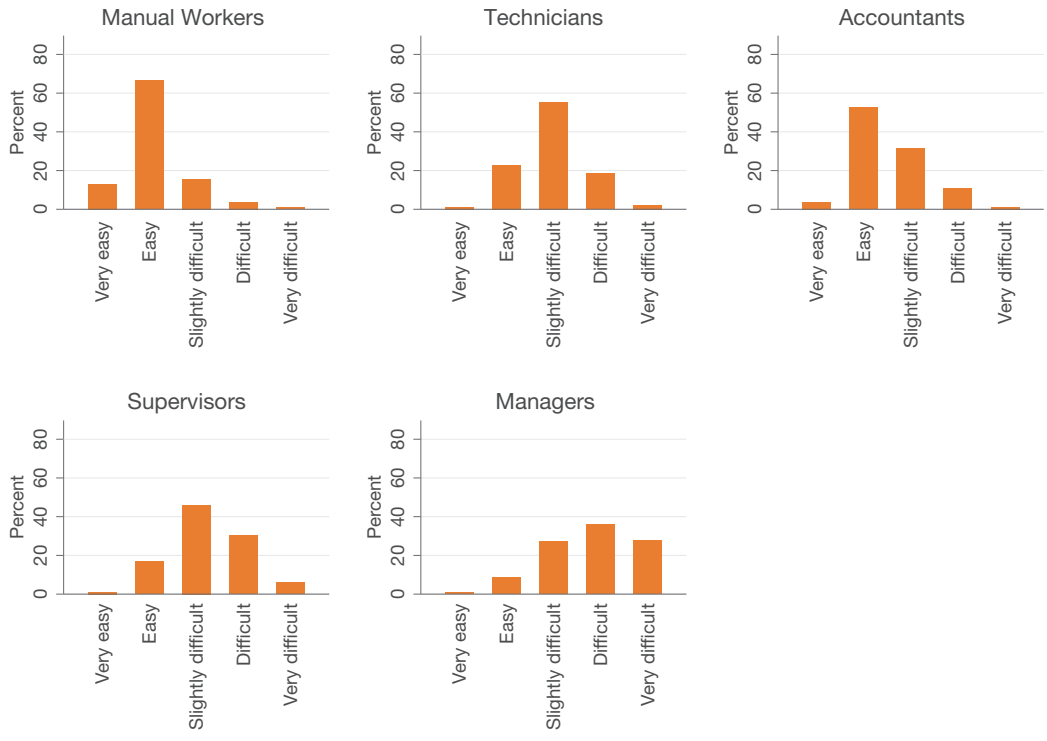
15 PCI Report 2014, p. 81

16 Small 2015

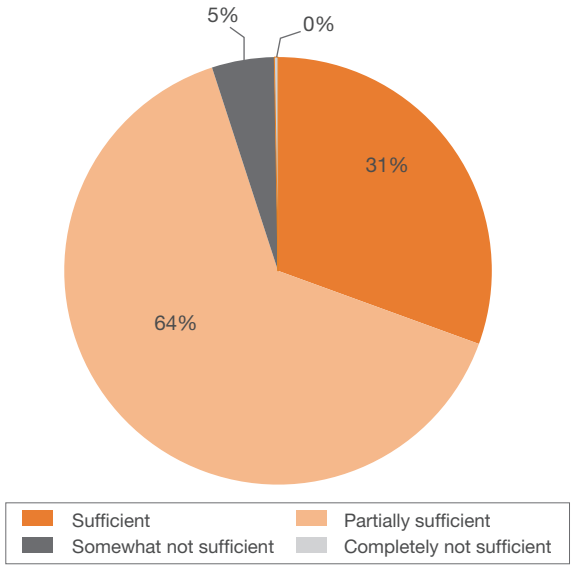
Figure 2.9 - Difficulty in Recruiting Workers



Source: PCI Survey 2017 Question F1.1.7 "Please evaluate how easy or difficult it is to recruit workers in these specific areas?"

Similarly, foreign investors' assessment of Vietnamese labor quality remains low. Figure 2.10 shows that only 31 percent of FIEs think that the quality of the province's workers meets their needs. A significant majority (64 percent) consider labor quality to be only partially sufficient.

Figure 2.10 - Quality of Labor in the Province

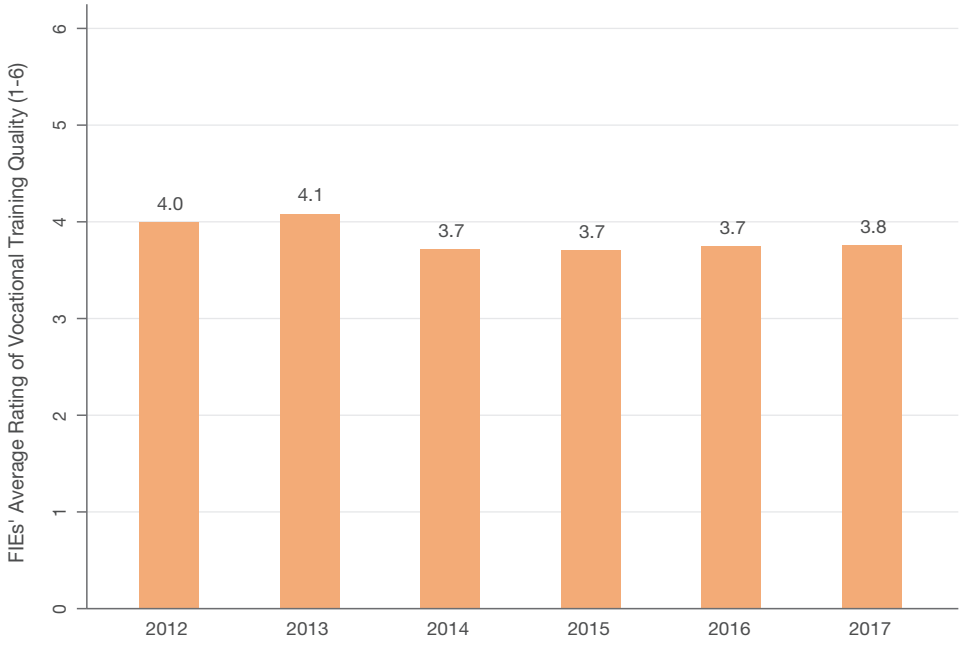


Source: PCI Survey 2017 Question F1.2.1 "Based on your experience of using local labor, please assess the quality of labor in the province:"

According to the 2014 PCI report, the less confidence FIEs have in the vocational training services delivered by the state, the more they must spend on in-house employee training.[17] The year 2014 saw a sudden decline in FIEs' ratings of vocational training and a corresponding spike in their internal training expenditures. The situation has not improved since. According to Figure 2.11, quality assessments of Vietnam's vocational training dropped from 4.1 to 3.7 on a five-point scale between 2013 and 2014 and remained basically flat for the next three years.

17 *PCI Report 2014, p. 81*

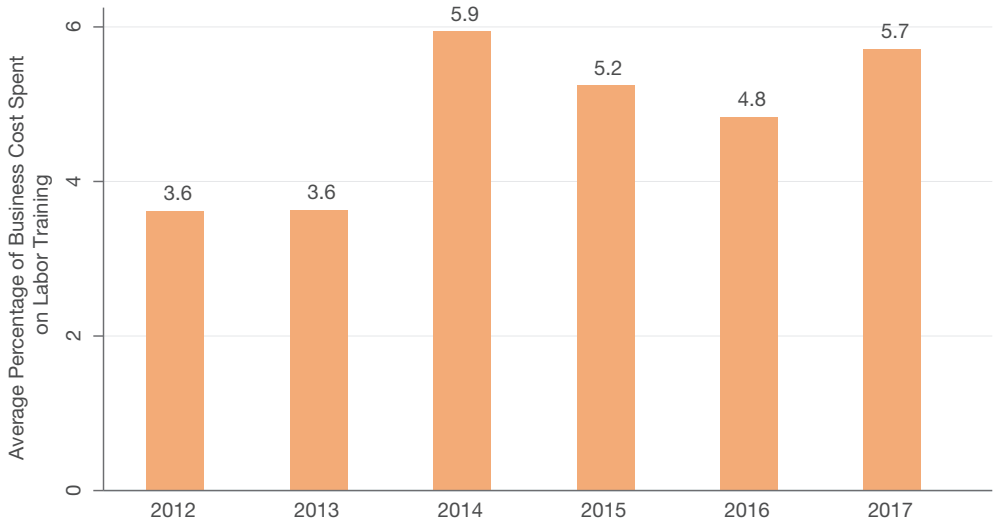
Figure 2.11 - Quality of Vocational Training



Source: PCI Survey 2017 Question F1.2 "How do you rate the overall quality and efficiency of these services delivered by provincial public agencies?" (from 1 "Very Poor" to 6 "Very good")

Accordingly, FIEs' spending on in-house training has increased by a wide margin, starting in 2014. Figure 2.12 shows that while the average spending on this item was only 3.6 percent of business costs in 2013, it rocketed to 5.9 percent in 2014 and returned to 5.7 percent in 2017. Some of this increase in labor training expenditures can be attributed to a move toward higher-value-added products that requires more intensive training of workers. However, other indicators of business confidence in labor quality suggest that at least part of this outlay reflects foreign investors' response to the local labor force's inadequate skill levels.

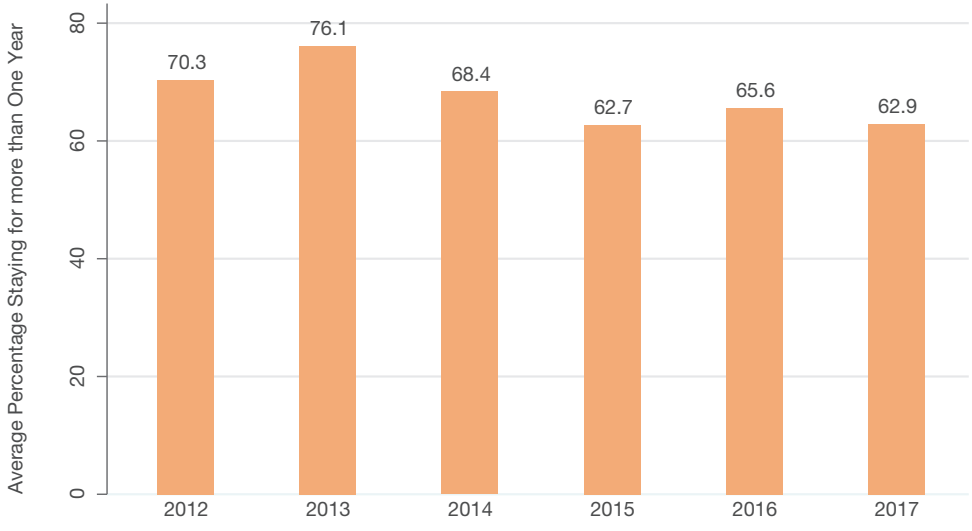
Figure 2.12 - Spending on In-House Training



Source: PCI Survey 2017 Question F1.3.1 "What percentage of business costs did your firm spend in labor training?"

Another problem facing FIEs is that the workers that they train do not remain with the firm. As can be seen in Figure 2.13, the share of trained workers staying with the firm for more than one year decreased from more than 70 percent in 2012 and 2013 to just under 63 percent in 2017.

Figure 2.13 - Do Trained Workers Stay with the Firm?

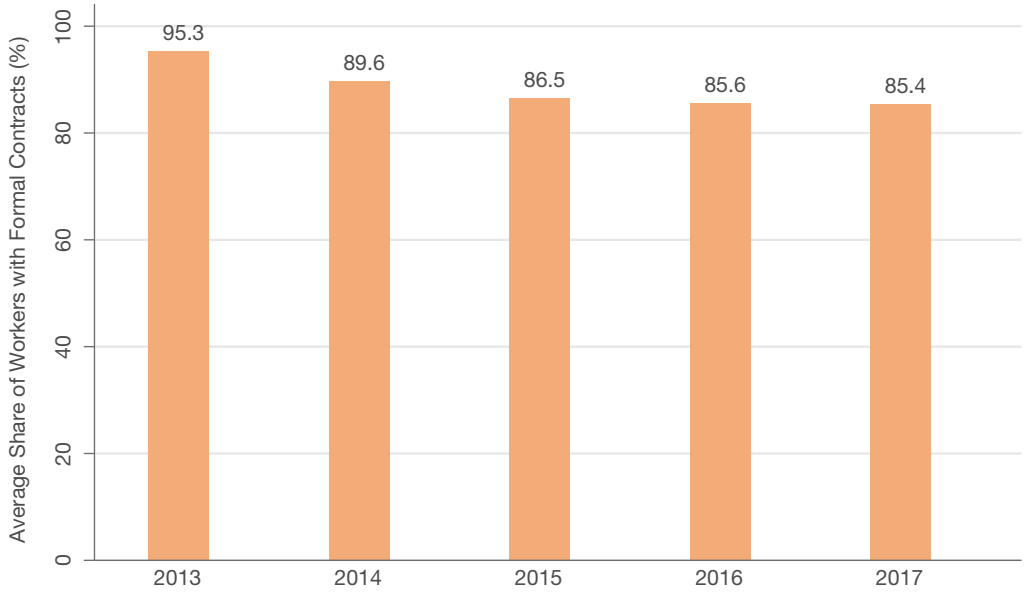


Source: PCI Survey 2017 Question F1.3.2 "On average, what percentages of workers trained by your company remain with the firm for longer than a year?"

The increasing tendency among employees of FIEs to switch firms is accompanied by a decreasing share of workers with formal labor contracts. From 95.3 percent in 2013, this proportion has steadily declined to 85.4 percent in 2017. Thus, the firm-worker relationship appears to have become more short-term and casual.

The potential consequences are twofold. First, some of the skills being taught are firm-specific, meaning that the training is wasted when workers switch employers. Second, and more importantly, the increasing transience of labor can discourage foreign investors from training the Vietnamese labor force. This will limit the knowledge and skill spillovers from the FDI sector as well as hinder the national climb up the value chain. The lack of long-term commitment from workers, combined with their insufficient initial skill level, puts foreign investors in a difficult dilemma.

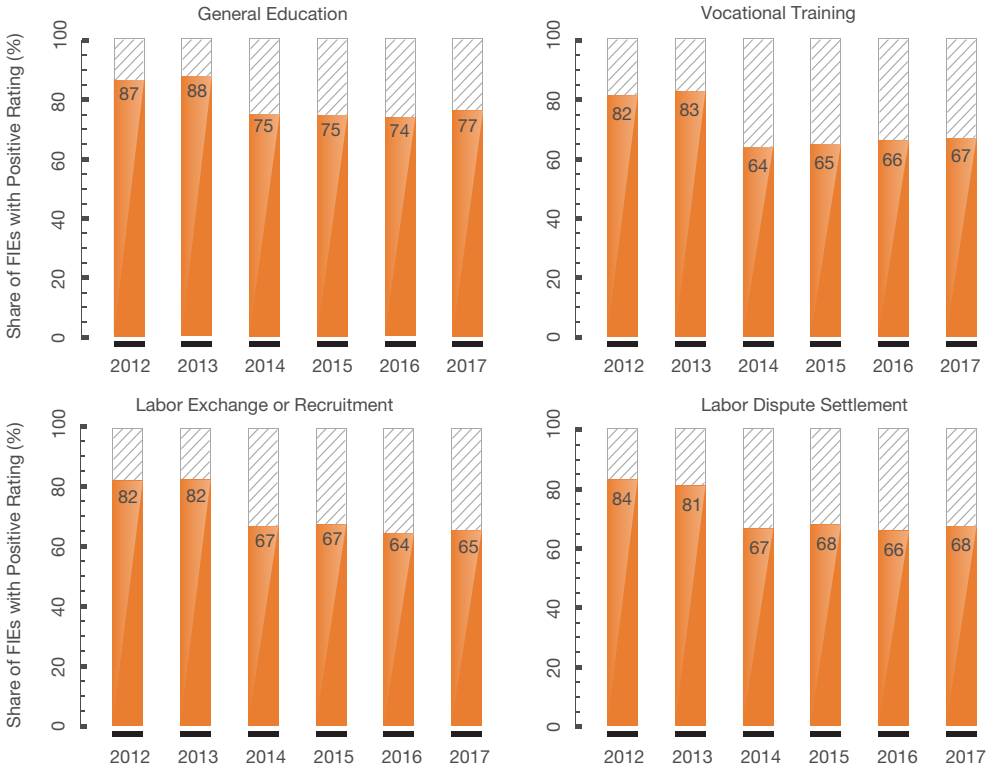
Figure 2.14 - Proportion of Formal Workers



Source: PCI Survey 2017 Question F1.1.3 "What proportion of your total workforce is long-term workers hired with formal contracts?"

In addition, FIEs have become less satisfied with the quality of labor services provided by provincial government agencies, as illustrated in Figure 2.15. We already mentioned the lower perceived quality of vocational training, but other services, including general education, labor exchange or recruitment, and labor dispute settlement also demonstrate similar trends. The proportion of FIEs reporting positive ratings for general education (3 and higher on a scale of 6) dropped precipitously from 0.88 to 0.75 between 2013 and 2014 and has largely stalled at that level. The corresponding numbers in 2017 are 0.65 for labor exchange or recruitment and 0.68 for labor dispute settlement.

Figure 2.15 - Quality of Labor Services



Source: PCI Survey 2017 Question F1.2 "How do you rate the overall quality and efficiency of these services delivered by provincial public agencies?"

2.5.2 Labor Relations

The news on labor is not all bad. Stability and predictability of labor relations have historically been considered Vietnam's greatest strengths in attracting foreign capital, and responses to the 2017 PCI-FDI survey show that the country has improved further in this respect.

The Labor Code came into effect in 2012 with a focus on collective bargaining and dispute resolution. The 2014 PCI survey recorded that 9 percent of FIEs had experienced strikes or similar work stoppages in the previous three years. Part of this can be explained by the spikes in protests in industrial zones in Binh Duong and Ha Tinh caused by the Haiyang Shiyou 981 incident. In 2017, strikes have become much rarer, declining by almost half to

4.9 percent. Not only do strikes happen less frequently, they are also becoming shorter. Among firms that experienced interruptions in production, the median work days lost decreased from two in 2014 to 1.5 in 2017. The economic costs of these strikes, however, remained at about 3 percent of FIEs' annual revenue each time.

Table 2.7 - Indicators of Labor Relations (2014 vs. 2017)

	Experienced strikes/work stoppages (%)	Number of work days lost	Share of annual revenue lost due to strikes (%)	Considered workers' demands legitimate (%)	Accommodated workers' demands (%)
2014	9.0	2.0	3.0	80	
2017	4.9	1.5	3.1	62	92

A blemish on this bright picture, however, is that FIEs are less likely to sympathize with labor's concerns. The share of respondents answering affirmatively to the question of whether the workers' demands were legitimate dropped from more than 80 percent in 2014 to 62 percent in 2017. However, in most cases (92 percent), the firms accommodated the demands of the striking workers.

2.5.3 Labor Quality and Labor Relations: Key Takeaways

On the bright side, labor relations have improved since 2014. Strikes and other work stoppages happen less frequently and are resolved more quickly. However, Vietnamese workers still struggle to meet the technical demands of foreign companies. Improving the skill level of the labor force is crucial for Vietnam to continue attracting and reaping the benefits of foreign capital. Otherwise, as the country gets richer and labor cost increases, multinational companies will depart for new destinations that offer them abundant labor at cheaper wages. In this respect, recent evidence from PCI surveys reveals significant difficulties. The dearth of technicians and managers continued. FIEs are less satisfied with the quality of labor services provided by provincial governments than they were four years ago. The relationship between workers and firms seems to have eroded, becoming more short-term and less formal. On this front, a great challenge lies ahead for both Vietnamese workers and policymakers.

2.6. CONCLUDING THOUGHTS

The 2017 PCI-FDI survey offers several causes for optimism. With the backdrop of a dramatic increase in foreign investment, the survey shows evidence of strong business confidence, ameliorated regulatory burden, decreased corruption, and improved labor relations. Crucially, many of these positive changes can be tentatively but directly attributed to administrative reforms in some areas as well as attempts to address excessive inspections, and anti-corruption efforts.

There is, however, much room for improvement. Bureaucratic corruption in areas such as inspections and government procurement is still prevalent and shows signs of being embedded in the business culture. A reputation for corruption will discourage new sources of foreign capital, especially from OECD countries. In addition, FIEs' assessments of labor quality have shown no sign of improvement after deteriorating in 2014. Urgently addressing these challenges will help Vietnam avoid the dreaded middle-income trap and allow the economy to realize its potential and maximize the benefits of foreign capital.

3 MANAGEMENT MATTERS. ARE BETTER MANAGERS THE SOLUTION TO VIETNAM'S BIGGEST DEVELOPMENT CONUNDRUM?

Among the most critical developmental challenges Vietnam faces today is the inability of private companies to develop the productivity and scale to compete in international markets.[1] Vietnam's Asian neighbors that managed to pass successfully through middle income to developed status, such as Taiwan, Korea, and Japan, were led through this process by extremely productive firms that learned to compete in fierce domestic markets and, once successful, began to export and invest abroad.[2]

Although the number of private firms entering Vietnam's domestic market is growing, the sector has actually experienced sharp declines in average capital and labor size. As we demonstrate below, the average Vietnamese firm now has fewer than twenty employees and 1.2 billion VND ($54,000) in fixed capital. Only fourteen percent engage in manufacturing as their primary economic activity; only eleven percent export either directly

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1 *World Bank, "Taking Stock: An Update on Vietnam's Recent Economic Developments," (Hanoi, Vietnam2017), 13; Hinh T. Dinh, Jobs, Industrialization, and Globalization (Rabat, Morocco: OCP Policy Center, 2017); Hinh T Dinh, Light Manufacturing in Vietnam: Creating Jobs and Prosperity in a Middle-Income Economy (World Bank Publications, 2014).*

2 *Joe Studwell, How Asia Works: Success and Failure in the World's Most Dynamic Region (Grove/Atlantic, Inc., 2013); Yuen Yuen Ang, How China Escaped the Poverty Trap (Cornell University Press, 2016); Robert Wade, Governing the Market: Economic Theory and the Role of Government in East Asian Industrialization (Princeton University Press, 1990); Alice Hoffenberg Amsden, Asia's Next Giant: South Korea and Late Industrialization (Oxford University Press on Demand, 1992).*

or indirectly through vendors; and only six percent sell goods or services to foreign firms operating in the country. This is consistent with Nguyen and Ramstetter's calculation that FIEs provide the bulk of exporting, accounting for 70 percent of exports and 80 percent of manufacturing exports.[3]

According to Hinh Dinh's research, even manufacturing firms employ technologies and management practices that are too outdated to plug into international supply chains.[4] By contrast, Vietnam's private firms have concentrated their energies and entrepreneurial innovation inward – the vast majority of businesses sell to the Vietnamese domestic market with a healthy share making their money in state procurement. According to this year's PCI, the two most popular sectors for recent private sector entrants are wholesale and retail trade (32 percent) and construction and real estate (17 percent). There is comparatively little activity in industries characterized by cutting-edge innovation. Correspondingly, the Global Innovation Index (GII) ranked Vietnam 101st out of 128 countries in capacity for innovation, citing the fact that private firms invest only three percent of their budgets in research and development.[5]

The shrinking size, limited capacity, and low internationalization of Vietnam's private sector are well-known dilemmas. The bulk of work on this question, especially research by the PCI team, has focused on the constraints to growth posed by factors external to firms, including reducing regulations,[6] improving infrastructure, increasing access to finance and land,[7] and reducing barriers caused by lack of transparency and corruption.[8] There is evidence that all of these factors play a role. Nevertheless, improvements over time on many of them have not delivered any true international champions.

In this chapter, we take a different tack, focusing instead on factors internal to Vietnamese businesses that they can fix themselves without having to rely on the decisions of policy-makers. In particular, we look at the quality of management of Vietnam's domestic enterprises. We build our analysis of management quality off Nicholas Bloom's influential

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3 *Kien Trung Nguyen and E Ramstetter, "Foreign Multinationals and Vietnamese Firm Exports" (paper presented at the Preliminary Draft prepared for the Asia-Pacific Trade Seminars 13th Annual Meeting, Hanoi, 2017).*

4 *Dinh, Jobs, Industrialization, and Globalization; Dinh, Light Manufacturing in Vietnam: Creating Jobs and Prosperity in a Middle-Income Economy; K Kummritz et al., "Vietnam's Integration in Global Value Chains," Background Note to the World Bank's Vietnam 2035 (2016).*

5 *Dominic Mellor to Asian Development Blog, June 1, 2017, https://blogs.adb.org/blog/innovation-drive-viet-nams-fourth-industrial-revolution.*

6 *Thang V Nguyen, Ngoc TB Le, and Scott E Bryant, "Sub-National Institutions, Firm Strategies, and Firm Performance: A Multilevel Study of Private Manufacturing Firms in Vietnam," Journal of World Business 48, no. 1 (2013); Claire Hollweg, Tanya Smith, and Daria Taglioni, Vietnam at a Crossroads: Engaging in the Next Generation of Global Value Chains (World Bank Publications, 2017).*

7 *Mellor Title of Weblog; Matthew Busch, "The Missing Middle: A Political Economy of Economic Restructuring in Vietnam," (2017).*

8 *Edmund Malesky, Neil McCulloch, and Nguyen Duc Nhat, "The Impact of Governance and Transparency on Firm Investment in Vietnam," Economics of Transition 23, no. 4 (2015).*

research program at Stanford University. Bloom and his co-authors have demonstrated that basic indicators of successful management quality are associated with higher levels of productivity and growth.[9] In addition, better-managed firms are more likely to be involved in exporting and contributing to multinational supply chains. Following their approach, we inserted four questions into both the PCI domestic and foreign surveys to measure management quality along three dimensions. These were: 1) performance monitoring (information collection and analysis); 2) target setting (the use of short- and long-run targets); and 3) incentives (rewarding high-performing employees; and retraining or removing underperformers).[10] To benchmark Vietnam's private firms, we compare them to foreign firms operating in Vietnam, which answered the same battery of questions.

Using this tool, we find strong evidence that improvements in management quality are associated with high productivity, profitability, and growth. Digging deeper, we demonstrate that Vietnam's best and most successful managers have the least need for corruption to succeed in Vietnam's market. Across a range of different measures of participation in bribery and business malfeasance, good managers are much less likely to engage in corruption, spend significantly less money on bribery or informal payments, and are far less likely to see corruption as a social norm in the Vietnamese business environment.

The finding that good managers are less corrupt and perceive the business environment to be more hospitable than bad managers sheds light on another puzzle that the PCI team has encountered over the years. Why have verifiable governance reforms enacted by provincial leaders not been appreciated by businesses in their jurisdictions? One reason appears to be that good managers are more willing to seek out information on policy changes and take advantage of those changes in their business operations. Bad managers, by contrast, often are unaware and at times blame provincial leaders for their own business problems.

The chapter is organized as follows. We begin by describing changes in the Vietnamese private sector, demonstrating how lifting regulations on business entry has led to tremendous growth in the number of participants, while having very little impact of the sector's contribution to investment or economic output. The reason is that, at exactly the time when industries should be consolidating and Vietnamese companies should be emerging to compete in the international arena, they are shrinking in the scale of both their fixed investment and employment growth.

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9 *Nicholas Bloom et al., "Does Management Matter? Evidence from India," The Quarterly Journal of Economics 128, no. 1 (2013); Nicholas Bloom et al., "Management Practices across Firms and Countries," The Academy of Management Perspectives 26, no. 1 (2012); Nicholas Bloom et al., "Jeea-Fbbva Lecture 2013: The New Empirical Economics of Management," Journal of the European Economic Association 12, no. 4 (2014).*

10 *"Private Data International Data on Measuring Management Practices," The American Economic Review 106, no. 5 (2016); Nicholas Bloom and John Van Reenen, "Measuring and Explaining Management Practices across Firms and Countries," The Quarterly Journal of Economics 122, no. 4 (2007).*

In the second section, we describe our tool for measuring management quality. We also demonstrate the validity of our instrument by illustrating how management quality is associated with education, background, and types of business engaged in by firms. Vietnam's best managers have MBAs, did business overseas or managed SOEs before entering the private sector, and sell primarily to foreign firms or engage in export. By contrast, Vietnam's worst managers have high school educations, entered the private sector in the informal sector or with low level employment in SOEs, and sell primarily to the domestic market, particularly government procurement.

In the third section, we demonstrate the relationship between management quality and key business performance measures. We show that firms with good managers have higher growth rates in both employment and fixed capital investment. They also are more likely to be optimistic about future expansion plans on the PCI Business Thermometer.

Finally, in the fourth section, we study the relationship between management quality and assessments of governance, particularly corruption. As we noted above, well-managed firms are less corrupt and less likely to see governance as a constraint to their growth.

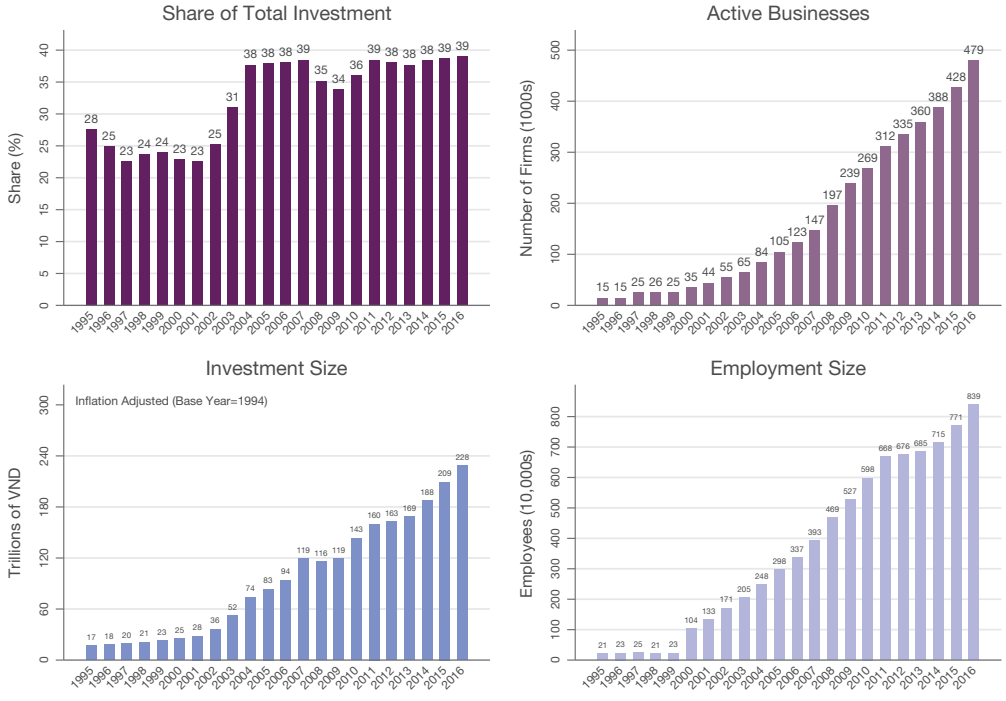
We conclude by laying out the policy implications of our findings, recommending targeted training for Vietnamese managers along the dimensions we measure. Because Vietnamese private businesses are too numerous to include in a single-shot training, there are opportunities to roll out training programs in a staggered manner that would facilitate evaluation of their impact and quality.

3.1. THE SHRINKING VIETNAMESE PRIVATE FIRM

Figure 3.1 depicts several indicators of private sector development since the mid-1990s in Vietnam. The first panel shows that, since the advent of the 2000 Enterprise Law which streamlined and institutionalized business entry, the share of private, domestic investment in total business activity has grown rapidly. After initially declining upon Vietnam's WTO entry in 2007, it now accounts for 39 percent of fixed capital investment. This growth has corresponded with a dramatic increase in the number of formal private businesses, enterprises that registered under the terms of the Enterprise Law as sole proprietorships, limited liability companies, or joint-stock companies. Before 2000, only 15,000 such firms existed compared with the 479,000 active formal private businesses now operating in the country. Investment and employment have increased correspondingly. Formal private businesses now employ 8,39 million workers, roughly 60 percent of the country's non-agricultural workforce.[11]

11 General Statistical Office, "Statistical Handbook," (Hanoi, VietnamMY).

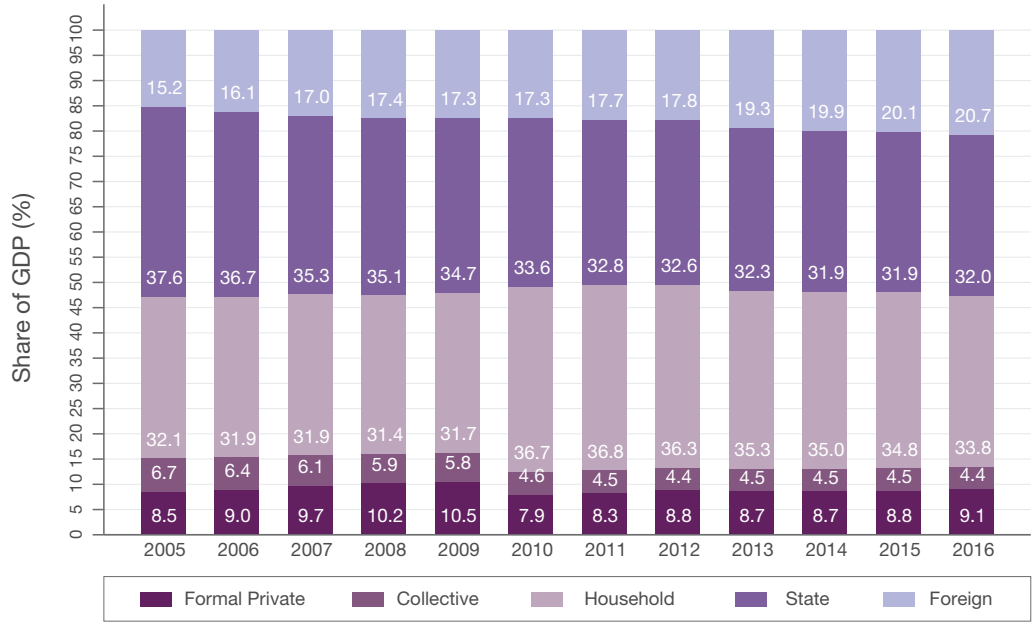
Figure 3.1. Indicators of Private Sector Growth during the Reform Era



Source: General Statistical Office (Multiple Years). Statistical Handbook; Calculations by Authors.

Figure 3.2 illustrates output of the private sector by depicting the contribution to GDP by different business establishments according to their ownership types. Noticeably, the greatest growth has occurred among foreign invested enterprises. The non-state sector expanded by five percentage points after 2009, but has recently declined to its early 2000 levels. Critically, the formal private sector's contribution has never exceeded 11 percent for the entire reform era. After declining from its peak in 2008, the share of private formal firms' national income contributions has edged upward in the past two years. Nevertheless, it has not yet reached the highs it achieved before WTO entry.

Figure 3.2 Contribution to GDP by Ownership Type



Source: General Statistical Office (Multiple Years). Statistical Handbook; Calculations by Authors.

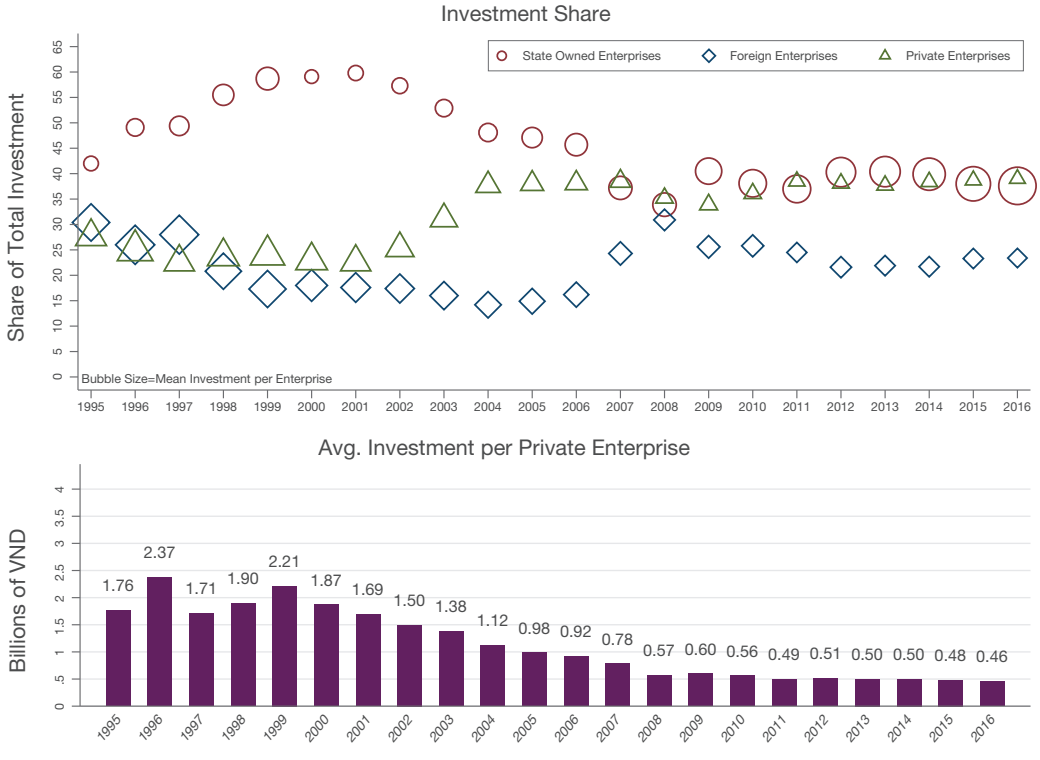
Certainly, part of the private sector's limited contribution has to do with the growing influence of the foreign sector, but there is more to the story. Pushing a bit further, the top panel of Figure 3.3 depicts the changing proportion of industrial investment over time. The graph depicts SOEs in medium purple, FIEs in light purple, and formal private enterprises in dark purple. As in Figure 3.1, we see the growth of the private sector share over time, including the striking increase after the 2000 Enterprise Law, and the plateau after WTO entry, when the foreign sector's role increased and SOEs recovered, consolidated, and strengthened their footing.[12]

What Figure 3.3 demonstrates that was hidden in the two previous graphs is illustrated by the size of the symbols (circles, triangles, diamond), which are weighted by the average investment per firm (adjusted for inflation by converting all figures to constant 1994 VND). Because we measure the markers in inflation-adjusted units, we can compare the sizes over time. A clear pattern is evident in the formal, private sector – new entrants are responsible for the entire growth in investment share. Expansion of existing firms plays very little role. In fact, the size of private firms has declined over time. The bottom panel

12 *Leonardo Baccini, Giammario Impullitti, and Edmund J Malesky, "Globalization and State Capitalism: Assessing Vietnam's Accession to the WTO," (2017); Vu Thanh Tu Anh, "Wto Accession and the Political Economy of State-Owned Enterprise Reform in Vietnam," (GEG Working Paper 2014/92. Available at: http:// www. globaleconomicgovernance. org/sites/geg/files/GEG% 20WP_92% 20WTO% 20Accession% 20and% 20the% 20 Political% 20Economy% 20in% 20Vietnam. pdf [accessed 15 Jan. 2016], 2014).*

of Figure 3.3 illustrates that the average investment size of 460 million in 1994 VND (1.2 billion in 2017 VND, about $54,000) is now at its lowest level in the reform era.

Figure 3.3 Share of Industrial Investment by Ownership Type



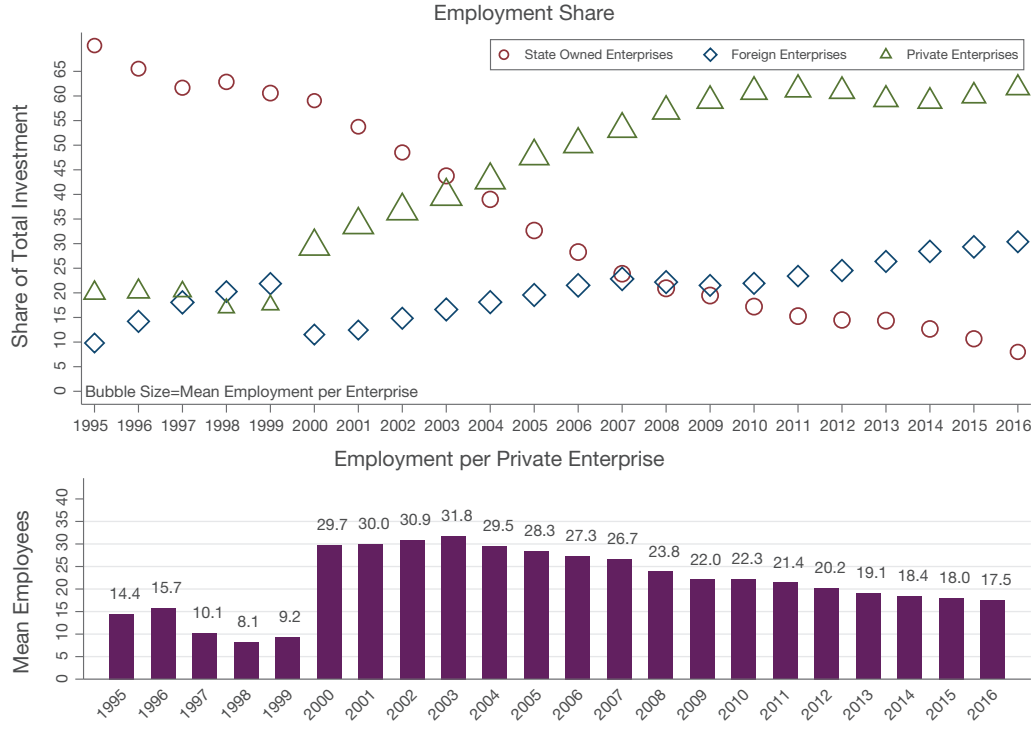
Source: General Statistical Office (Multiple Years). Statistical Handbook; Calculations by Authors
Investment Size Measured in Inflation Adjusted Billions of VND (Base Year=1994)

Figure 3.4 demonstrates that the same shrinking pattern is evident in employment. Here, it is clear that the formal private sector has cushioned employment as reforming SOEs have shed labor and increasingly concentrated on capital-intensive sectors.[13] Private firms now account for close to 65 percent of industrial and service sector employment. This role is critically important, because the rapidly expanding FIE sector is unlikely to reach the size necessary to accommodate the annual addition of over one million laborers to the work force. Nevertheless, the private sector's employment role was accomplished purely through new business entrants. As with investment, employment per unit is now at historical low of 17 employees per firm. In fact, even this number is overstated, as a few extremely large firms skew the sample, increasing the average firm size. In fact, this

13 *Ian Coxhead and Diep Phan, "Princelings and Paupers? State Employment and the Distribution of Human Capital Investments among Households in Viet Nam," Asian Development Review (2013).*

year's PCI survey demonstrates that well over 50 percent of operations have fewer than 10 employees (85 percent have fewer than 50 employees).

Figure 3.4. Share of Industrial and Service Sector Employment over Time



Source: General Statistical Office (Multiple Years). Statistical Handbook; Calculations by Authors

Concluding Thoughts on the Struggles of Domestic Firms

It is possible that holding groups or conglomerates account for some of the business shrinkage, as they register multiple operations but register and pay taxes on them as individual units. This would account for some of the apparent proliferation.[14]

That said, the inability of firms to grow to sizable numbers is reflected in responses to other PCI questions. According to this year's PCI data, only 11 percent of Vietnamese private firms export either directly or indirectly through international buyers, and only 14 percent sell to foreign firms in Vietnam. These numbers indicate that the private sector primarily produces for the domestic market. Thus, the critical challenges are how to increase the size of these local enterprises and integrate them with the foreign-owned enterprises and to raise the value addition in the value chain.[15]

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14 Jonathan Pincus, "Why Doesn't Vietnam Grow Faster?: State Fragmentation and the Limits of Vent for Surplus Growth," Journal of Southeast Asian Economies (JSEAE) 32, no. 1 (2015).

15 Kummritz et al., "Vietnam's Integration in Global Value Chains."

3.2. MEASURING MANAGEMENT QUALITY

Measuring the quality of managers is extremely challenging. Different industries require specialized skillsets and experience, and new businesses have different needs than those in periods of expansion or decline. For comparative purposes, Nicholas Bloom and his collaborators developed survey instruments that gauge management quality along three dimensions: These are: 1) performance monitoring (information collection and analysis); 2) target setting (the use of stretching short- and long-run targets); and 3) incentives (rewarding high-performing employees; and retraining or moving underperformers).[16] These dimensions are common across all sectors and challenges faced by managers.

In their original research design, the scholars used open-ended questions and coded respondents' qualitative answers, scoring each answer based on how much it contributed to one of the three dimensions.[17] Later, the authors adapted their survey instrument to include primarily close-ended question scales in which respondents were no longer invited to provide comprehensive answers but had to choose between set lists of pre-selected options.[18] Close-ended questions have the advantage of not requiring subjective judgement or interpretation on the part of researchers. They are also easier to ask and take less time to administer, allowing for larger sample sizes and hands-off survey delivery techniques (i.e. mail-out like the PCI or internet based).

Nevertheless, close-ended questions have inherent risks. Measurement error can also sneak in through perception biases and differences in anchoring on the part of respondents. For instance, two managers with objectively the same usage of performance indicators may rank themselves differently based on their familiarity with the tool. A manager who has newly implemented performance indicators in his business may be so charmed by his innovation that he ranks his firm highly on the usage scale, while a manager who has been using the exact same tools for a long time may be less enthralled and rank his firm lower. Even more dangerous is the threat of social desirability bias, whereby managers may seek to impress interviewers and therefore exaggerate their employment of a particular management tool. This would lead to inflated estimates of management quality in the sample.[19]

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16 *Bloom et al., "Private Data International Data on Measuring Management Practices."; Bloom and Van Reenen, "Measuring and Explaining Management Practices across Firms and Countries."*

17 *"Measuring and Explaining Management Practices across Firms and Countries."*

18 *Bloom et al., "Private Data International Data on Measuring Management Practices."*

19 *Concerned about Social Desirability Bias, We Included an Experimental Test of Its Presence in Our Survey. We Find No Evidence that Answers are Biased by Seeking to Impress the VCCI Researchers. See Appendix 3.2.*

Due to space and time constraints in the PCI survey, we selected four of the Bloom et al. questions that were most appropriate for the Vietnamese business context.[20] Table 3.1 provides the specific questions used in the survey, their scoring system, and the management dimensions to which they apply.[21]

Table 3.1. Management Indicators in PCI Survey

Question	Dimensions	Score Values (1)	(2)	(3)	(4)
1. What describes what happened in the past year when a problem in the production/service delivery process arose? *Examples: Finding a quality defect in a product or piece of machinery. Identifying a weakness in the capacity of employees delivering a service to customers.*	i. Performance Monitoring (Informational Collection and Analysis)	No action was taken.	We fixed it, but did not take further action	We fixed it, and took action to make sure that it did not happen again.	We fixed it, and took action to make sure that it did not happen again, and had a continuous improvement process to anticipate programs like these in advance.
2. In the past year, how many key performance indicators of were monitored at this establishment. *Examples: Metrics on production, productivity, costs, waste, quality, inventory, energy usage, employee absenteeism, delivery of goods or services on time*	ii. Target Setting (The Use of Short and Long Term Targets)	No key performance indicators	1-2 key performance indicators	3-10 key performance indicators	10 or more performance indicators
3. In the past year, what was the primary way non-managers were promoted at this establishment?	iii. Incentives (rewarding high-performing employees; and retraining or moving underperformers).	Non-managers are normally not promoted.	Promotions were based mainly on factors other than performance and ability.	Promotions were based partly on performance and ability, and partly on other factors (for example seniority, family connections, government relations	Promotions were based solely on performance and ability
4. In the past year, what best describes the use of data to support decision making at this establishment?	i. Performance Monitoring (Informational Collection and Analysis)	Decision making does not use data	Decision making relies slightly/ moderately on data	Decision making relies heavily on data	Decision making relies entirely on data

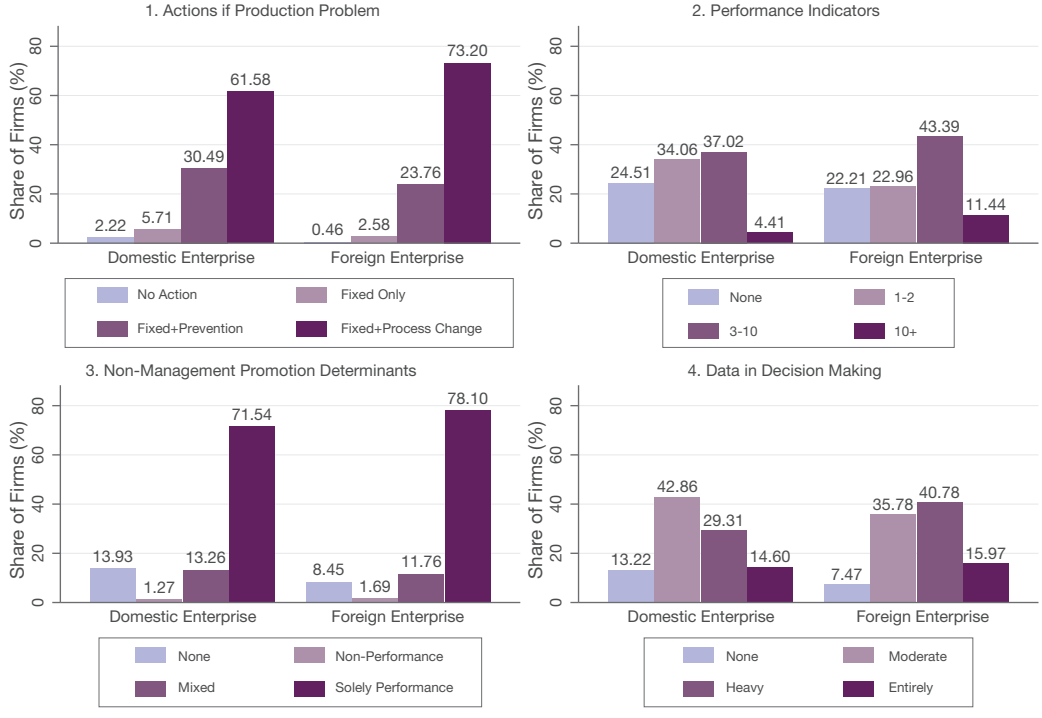
20 *Bloom et al., "Private Data International Data on Measuring Management Practices."*

21 *A fifth indicator was dropped because foreign firms appear to lag behind on domestic firms in their ability to rapidly remove under-performing workers. sixty-six percent of domestic firms were able to fire a low-quality worker within six months, compared to only 45 percent of FIEs. We determined this may have less to do with management quality than with institutional constraints imposed by the Labor Code*

Figure 3.5 provides the distributions of responses to the individual management quality question. On two of the indicators, management quality in Vietnam appears to be quite high compared to the other developing countries in the Bloom dataset. Sixty-two percent of domestic firms and 73 percent of foreign firms in Vietnam chose to make long-term changes to production of service processes after discovering a fault in their operations. A further 31 percent of domestic businesses and 24 percent of FIEs fixed the problem and took preventive actions. Less than seven percent took no action or only fixed the immediate problem. Turning to incentives for promotion, nearly three-quarters of the sample claim that they promote non-managers solely on the basis of performance criteria with only a tiny minority admitting other criteria like social relations are used.

On the two other questions, results are much more varied. The use of performance indicators for firms is still quite limited in Vietnam. Nearly twenty-five percent of domestic firms do not use any performance indicators at all, and another 34 percent use only one or two. Similarly, the majority of domestic firms (56 percent) use data sparingly in their day-to-day decision-making. By contrast, the majority of foreign firms (57 percent) use data moderately to heavily in their decisions. Further, 11.44 percent of FIEs use more than 10 indicators, compared with only 4.41% of domestic firms.

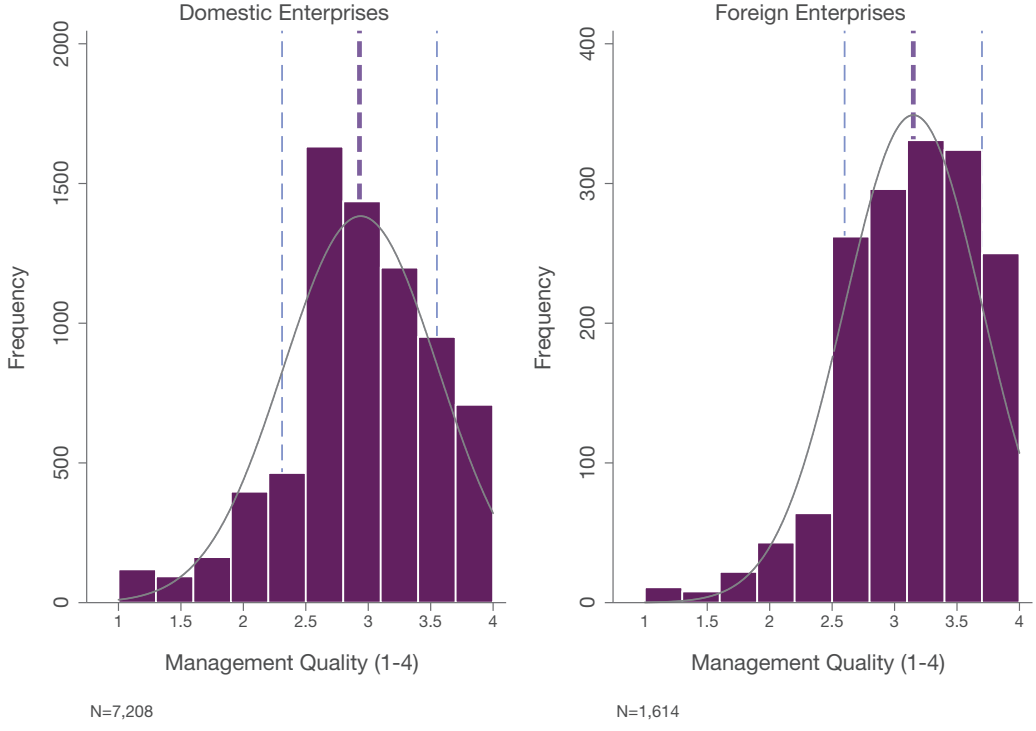
Figure 3.5. Distribution by Individual Management Questions



Source: PCI 2017 (Section E5) & PCI-FDI 2017 (Section F2) Surveys

Figure 3.6 provides the overall distribution for both the foreign and domestic samples. Average management quality is lower among domestic firms (2.93) than foreign firms (3.15) in Vietnam. Standardizing these questions to compare to Bloom and Van Reenan's cross-country rating, managers of Vietnamese private firms rank just below their counterparts in China and India.[22] Moreover, despite a large sample size, there is more variation among domestic firms than foreign firms (standard deviations equal 0.55 and 0.62 respectively), indicating that there is a longer left tail of poorly managed domestic firms. Both distributions, however, are left-skewed, which may result from anchoring and social desirability biases. Furthermore, one of the features of poor management is the inability to benchmark one's own operations against professional standards; this likely introduces some measurement error into our metric.

Figure 3.6. Distributions of Average Management Quality



Source: PCI 2017 (Section E5) & PCI-FDI 2017 (Section F2) Surveys

Construct Validity of the Management Quality Measure

Despite the measurement error, is our index a valid measure of management quality? Does it do a good job of capturing types of firms that should better understand modern

22 *Nicholas Bloom and John Van Reenen, "Why Do Management Practices Differ across Firms and Countries?," The Journal of Economic Perspectives 24, no. 1 (2010).*

management practices and how to apply them in their operations? To answer this question, the next few pages examine average management scores across different types of firms to see if the categories identified as good enough measures pass basic face validity tests. We do this by testing whether management possesses the predicted theoretical associations with other determinants of productivity, including ownership type, education level of the top manager, main customers, and the background and origin of the firm.

First, we would expect that foreign firms, especially multinational corporations (MNCs), because of their experience with Western business practices, will have higher average management scores. Among domestic firms, Bloom et al. identified in other developing countries that the more sophisticated the management structure, the higher the quality of management.[23] Managers that are accountable to other partners, management boards, and stockholders are more likely to employ cutting-edge approaches to running the company. There are two reasons for this. First, managers who face sanction for poor performance have greater incentives to invest in upgrading that will deliver desired business performance. Second, additional stakeholders can be sources of ideas and innovation during periods of uncertainty. They may serve as a conduit to the top manager of successful strategies from other contexts.

To test this hypothesis, Figure 3.7 studies average management quality across different legal forms of domestic and foreign firms. The bars in the graph depict the average score, while range bars present 95 percent confidence intervals. When range bars do not overlap, they indicate that the differences between groups could not have occurred by chance alone. Starting with the right-hand side of the panel, we see that managers of foreign firms generally perform better than their domestic counterparts. Among foreign firms, companies that are part of MNCs possess significantly better management.

Within the category of domestic firms, average scores meet our expectations. Sole proprietorships, especially those still run by their founders, are the least accountable and therefore have the lowest quality management among all firms (2.81). As the number of stakeholders to whom a general manager must report increases, average management quality in domestic firms increases. The best-managed private firms in Vietnam are, not surprisingly, the 41 PCI respondents listed on one of the two Vietnamese stock exchanges, and who must file annual financial reports for their shareholders. These firms have management quality that is better than the average FIE, but lower than multinational corporations. Significantly below this group, we find joint-stock companies, which have multiple owners and complex shareholding agreements (3.03), and finally limited liability companies (LLCs).

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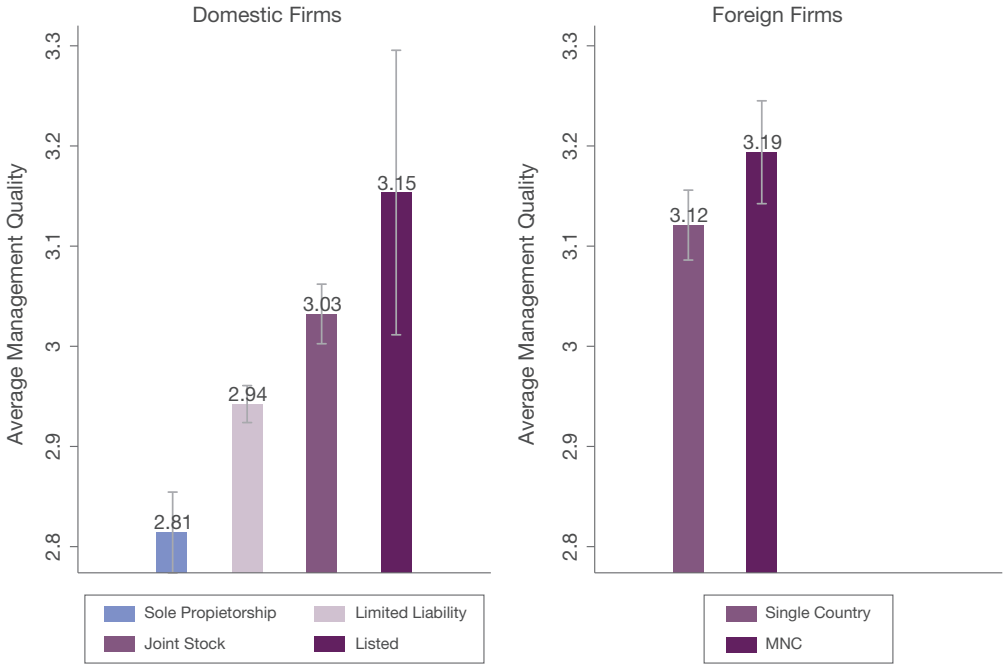
23 Ibid.

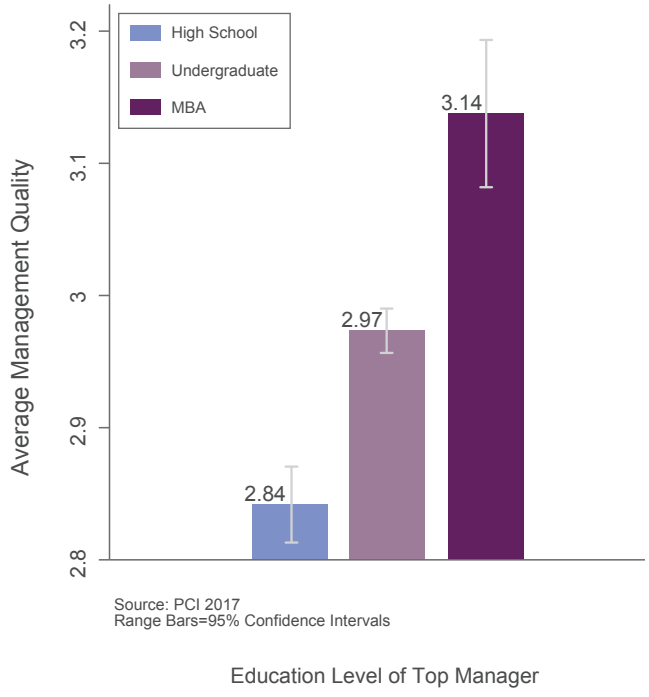
Figure 3.7. Management Quality by Legal Form



A second validity test is the level of education attainment of the top managers. Certainly, we would expect that those with college degrees to be superior managers to high school graduates, and that managers with MBAs should outperform both of those groups. Education should expose managers to techniques to better run their companies. Figure 3.8 provides evidence consistent with this expectation among domestic managers.[24] Indeed, domestic managers with MBAs employ management techniques on a level akin to their foreign counterparts. Their average score is 3.14, which is slightly higher than unaffiliated foreign investors.

24 Unfortunately, we do not have education levels for foreign firms.

Figure 3.8. Management Quality by Level of Education Attainment



Bloom et al. also suggest that management quality should differ by customer.[25] As Melitz and other proponents of the *"New New Trade Theory"* have shown, the most productive and highest quality firms in any country are those that are capable of competing abroad either as foreign investors or exporters.[26] Among those unable to compete abroad, we might expect that the next best managers would be domestic managers who are capable of providing goods or services for foreign firms operating in Vietnam. Foreign contractors place high product standards and strict quality control criteria on their vendors. Meeting these requires extremely capable domestic operations. In other countries, Bloom found that the lowest quality managers tended to service the domestic market.[27] Hinh Dinh and co-authors draw a similar conclusion, arguing that Vietnamese businesses, reliant as

25 *Bloom et al., "Does Management Matter? Evidence from India."*

26 *The New New Trade Theory is An Expression to Explain the Third Major Revolution in Trade Theory that Emphasizes the Central Role of Highlight Productive Firms in Carrying Out Both Trade and Foreign Investment Activities. See Elhanan Helpman, Marc J Melitz, and Stephen R Yeaple, "Export Versus Fdi With Heterogeneous Firms," American Economic Review 94, No. 1 (2004); Marc J Melitz, "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity," Econometrica 71, No. 6 (2003); Marc J Melitz and Gianmarco Ip Ottaviano, "Market Size, Trade, and Productivity," The Review of Economic Studies 75, No. 1 (2008).*

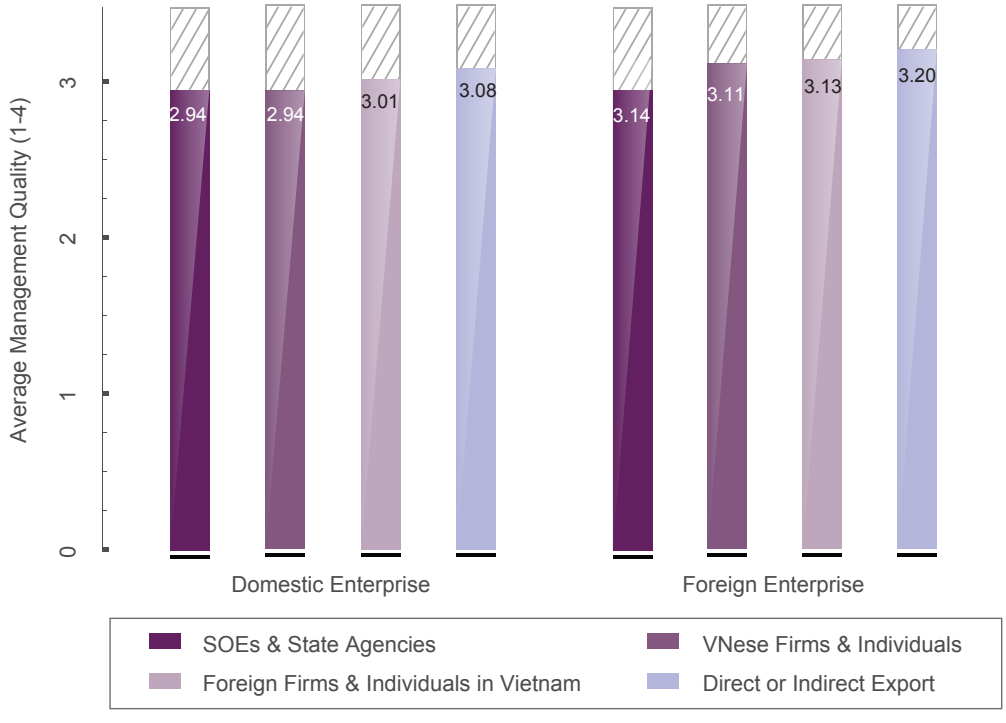
27 *Bloom et al., "Does Management Matter? Evidence from India."; Bloom and Van Reenen, "Why Do Management Practices Differ across Firms and Countries?."*

they are on backward technology and production standards, cannot hope to compete for foreign contracts and instead concentrate on less demanding domestic consumers.[28]

Again, these theoretical expectations are consistent with the 2017 PCI findings in Vietnam (see Figure 3.9 below). Among domestic firms, those engaged in direct or indirect exports have the highest management scores (3.08), followed by those supplying foreign companies operating in Vietnam (3.01). The worst managers primarily engage in wholesale or retail trade for the domestic market or provide services to Vietnamese government agencies and SOEs (2.94).

For FIEs, the results are less pronounced. After all, FIEs in Vietnam, according to *New New Trade Theory*, already represent the most productive firms in their home countries. Because of their achievements at home, they have the skills and capacity to venture abroad. Again, foreign exporters score the best (3.20), but there are few noticeable differences between those engaged in government procurement versus selling to domestic and foreign firms in Vietnam.[29]

Figure 3.9. Management Quality by Customer



Source: PCI 2017 & PCI-FDI 2017 Surveys
Margin of Error=.04

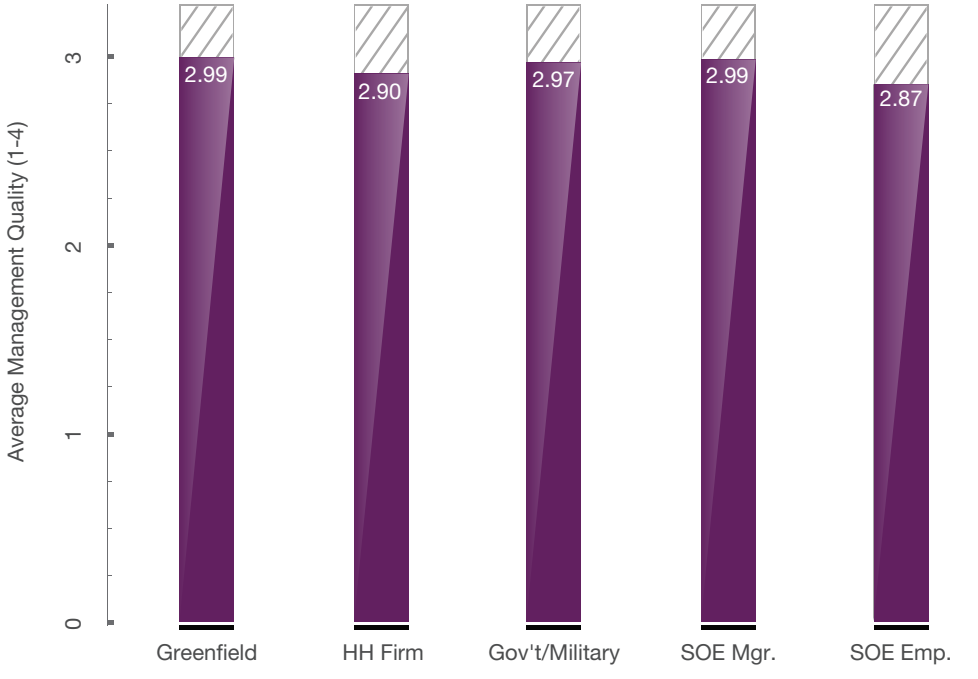
28 *Dinh, Light Manufacturing in Vietnam: Creating Jobs and Prosperity in a Middle-income Economy.*

29 *Appendix 3.2 provides more detail breakdowns by sector.*

Finally, we look at the origins of domestic managers. What jobs did they hold before entering the private sector? These include: 1) greenfield private investors, who registered their business directly in the formal private sector without first starting as an informal business; 2) household businesses, which began in the informal sector and registered after achieving some level of success and scale; 3) business managers who started their careers as central or subnational government officials or served as military officers; 4) former SOE managers; and 5) former SOE employees.

The best domestic managers are greenfield entrepreneurs and former SOE managers, many of whom are running privatized versions of the firms they managed when they were in the state sector. They are more likely than others to use performance indicators and data, and promote based on employee quality. These both have management quality scores of 2.99. Slightly below them are former government officials and military officers. In the next tier below, we find the fourth-ranked origin category for producing manager quality – managers who formerly ran household businesses, which is consistent with Bloom's work in India. Family-run businesses, even large ones, tend to be slow to embrace management advances.[30] The worst managers are former SOE employees.

Figure 3.10. Management Quality by Origin of Firm



Source: PCI 2017 & PCI-FDI 2017 Surveys
Margin of Error=.04; Greenfield=New formal private sector entrepreneur; HH=Previous informal (household) operation.

30 *Bloom et al., "Does Management Matter? Evidence from India."*

Summary of Findings on Management Quality Determinants

This analysis has demonstrated that, despite measurement error in using a close-ended question that is more prone to social-desirability bias, we find that our metric of management quality passes several validity tests. Our measure of management quality is associated with four key factors that have been found by previous scholars to be critical for firm-level productivity. First, our measure is strongly associated with the complexity of ownership and the number of stakeholders to whom the manager is accountable. For foreign firms, MNCs outperform single-country investors. For domestic firms, listed and joint-stock companies have high-quality management, followed by LLCs and sole-proprietorships with relatively low capacity leaders. Second, education matters. Managers with MBAs outperform those with college and high school degrees. Third, our metric is consistent with the influential Melitiz model of trade, finding that better managers are the most likely to export and/or service international supply chains. Poor managers tend to focus on the domestic market. In particular, poor managers are particularly associated with government procurement and contracting. Finally, better managers appear to arise as either greenfield investors or from government and state management positions. Former SOE employees and household businesses score much lower on the management quality index.

3.3. MANAGEMENT QUALITY AND BUSINESS PERFORMANCE

Returning to the conundrum that initiated our research, is higher quality management a solution to the paucity of sizable and productive firms who are primed to compete on the global stage? Bloom et al. found that their index correlated strongly with productivity and business performance.[31] We apply the same test using four indicators from Section A of the PCI surveys. We test whether better managers have higher levels of 1) self-reported profitability;[32] 2) willingness to expand their operations over the next two years;[33] 3) the average annual growth in labor since establishment;[34] and 4) the average annual growth in fixed capital investment since establishment.[35] Again, we compare both domestic, private and foreign firms.

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31 Bloom Et Al., "Management Practices across Firms and Countries."

32 Which Statement Best Characterizes Your Firm's Overall Performance in 2017? 1) Large Losses; 2) Small Losses; 3) Break Even; 4) Small Profits; 5) Large Profits. Profitability=1 If Answer>3; Profitability=0 If Answer<=3.

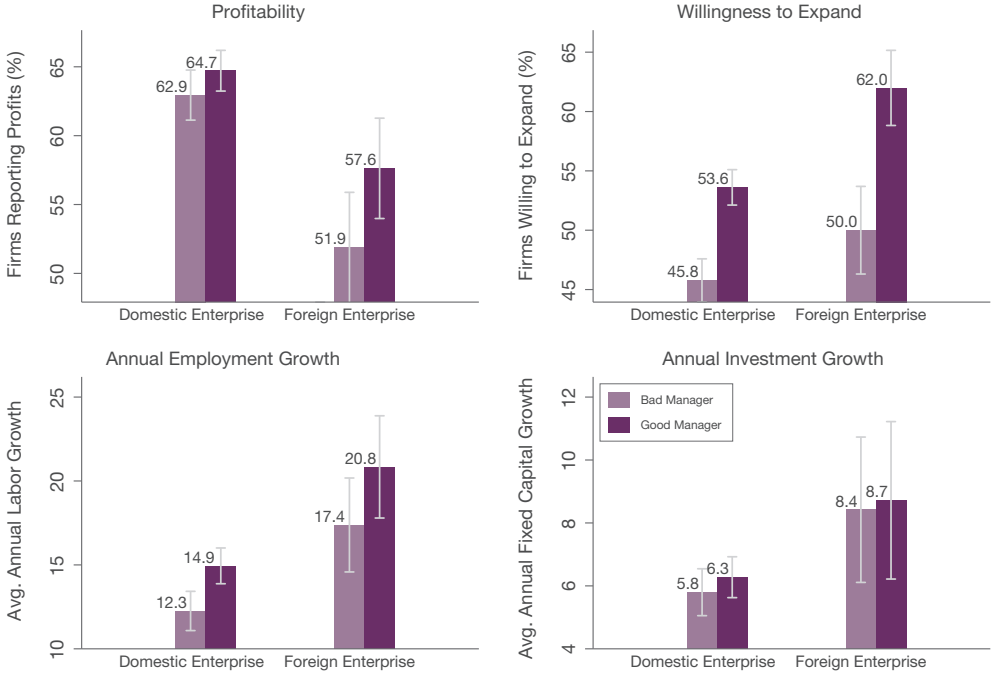
33 Which Statement Best Characterizes Your Firm's Investment Plans Over the Next 2 Years? 1) Plan to Increase the Size of Operations; 2) Considering Increasing the Size of Operations; 3) Will Continue Operations at Present Size; 4) Consider to Reduce the Size of Operations; 5) Plan to Reduce the Size of Operations; 6. Plan to Close The Business. Willingness to Expand=1 If Answer<=2; Willingness To Expand=0 If Answer>2. Results Are Shown In The Pci Business Thermometer (See Figure 1.1)

*34 The Employment Size at Establishment (L1) and Today (L2): 1) Less Than 5 People; 2) Between 5 and 9 People; 3) Between 10 and 49 People; 4) Between 50 and 199 People; 5) Between 50 and 199 People; 6) Between 300 and 499 People; 7) Between 500 and 1,000 People; 8) Above 1,000 People. Age Equals Years Between L1 And L2. Labor Growth= ((L2-L1)/L1)*100)]/Age.*

*35 Fixed Capital Size at Establishment (K1) and Today (K2): 1) Under 0.5 Billion VND; 2) Between 0.5 and 1 Billion VND; 3) Between 1 and 5 Billion VND; 4) Between 5 and 10 Billion VND; 5) Between 10 and 50 Billion VND; 6) Between 50 and 100 Billion VND; 7) Between 100 and 200 Billion VND; 8) Between 200 and 500 Billion VND; 9) Above 500 Billion VND. Age Equals Years Between K1 and K2. Capital Growth= ((K2-T1)/K1)*100)]/Age.*

Figure 3.11 compares the percentage of managers who score above the median quality (3 and 3.25 for private and foreign firms respectively). We depict bad (below median) managers with light purple bars and good managers (above median) with dark purple bars. We further divide by domestic and foreign enterprises. In general, the graphs show that good managers outperform managers with below-median scores in nearly every category. Range bars depict 95 percent confidence intervals. Two of the scores for domestic firms are statistically significant. Good managers at these companies are more optimistic about expansion (54 percent plan to increase the size of operations) and have experienced more rapid labor growth since establishment. Good managers also recorded slightly higher profitability and labor growth, but these scores are not statistically significant. Good managers of foreign firms score better on each measure, although their quality only has statistically significant impact on their firms' plans for expansion.

Figure 3.11. Performance by Management Quality and Ownership



Source: PCI 2017 & PCI-FDI 2017 Surveys
Range Bars=95% Confidence Intervals

Regression Analysis

Although these scores are compelling, we made two choices that limit precision. First, we have split the dependent variable in two, throwing away of a great deal of information on the range of management quality. Secondly, we have only focused on the immediate effect of management quality without considering how management relates to other determinants of business performance. A number of confounding factors may affect both management quality and business performance. When these factors are not addressed with control

variables, they may inflate the effect of management quality, making the relationship between management and business performance appear larger than it actually is. In statistical jargon, this inflation of the difference is known as "bias."

To provide a more rigorous assessment and reduce bias, we use linear regression to isolate the association between management and performance from potential confounders. We do this by running an ordinary least squares (OLS) regression model and controlling for:

1) labor and capital size at establishment, to account for the fact that it is easier to grow from a lower base;
2) dichotomous measures of each industrial sector in which the firm competes (industry fixed effects) to account for the fact that different industries have different development trajectories;
3) the education level of the manager, which we showed above was correlated with management quality.;
4) the gender of the manager, in case genders differ systematically in management philosophy and behavior;
5) the legal form of the business, which is correlated with both management quality and size.[36]

Figure 3.12 provides the results of this analysis for domestic firms in a form of four range bars. The shapes in the middle of the range bar represent the predicted change (i.e. the marginal effect) in each performance indicator due to a one-point increase in management quality (about a two standard deviation shift). Marginal effects are clearly revealed. For instance, we find that if a firm were to obtain a one-point increase in management quality, it would experience a 1.06 percent increase in average annual capital growth.[37]

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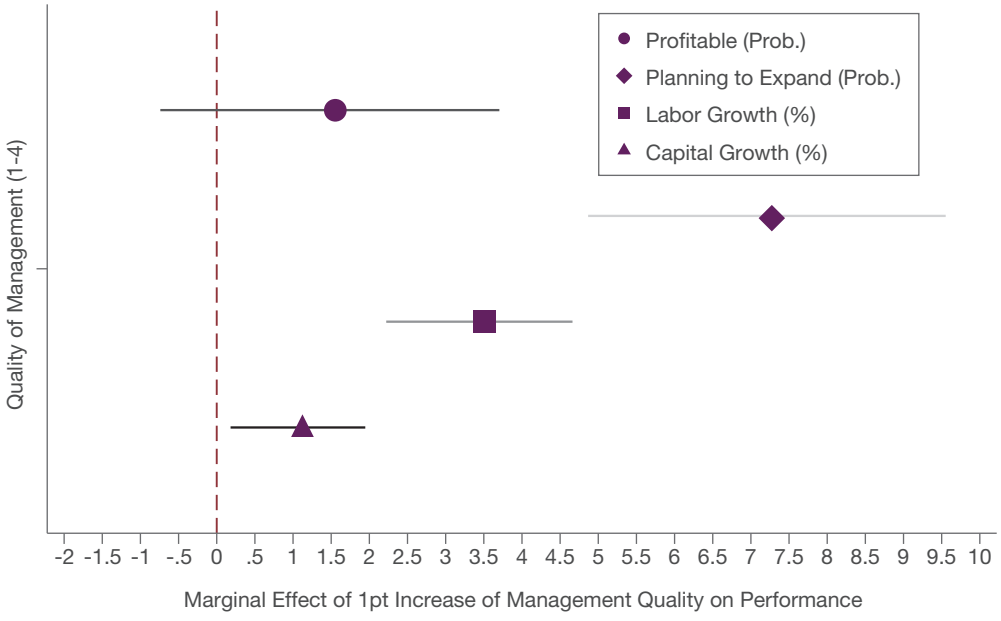
36 *Because Firms in a Province Face the Same Governance Constraints, Selection of Firms Nested in the Same Locality Cannot be Considered Independent Draws, Violating a Critical Ols Assumption. As a Result, We Cluster Standard Errors at the Provincial Level.*

37 *The Range Bars Represent 95 Percent Confidence Intervals, Depicting The Possible Range of Marginal Effects if We were to Re-Sample The Pci Firm 1000 Times. When These Confidence Intervals Do not Cross Zero As in the Case of Capital Growth, They Indicate that the Finding is Statistically Significant and Does not Result from Chance or Idiosyncratic Features of the Sample.*

Figure 3.12. Management Quality and Business Performance of Domestic Firms



Symbols=Regression Coefficients; Range Bars=95% CIs;
OLS Regressions control for labor and capital size at establishment, two-digit industry fixed effects, education and gender of manager, and legal form of firm.

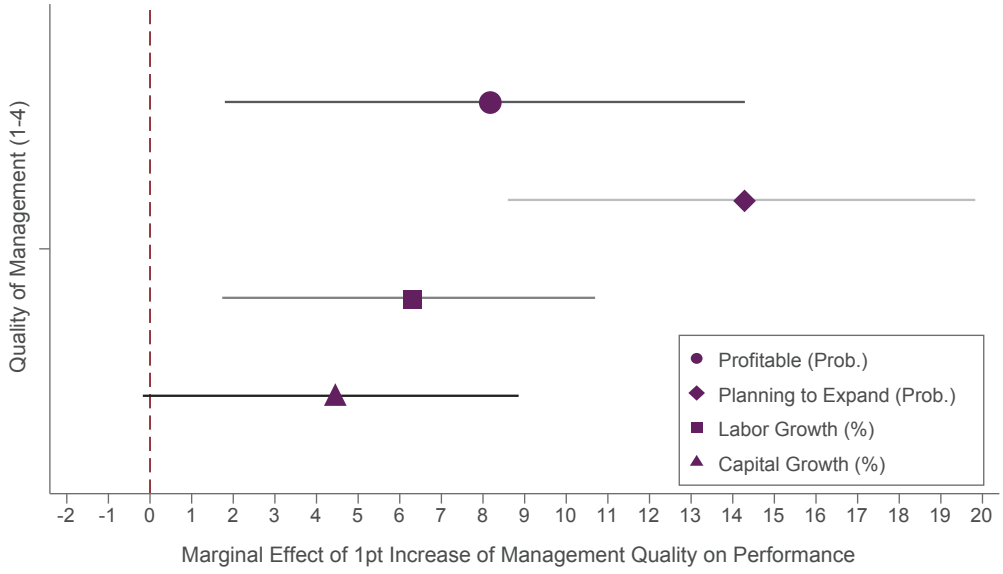
The graph demonstrates persuasively that management quality correlates with business performance among private firms. Three of the four indicators are statistically significant, indicating that better management is the reason for these firms' better performance in these areas. While there is no significant difference in profitability, a one point increase in management quality is associated with a 7.2 percentage point increase in the share of firms willing to expand their operations, a 3.4 percent improvement in labor growth, and a 1 percentage point increase in investment growth.

Of course, we have only identified a correlation between management quality and growth; we cannot know if these results are causal. Reverse causality is a threat, as more successful firms may have more resources to invest in quality management. Furthermore, we have no direct measure of entrepreneurship, which may be associated with both better management and better business performance. Nevertheless, we can say that, after controlling for a range of confounding factors, a strong relationship remains. Better-managed firms are more successful.[38]

38 *In addition, we test whether our results hold if we control for governance and provincial fixed effects. Our results are statistically significant and substantively similar.*

Figure 3.13 applies the same analysis to foreign firms. Again, we find that management matters dramatically for firm success. A one-point increase in the management quality index is associated with higher profitability (8 percentage points), greater willingness to expand operations (14 percentage points), a 6.2 percentage point increase in average annual labor growth, and a 4.2 percentage point increase in capital investment. All but the last are statistically significant.

Figure 3.13. Management Quality and Business Performance of Foreign Firms



Symbols=Regression Coefficients; Range Bars=95% CIs;
OLS Regressions control for labor and capital size at establishment, two-digit industry fixed effects, gender of manager, and legal form of firm.

Discussion Regarding the Relationship between Management Quality and Performance

These analyses are far from definitive, as an inability to randomly assign management quality limits the precision of the estimates. Nevertheless, they are indicative of a trend. After controlling for a variety of factors, we find that management quality matters for business performance among domestic and private firms. This confirms Bloom et al's findings that better managers are more productive, more innovative, and more growth oriented. Consequently, as we will detail below, there is hope that by investing in management training and scholarships to pursue MBAs abroad, Vietnam may develop the types of domestic businesses that can lead it out of the middle-income trap. [39]

39 *Busch, "The Missing Middle: A Political Economy of Economic Restructuring in Vietnam."; Mai Fujita, "Vietnam's Post-Wto Industrial Development: Strategies and Realities," in Southeast Asia Beyond Crises and Traps (Springer, 2017).*

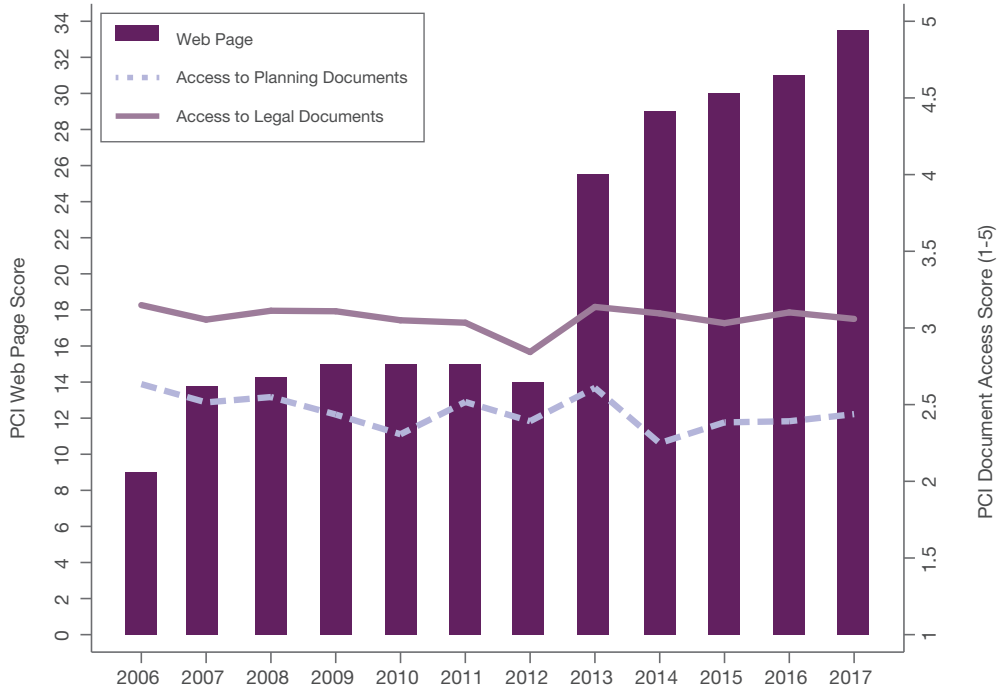
3.4. MANAGEMENT QUALITY AND PROVINCIAL ECONOMIC GOVERNANCE

As we travel around the provinces for PCI diagnostic workshops, a common complaint of frustrated local officials is the fact that they have invested heavily in reforms to help the private sector, yet respondents to the PCI survey either do not notice or do not give them credit for the changes. Of course, the reform efforts are well-documented in provincial Party resolutions, People's Committee Decisions, official letters and action plans. In fact, nearly all of Vietnam's 63 provinces have task forces, which specifically monitor and report on reform efforts at their localities. Many of these efforts are clearly documentable.

Take Subindex 3 on transparency as an example. Since 2006, the PCI research team has recorded improvements in provincial websites. We begin with a 20-point count of documents available on the website. In 2012, after the vast majority of provinces maximized our score by including every document on our list, we decided to upgrade to allow top provinces greater room for improvement. Beginning in 2013, we shifted to a 50-point scale. Since that time, we have documented an eight-point increase (25.5 to 33.5) on the amount of information available to businesses on local budgets, plans, and legal documents on the median provincial website (see Figure 3.14). At the same time, the median respondent in those same provinces continues to say that accessing the exact same planning and legal documents is difficult, time-consuming, and often requires connections. How can it be, ask the provincial officials, that we can be so open and transparent, and firms do not seem notice or give us credit?

The PCI team has devoted a great deal of thought to this question. Technical sophistication and marketing certainly play a role. Not all firms are capable of navigating a provincial website, and many firms do not follow provincial publications frequently enough to know what is changing. They tend to look for information only when it is immediately relevant to their business needs. As a result, we have recommended that provincial officials do more outreach to businesses to make them aware of government websites and programming. We have also advocated installing publicly accessible computers in provincial offices to allow local firms to reach the provincial website and download and print critical information, as they may not have access to computers and internet in their offices, or simply may not want to expend money on data. Government offices in high-ranked provinces, including Quang Ninh, Da Nang, and Binh Duong among others, have implemented this suggestion and seen their scores improve.

Figure 3.14. Measures of Transparency in the Median Province



Source: PCI 2017 Survey; Graphs depict median provincial scores over time on web page and Section F1 2005-2012 web page score on 20-point scale; 2013-2017 scores increased to 50-point scale to better capture improvement

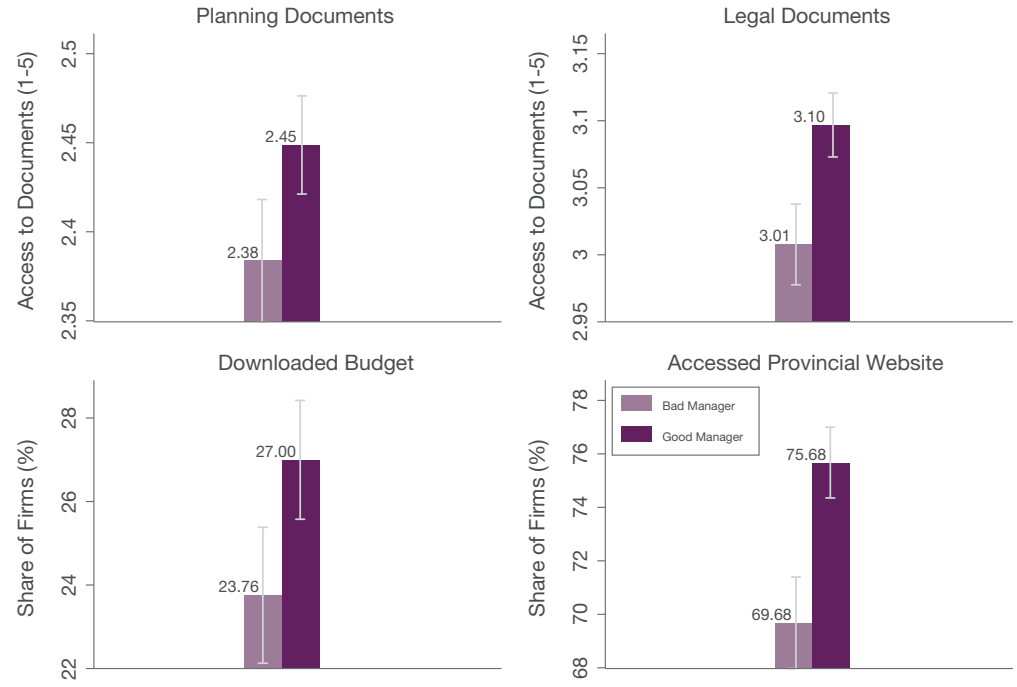
Management Quality and Governance

An alternative explanation for the disjuncture between reform effort and acknowledgment, however, may be related to management quality. Better managers are more likely to engage in strategic planning that requires detailed information, to use published provincial measures in their performance assessments and forecasting, and to possess the technical sophistication and drive to locate that information on provincial websites and in provincial offices. In short, bad managers may provide their provinces with low governance assessments, because they blame government for their own difficulties.

Figure 3.15 provides a test of this alternative hypothesis by studying the difference between good and bad domestic managers in how they scored their province on transparency indicators used in the PCI index (see the Appendix to Chapter 1). The top row includes the five-point measures of access to planning and legal documents, shown above, where five represents the highest score possible. The bottom row shows the percentage of firms that visited the provincial website in the past year and that downloaded a budget.

Across all indicators, better managed firms believe their province to be more transparent, because they are actually taking advantage of the increases in provincial openness. The difference is particularly stark when it comes to use of the website. Correspondingly, better managed firms are more likely to say that central policies and provincial implementation are predictable.

Figure 3.15. Transparency Indicators by Management Quality



Source: PCI 2017 Survey; Range Bars=95% Confidence Intervals
Good Manager>=3 on Management Quality Index

Table 3.2 expands upon this analysis by looking systematically at every one of the PCI sub-indices. To create the table, we re-generated the PCI index at the individual firm level, providing us with a PCI score for each respondent. We then performed an econometric analysis, similar to the one presented in section 3.3, where we regressed the unweighted PCI index and ten sub-indices on management quality. The first row of Table 3.2 depicts the impact of a one-unit change in management quality, controlling for a range of structural confounders.

As with Figures 3.12 and 3.13, we can read the relationship between management quality and assessments of governance as the effect of a one-point increase in management quality. Beginning with the unweighted and weighted indices in Table 3.2, we see that a one-unit change in management quality is associated with about a one-point change in overall assessments of economic governance. To put this number in perspective, the increase represents about the distance from the lowest ranked province in the Mid High Tier to the lowest ranked province in the High Tier in Figure 1.1.

This evidence is consistent with the idea that better managers tend to have more positive assessments of their local government officials. Probing further, we see that management quality is not associated with every measure of economic governance in the PCI. Good management is strongly associated with transparency, informal charges, proactivity, and legal indices. One-point improvements in management are associated with between one- and two-tenths of a point on the 10-point indices. Management is only weakly associated with measures of entry costs and labor quality, and not at all associated with assessments of land access and security, time costs of regulatory compliance, bias against private enterprises, and business support services.

Table 3.2 Econometric Analysis of Relationship between Management Quality and Governance

Dependent Variable	**Unweighted PCI**	**Weighted PCI**	**Entry Costs**	**Land Access**	**Transparency**	**Time Costs**
(Model)	(U)	(W)	(1)	(2)	(3)	(4)
Average Management Quality	0.913***	0.911***	0.036*	0.028	0.201***	0.049
	(0.179)	(0.136)	(0.018)	(0.022)	(0.022)	(0.039)
Constant	58.482***	56.608***	6.085***	5.395***	4.606***	7.287***
	(0.719)	(0.576)	(0.184)	(0.104)	(0.100)	(0.151)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Two Digit Sector FE	Yes	Yes	Yes	Yes	Yes	Yes
Legal Form FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,569	5,569	5,569	5,569	5,569	5,569
Clusters	63	63	63	63	63	63
R-squared	0.028	0.039	0.029	0.027	0.049	0.014
RMSE	7.321	5.994	1.008	0.940	1.052	1.459

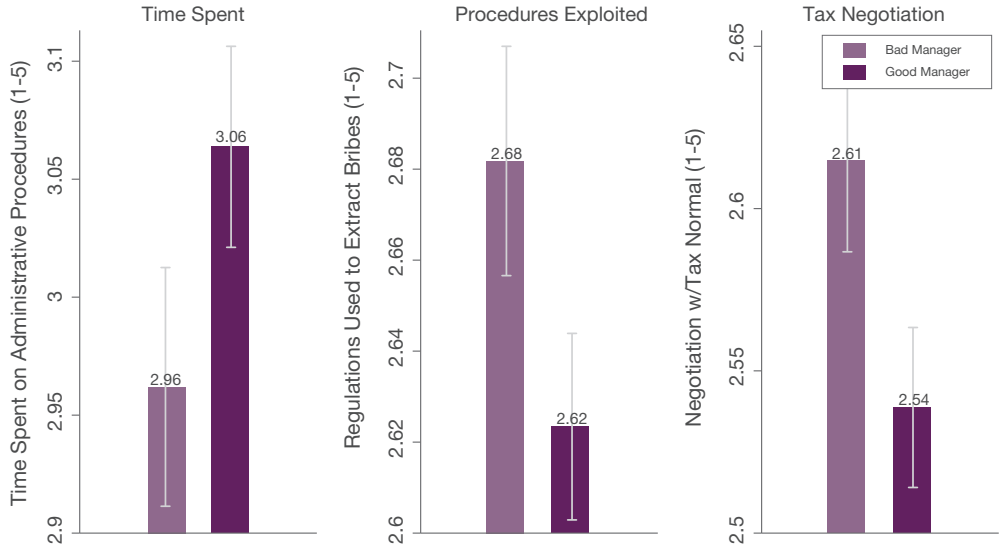
Dependent Variable	**Informal Charges**	**Bias**	**Proactive Leadership**	**BSS**	**Labor**	**Legal**
(Model)	(5)	(6)	(7)	(8)	(9)	(10)
Average Management Quality	0.149***	0.028	0.204***	0.008	0.045**	0.167***
	(0.040)	(0.043)	(0.035)	(0.016)	(0.022)	(0.036)
Constant	5.860***	5.936***	5.717***	5.771***	5.915***	5.910***
	(0.155)	(0.199)	(0.157)	(0.092)	(0.109)	(0.156)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Two Digit Sector FE	Yes	Yes	Yes	Yes	Yes	Yes
Legal Form FE	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,569	5,569	5,569	5,569	5,569	5,569
Clusters	63	63	63	63	63	63
R-squared	0.025	0.022	0.024	0.031	0.059	0.022
RMSE	1.535	2.218	1.656	0.784	1.022	1.458

OLS with standard errors clustered at provincial level in parentheses. *** p<0.01, ** p<0.05, * p<0.1. Regressions control for capital and labor size at establishment, gender and education-level of manager, as well as legal form and two-digit industry fixed effects.

One may be tempted to infer that good managers simply interact less with the bureaucracy and therefore have a more positive outlook towards it. In fact, using three long-standing PCI indictors of bureaucratic quality and time costs, we show that good managers actually spend more time interacting with bureaucrats and relying on local documents (see Figure 3.16). They simply believe that these procedures are more fairly applied. They are significantly less likely to believe that bureaucrats exploit administrative procedures for private gain, and more likely to believe filing taxes does not require negotiations with the tax authority about how much you owe.

These second two panels highlight an interesting phenomenon. In the next section, we probe more deeply into the management-governance relationship by probing the specific opinion of corruption. Why do good managers tend to believe that local governments are less corrupt than bad managers?

Figure 3.16. Management Quality and Bureaucratic Procedures



Source: PCI 2017 Survey; Range Bars=95% Confidence Intervals
Good Manager>=3 on Management Quality Index

Good Management and Reduced Need for Corruption

As a result of Government Resolution 35, which mandated that the PCI research project provide more fine-grained assessments of corruption in the country in order to contribute to anti-corruption efforts, both PCI surveys now include nearly 15 separate indicators of perceptions and experience with bureaucratic corruption.[40] These measures are dispersed throughout the instrument, but include questions regarding corruption in bribery, land access, during regulatory inspections, during customs procedures, when taking a case to court, while bidding for government procurement, and when applying for bank loans.[41]

Table 3.3 provides the coding and basic descriptive statistics on the key corruption questions used in the PCI and PCI-FDI surveys.

In this section, we look to see whether management quality reduces the need to engage in these types of activities. Figure 3.17 shows the results of regression analysis to assess the impact of management quality on corruption. Across the board, we find that good

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40 Article 4, Clause D reads: "The Vietnam Chamber of Commerce and Industry will conduct surveys, and statistically analyze the total costs of formal charges and informal charges for businesses, compared with businesses in the region and internationally, and propose solutions. Nguyen Xuan Phuc. 2016. "On support and development of enterprises by 2020," (35-NQ-CP). May 16, 2016. http://thuvienphapluat.vn/van-ban/Doanh-nghiep/Nghi-quyet-35-NQ-CP-ho-tro-phat-trien-doanh-nghiep-2020-2017-311331.aspx

41 See Appendix 1.1 and the PCI and PCI-FDI survey codebooks for question wording and details.

managers engage in less corruption and are less likely to perceive local officials as corrupt. A one-point improvement in management quality is associated with a 3 percent reduction in the probability of bribing at registration, a 5.5 percent reduction in the probability of giving gifts during inspections and 1 percent reductions in the probability of bribing while accessing land or appearing in court.[42] Furthermore, on several four-point scales, we see a .05 point reduction in whether firms believe bribes are common, a .06 point reduction in whether regulations are exploited to attract bribes, a .06 point reduction in the necessity of bribes for bank loans, and a .11 point reduction in the use of bribes to prevail in government procurement.

Figure 3.18 shows that these same findings hold for foreign firms. There are two exceptions, however. First, the relationship between management quality and bribery at customs is not statistically significant. This appears to be because bribes at customs are extremely common. Well over half the firms in the PCI-FDI sample engage in such activity. Similarly, very few foreign firms compete for government contracts; as a result, the variance in bribery during procurement is quite large, and the confidence intervals consequently spill over to both sides of the zero line. We must conclude, therefore, that there is no relationship between management quality and procurement bribes. Otherwise, the reductions in bribery from management improvements is very similar to that of domestic firms.

The bottom line is that good managers are significantly likely to experience corruption or see corruption as a detriment to their business performance. It appears that good managers do not need to rely on corruption to be successful.

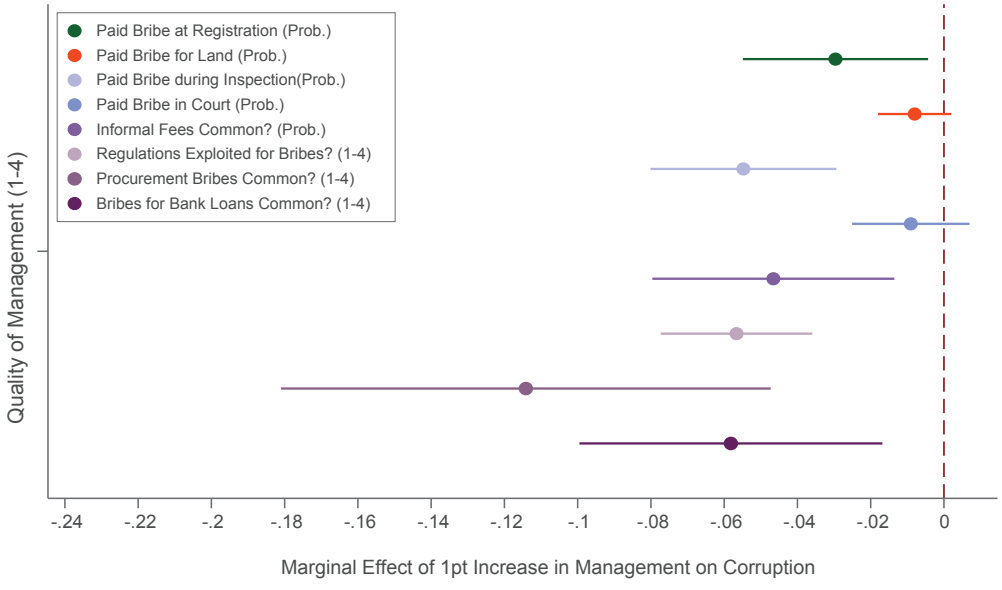
Table 3.3. Types of Corruption Measured in PCI and PCI-FDI Surveys

Type of Corruption	Question Wording	Coding	Domestic Firms		Foreign Firms	
			N	Mean	N	Mean
Paid Bribe at Registration (Prob.)	Did you pay an informal charge to expedite the delivery of the registration certificate?	Yes=1; No=0	6032	28.9%	1495	32.7%
Paid Bribe for Land (Prob.)	My firm had was forced to pay informal charges at the land official's request in order to have the dossiers processed faster	Yes=1; No=0	8242	6.5%	1765	5.0%
Paid Bribe during Inspection (Prob.)	During any of the inspections, did you provide a gift or informal payment to the examiner?	Yes=1; No=0	6462	49.5%	1341	44.9%
Informal Fees Common? (Prob.)	Firms in my line of business usually have to pay extra 'informal payments."	Yes=1; No=0	7074	58.5%	1294	68.6%
Paid Bribe in Court (Prob.)	Offering bribes to solicit favorable judgment is common	Yes=1; No=0	8242	17.0%	1765	9.0%

42 The latter two are only statistically significant at the .1 level.

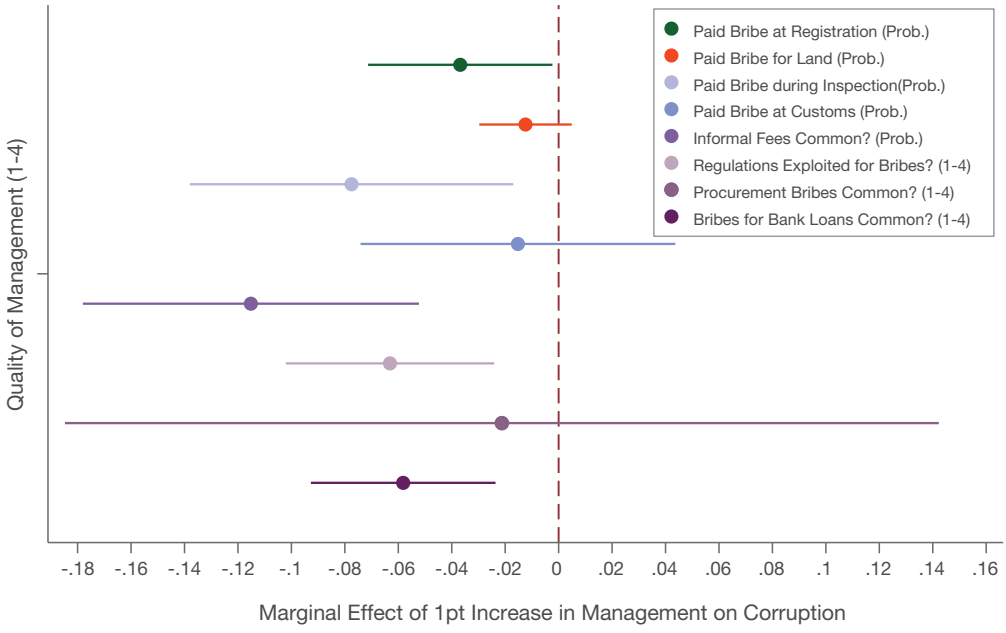
Type of Corruption	Question Wording	Coding	Domestic Firms		Foreign Firms	
			N	Mean	N	Mean
Paid Bribe at Customs (Prob.)	Have you ever paid an informal charge to expedite service at the port?	4=S. Agree; 3=Agree; 2=Disagree; S.Disagree	NA		978	53.0%
Regulations Exploited for Bribes? (1-4)	It is common that government officials cause troubles when processing procedures for businesses	4=S. Agree; 3=Agree; 2=Disagree; S.Disagree	7037	2.65	1454	2.46
Procurement Bribes Common? (1-4)	Paying a "commission" is essential to improve chances of winning the contract?	4=S. Agree; 3=Agree; 2=Disagree; S.Disagree	3571	2.63	409	2.56
Bribes for Bank Loans Common? (1-4)	Giving bribes" to bank staff is very common	4=S. Agree; 3=Agree; 2=Disagree; S.Disagree	5438	2.43	NA	

Figure 3.17. Impact on Corruption of Improvements in Management Quality (Domestic Firms)



Symbols=Regression Coefficients; Range Bars=95% CIs;
OLS Regressions control for labor and capital size at establishment, two-digit industry fixed effects, education and gender of manager, and legal form of firm.

Figure 3.18. Impact on Corruption of Improvements in Management Quality (Foreign Firms)



Symbols=Regression Coefficients; Range Bars=95% CIs;
OLS Regressions control for labor and capital size at establishment, two-digit industry fixed effects, gender of manager, and legal form of firm.

Management Quality and Bribe Size

Figure 3.19 demonstrates that the effect is not just limited to the frequency of bribery; it also applies to its scale.[43] Here, we compare the average share of revenue that firms pay in bribes annually. In line with previous years, domestic firms expend between 3 and 4 percent, whereas foreign firms, which also have mobility and therefore an exit option, expend between 1 and 2 percent. Within these samples, we again find that good managers matter substantially. Good domestic managers spend about 3.4 percent of their revenue on bribes, compared to 3.9 percent for poor managers. This corresponds to a tremendous 14 percent difference in the scale of bribery! For foreign firms, the absolute level of bribery is lower (1.7 percent for bad managers and 1.1 percent for good managers), but the percentage difference is a staggering 55 percent.

In short, bad management is extremely costly. Lower quality managers appear to make up for their lack of capacity by spending more on bribes to overcome regulatory mistakes and win procurement opportunities.

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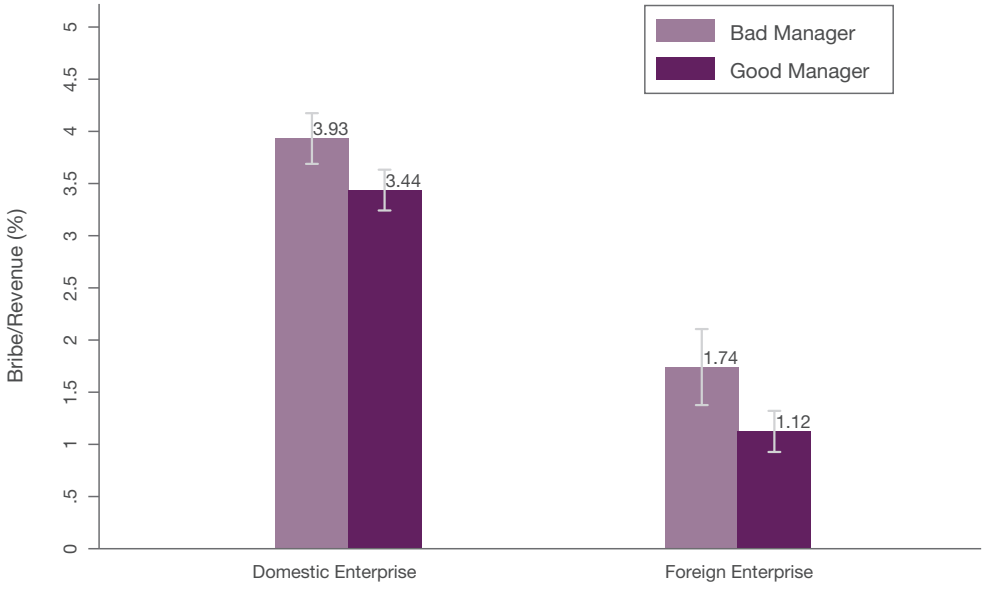
43 On average, what percentage of revenue do firms in your line of business typically pay per year for informal charges to public officials?" 1. 0%; 2. Less Than 1%; 3. From 1 to Under 2% 4. From 2 to Under 5%; 5. From 5 to Under 10%; 6 From 10 to Under 20%; 7. From 20 to 30%; 8. Above 30%

Figure 3.19. Size of Bribery by Management Quality



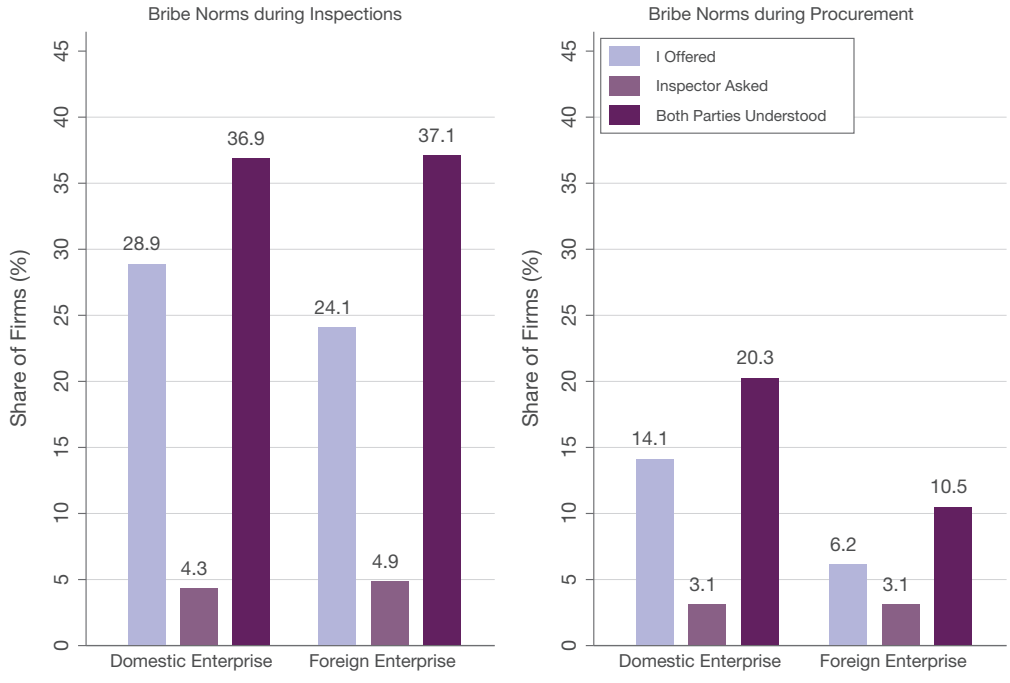
Source: PCI 2017 Survey; Range Bars=95% Confidence Intervals
Good Manager>=3 on Management Quality Index

Bribery as a Social Norm

One fascinating finding from last year's report was that many business managers believe engaging in bribery is so common that there is actually no actual initiation of bribery between businesses and bureaucrats. Many managers see the act of offering a gift to an inspector or bureaucrat as a normal part of doing business. This can be seen in Figure 3.20 when firms, after admitting they made the payment, were asked who initiated the bribe request. Notice that these firms, who have already admitted culpability, were extremely unlikely to say that the regulator visiting the factory or the bureaucrat administering the government procurement were the initiators. Less than 5 percent of domestic and foreign firms made informal payments during inspections and about 3 percent of both types of companies that offered gifts during procurement did so at the instigation of the local official. More firms tended to say that they themselves were the initiators. Generally, during both regulatory inspections and procurement, there was no need to ask or offer a bribe as both parties understood. This is clear evidence of the way corruption has become so ingrained in daily behavior that it has virtually become a social norm.[44]

44 *Raymond Fisman and Miriam A Golden, Corruption: What Everyone Needs to Know (Oxford University Press, 2017).*

Figure 3.20. Social Norms of Corruption: Who Initiated the Bribe Request?



Source: PCI 2017 (Section D2 and D4) & PCI-FDI 2017 (Section D2 and D4) Surveys

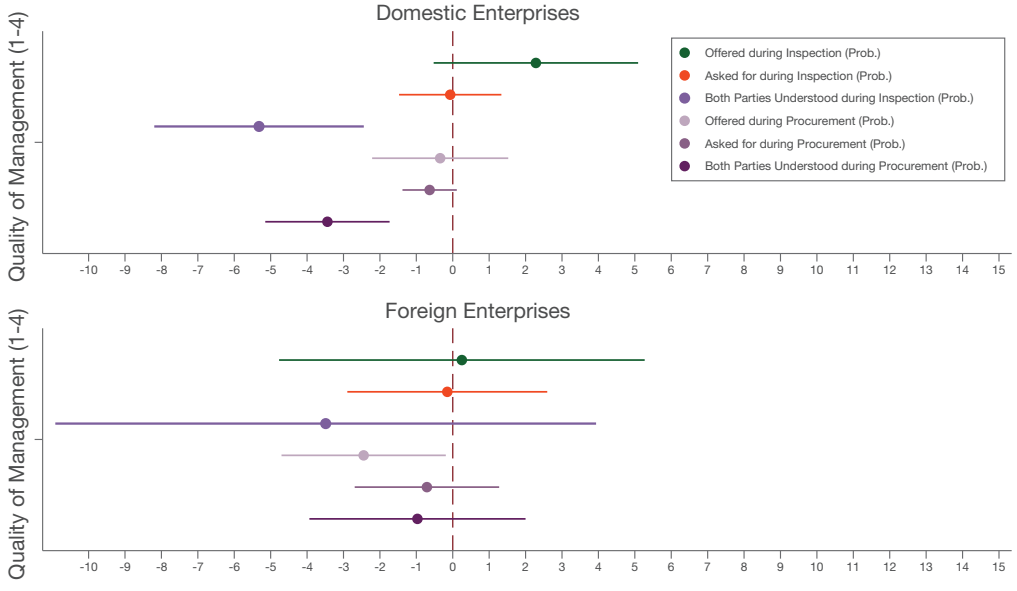
In our final analysis, we probe the effect of management quality on corruption using regression analysis. We use the same specifications as above, but this time we treat bribe initiation as our outcome variable. The results are fascinating.

Beginning with the top panel on domestic enterprises in Figure 3.21, it is clear that there is no statistical difference effect of better management when it comes to whether the firm was more likely to offer a bribe or receive a payment request from a local bureaucrat. For both inspections and procurement, the marginal effect of quality management is very small (close to zero) and even when it is slightly off the zero line, the 95 percent confidence intervals cross zero, indicating that the result is likely due to chance.

When it comes to seeing bribery as a social norm, however, there is a sizable difference. A one point improvement in management is associated with a 5.5 percent reduction in the probability of offering a bribe during an inspection and a 3.5 percent reduction in the probability of offering a bribe during procurement.

These findings indicate that, among domestic mangers, the better the quality of the manager, they less likely they are to perceive corruption to be a social norm. Managers of foreign firms were nearly 3 percent less likely to offer a bribe during procurement, but appear to have a stronger sense of informal payments as a social norm in all other areas.

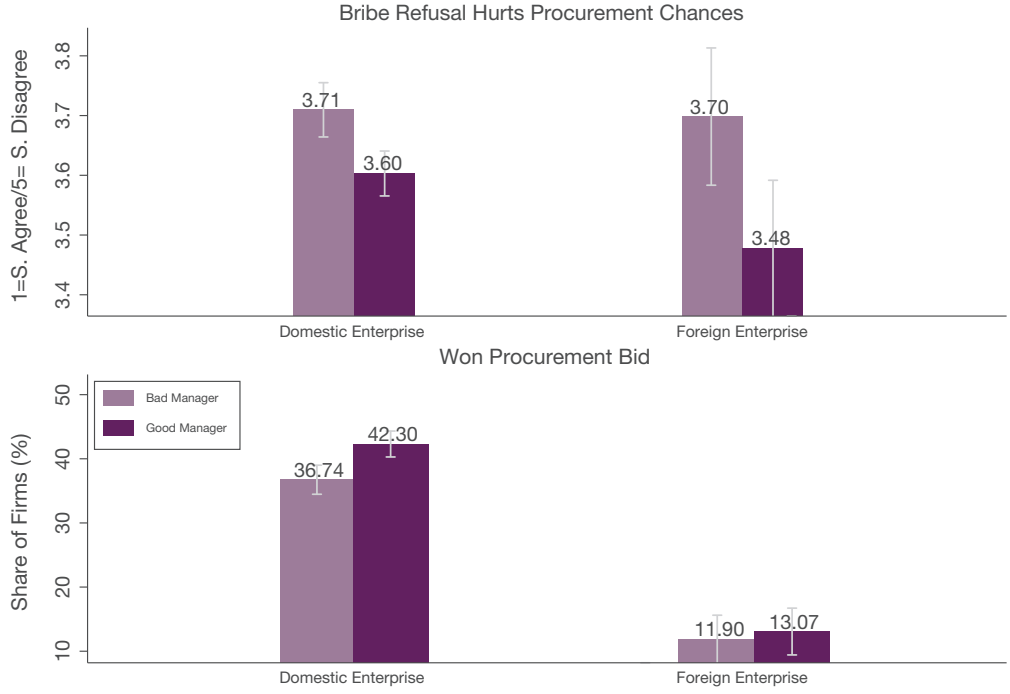
Figure 3.21. Relationship between Management Quality and Social Norms of Corruption



Symbols=Regression Coefficients; Range Bars=95% CIs;
OLS Regressions control for labor and capital size at establishment, two-digit industry fixed effects, education and gender of manager, and legal form of firm.

Because good managers are less likely to bribe, do they believe they are disadvantaged in their business operations? Figure 3.22 indicates this is not the case. Asked on a five-point scale whether refusing to bribe during procurement contracting hurts their chances of victory, good managers were significantly less likely to agree. At the same time, among the category of domestic firms, better managers were more likely to win procurement bids. Too few foreign firms engage in procurement to detect signfificant differences between willingness to pay and the outcome of the contract.

Figure 3.22. High Quality Managers Do Not Feel Disadvantaged by Corruption



Source: PCI 2017 Survey; Range Bars=95% Confidence Intervals
Good Manager>=3 on Management Quality Index

Discussion of Management Quality and Governance

High quality managers are more likely to rank their province as well governed. In particular, they are likely to believe that they have adequate information to plan and operate the business; that they are not overly burdened with corruption; that provincial leaders tend to be creative problem solvers; and that dispute resolution is fairly applied. There are three likely reasons for these findings.

First, good managers are in a better position to take advantage of provincial reforms and information provision. They know how to use data in their business and are more equipped for strategic planning. As a result, they tend to view government as a partner rather than an obstacle to their business success.

Second, good managers are less likely to blame local government for issues with their business. Because they are maintaining performance indicators, engaging in constant reassessments of their processes, and collecting data on their performance, they are better able to distinguish between problems for their business caused by macroeconomic forces outside of officials' control, their own business mistakes, and burdens imposed by cumbersome government procedures and malfeasance.

Third, good managers are less likely to resort to corruption. They bribe less across a range of indicators, pay significantly less when they do make informal payments, and are far less likely to see bribery as a normal way of doing business in Vietnam. Furthermore, they claim that they are able to succeed without corruption, even in the case of bidding for government procurement contracts.

3.5. CONCLUSION

Analysts of the Vietnamese economy have consistently pointed to the problem of the "missing middle," the paucity of sufficiently sized and capable domestic companies to compete in global markets.[45] One clear policy implication of this chapter is that better management training is a potentially fruitful approach toward stimulating Vietnamese firms' global entry, particularly along the dimensions analyzed in this chapter. Vietnamese companies would benefit from learning how to better monitor their operations, identify targets and the data for measuring whether they have met them, and promote internal talent to take firms to the next level.

Although the number of high quality managers in Vietnam is currently limited by international standards, we find in this chapter that such managers are best positioned for international success. They are more likely to be exporting or selling to foreign supply chains, have achieved far more rapid growth than more poorly managed firms, and are far less likely to see domestic governance as a constraint to their performance. Indeed, good managers tend not to rely on corruption as a business tactic, and are significantly less likely to view corruption as a norm in the Vietnamese business environment.

These conclusions should be tempered with caution, however, as they represent mere correlations and not clear causal effects. There are a range of research problems that threaten our ability to draw more definitive conclusions. First, other factors such as education, innate talent, or entrepreneurialism may be contributing to both management quality and the outcomes that we study in this chapter (business performance and governance). Second, reverse causality is a threat. Better business performance might provide a company with more resources to expend on upgrading its management. Third, certain respondents may just be more likely to respond positively to all questions in the PCI survey, leading to systematic measurement error that generates positive correlations across several seemingly unrelated concepts.

To truly assess the impact of management quality, a randomized experiment that assigns some managers to structured training programs and others to a control group is necessary. Because the management training would randomly assigned and therefore uncorrelated

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45 Busch, "The Missing Middle: A Political Economy of Economic Restructuring in Vietnam."; Pincus, "Why Doesn't Vietnam Grow Faster?: State Fragmentation and the Limits of Vent for Surplus Growth."

with other features of the firm or questionnaire, we would be able to isolate the effect of the training on performance and assessments of governance.

Such a training program is feasible and ethical. Clearly, we don't have the resources to invite all of Vietnam's 450,000 private businesses to engage in training. Using a lottery of PCI respondents is a fair and equitable way to dole out this valuable skills development opportunity. Furthermore, there are a number of high quality business schools in Vietnam that could provide tailored executive courses along these lines. Most importantly, such training programs have delivered sizable results on business expansion and innovation in other contexts.[46]

Improving the capacity of Vietnam's managers is just one among many possible strategies for reversing the trend of the shrinking Vietnamese private firm. Nevertheless, the results of this analysis appear to indicate that at least some managers, endowed with new skills, will be able to thrive and compete in the international marketplace.

46 *David McKenzie and Christopher Woodruff, "What Are We Learning from Business Training and Entrepreneurship Evaluations around the Developing World?," The World Bank Research Observer 29, no. 1 (2013).*

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APPENDICES

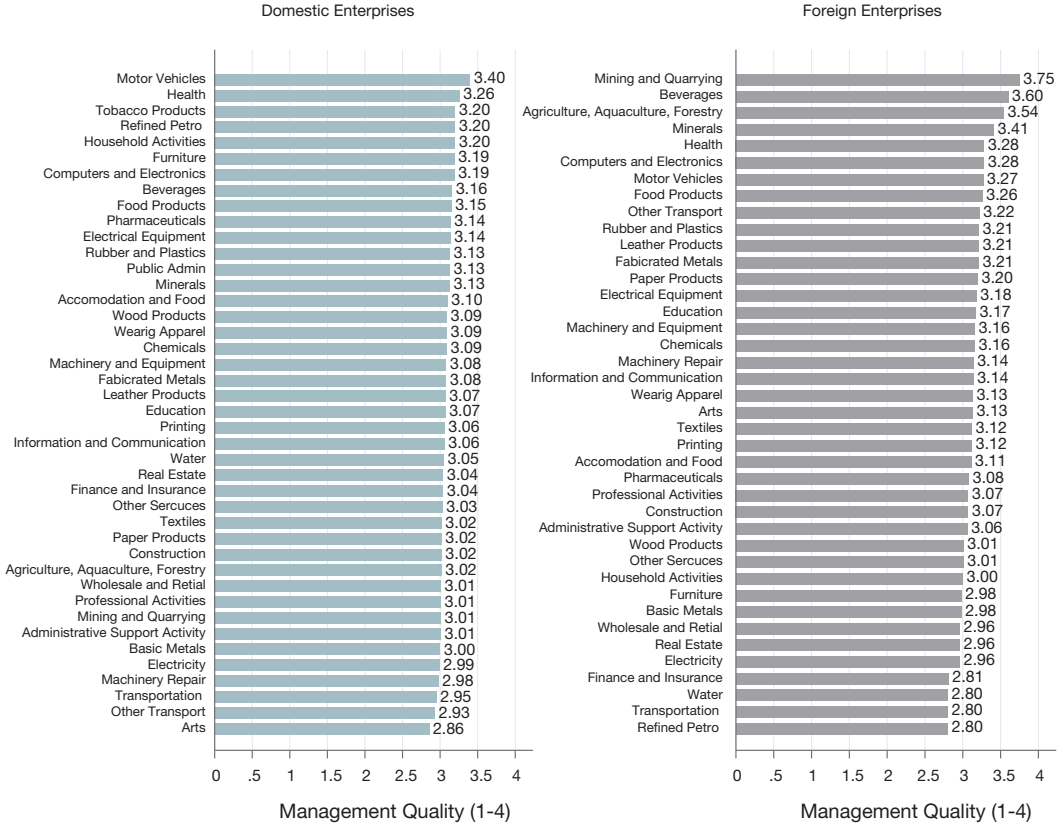
Appendix 1.1. All Methodological Changes in 2017

Methodological	Location	Change	Motivation
Collection	Subindex 1: Entry Costs	Drop "Wait for Land Title (Days)"	Move to Subindex 2 on Land Access where it is a better fit.
Collection	Subindex 1: Entry Costs	Drop "No quality criteria in OSS met"	Respondents misunderstood question generating measurement error.
Collection	Subindex 1: Entry Costs	Add "Percentage of firms registering or re-registering through new methods: online, public administration center & post offices"	Added to capture new reforms in provinces.
Construction	Subindex 1: Entry Costs	Removed dimensions within index of new and old indicators, and now treat all 10 indicators equally in subindex construction. Now, only one dimension for entire index.	The "new" indicators were no longer capturing reforms in Vietnam. One Stop Shops are now everywhere in the country.
Collection	Subindex 2: Land Access	Add "Wait for Land Title (Days)"	Better fit here than Subindex 1.
Collection	Subindex 2: Land Access	Drop share of land with LURCs from MONRE	Ministry no longer produces this indicator at the provincial level.
Collection	Subindex 2: Land Access	Add: "Firms lacking available land"	Suggested by advisory board
Collection	Subindex 2: Land Access	Add: "Firms saying land clearance procedures are slow"	Suggested by advisory board
Collection	Subindex 2: Land Access	Add: "Firms reporting inadequate land information"	Suggested by advisory board
Construction	Subindex 2: Land Access	Added new dimensions to lead to 3: 1) Access to land (6 indicators); 2) Security of tenure (3 indictors); 3) Land transactions (2 indicators). Now, all dimensions count for 1/3 if index.	Difficulty with land procedures and transactions is a new problem that has emerged as local real estate markets have developed.
Collection	Subindex 3: Transparency	Drop "Budget documents are published right after being approved"	Follow up with respondents reveal they don't monitor web page closely enough to answer accurately.
Collection	Subindex 3: Transparency	Add "Received information from public information request."	Added to capture progress on Vietnam's "Access to Information Law."
Collection	Subindex 3: Transparency	Add "Time to receive information (Median days)"	Added to capture progress on Vietnam's "Access to Information Law."
Collection	Subindex 3: Transparency	Add "Transparency in procurement bidding"	Added to capture reforms to law on public procurement that requires public posting of contract availability.
Construction	Subindex 3: Transparency	Originally had four dimensions (access, equity, predictability, and website openness). Predictability and equity merged into a single dimension. Now, all dimensions count for 1/3 of the index.	Due to small number of indicators on equity, there was a potential for bias by overweighting the indicators in that dimension.

Methodological	Location	Change	Motivation
Collection	Subindex 4: Time Costs	Drop "Median Number of Inspections"	Too little variation. Altering to include share of firms harassed with 5+ inspections.
Collection	Subindex 4: Time Costs	Drop "No improvements in public administration reform."	Follow-up with respondents indicated question was confusing leading to measurement error.
Collection	Subindex 4: Time Costs	Add: "Share of firms receiving overlapping inspections"	Advisory board suggested it would be useful to measure improvements of the inspection law.
Collection	Subindex 4: Time Costs	Add "Inspections used to extract bribes"	Advisory board suggested it would be useful to measure improvements of the inspection law.
Collection	Subindex 4: Time Costs	Add "Share of firms receiving 5+ inspections"	Better captures harassment of particular firms through inspections.
Collection	Subindex 4: Time Costs	Add "Time to complete administrative procedures is shorter than specified in regulation."	Board suggests as measure to capture efforts by local leaders to exceed law.
Construction	Subindex 4: Time Costs	Original formula did not have dimensions. New subindex has two dimensions: 1) Administrative procedures; 2) Inspections. Both are equally weighted in construction.	With better measures of inspections, we felt comfortable granting these important indicators a greater share of index creation.
Collection	Subindex 5: Informal Charges	Add "Percentage of firms paying informal charges in land APs	Added in accordance with Government Resolution 35 to better measure corruption, and provide more fine-grained indicators of malfeasance.
Collection	Subindex 5: Informal Charges	Add "Percentage of firms paying informal payment to the inspector (%)"	Added in accordance with Government Resolution 35 to better measure corruption, and provide more fine-grained indicators of malfeasance.
Collection	Subindex 5: Informal Charges	Add "Paying commission is essential to improve the chance of winning procurement bids (% agree)"	Added in accordance with Government Resolution 35 to better measure corruption, and provide more fine-grained indicators of malfeasance.
Collection	Subindex 5: Informal Charges	Add "Offering bribes to solicit favorable decisions in court are common (%)"	Added in accordance with Government Resolution 35 to better measure corruption, and provide more fine-grained indicators of malfeasance.
Construction	Subindex 5: Informal Charges	Original formula did not have dimensions. New subindex has two dimensions: 1) Petty Corruption; 2) Grand Corruption. Both are equally weighted in construction.	Aligns PCI better with academic work on corruption and allows for better policy advice.
Collection	Subindex 7: Proactive Leadership	Add "Provincial authorities handle firm difficulties in a timely manner" (% Agree)"	Suggested by advisory board.
Collection	Subindex 7: Proactive Leadership	Add "Received response from local authorities regarding feedback or complaints" (% Agree)"	Added to capture reform effort on decentralization local participation in decision making
Collection	Subindex 7: Proactive Leadership	Add "Satisfied with response and handling of issue" (% Agree)"	Added to capture reform effort on decentralization local participation in decision making
Construction	Subindex 7: Proactive Leadership	New indicators added to single dimension with 9 indicators.	Did not divide into dimensions as there was no obvious theoretical categorization.

Methodological	Location	Change	Motivation
Collection	Subindex 10: Law & Order	Revised theory and name of 10th subindex from Legal Institutions and focus on dispute resolution to Law & Order. Added a range of questions that captured crime and police response to crime.	Crime is becoming an increasingly an important issue in Vietnam, and local police protection plays an important provincial competitiveness role.
Collection	Subindex 10: Law & Order	Add: “Leader disciplines staff that engage in malfeasance” (% Agree)	Suggested by local authorities to capture implementation of anti-corruption campaign.
Collection	Subindex 10: Law & Order	Add "Good security situation in the province" (% Agree)	Add to capture general perception of Law & Order
Collection	Subindex 10: Law & Order	Add "Victim of theft or break in last year";" (% Agree)	Measures specific experience with crime.
Collection	Subindex 10: Law & Order	Add "Local police handle firm's broken-in case effectively" (% Agree)	Measures specific experience with law and enforcement.
Collection	Subindex 10: Law & Order	Add "Pay money to gangster groups" (% Agree)	Measures specific experience with crime.
Calibration	Recreated weights	Recreated weights through regression analysis. Regress three dependent variables (number of enterprises per capita (ln), investment per firm (ln), and profit per enterprise (ln) on ten sub-indices. T-values for each subindex are used to measure the standardized influence on dependent variables. These are used to generate weights. The weighted PCI formula is: generate weighted PCI = 10*(sub1_ entry*.05)+ 10*(sub2_land*.05)+ 10*(sub3_transparency*.2)+ 10*(sub4_ time*.05)+ 10*(sub5_informal*.1) +10*(sub6_ bias*.05)+10*(sub7_proactivity*.05)+ 10*(sub8_bss*.2)+10*(sub9_labor*.2)+ 10*(sub10_legal*.05)	Updated weights to help provincial officials prioritize reform plans. As economic needs change, weights in the PCI index need to keep up.
Calibration	New cut-points denoting provincial tiers	Use standard deviations to generate new tiers. These are: Excellent – 2 Standard Deviations (SD) above mean; High– between and 1 and 2 SDs above mean; Mid-High – within one SD above mean; Mid-Low within 1 SD below mean; Low – between 1 and 2 SD below mean; Very Low more than 2 SD below mean.	Due to increasing improvement by all provinces and reduced variation in the index, cut-points are no longer meaningful. Every province was above average. Re-calibrated to better display meaningful differentiation.

Appendix 3.1: Management Quality by Two-Digit Industrial Category



Source: PCI 2017 (Section E5) & PCI-FDI 2017 (Section F2) Surveys

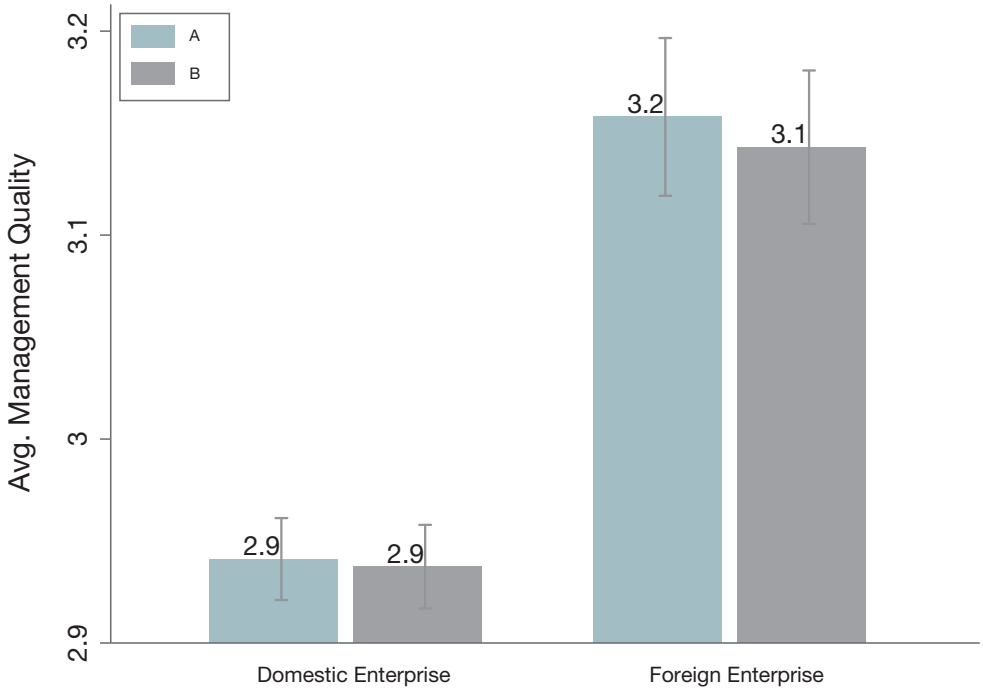
Appendix 3.2: Social Desirability Bias

Priming respondents about possible benefits to answering positively about management quality has distinguishable impact on responses. Respondents incentivized to show off for VCCI (Form B) answer similarly to those who received no such prime (Form A) for both foreign and domestic respondents.

"The next five questions are going to ask you a little bit about the management practices in your own firm. Please answer as honestly as possible to the best of your knowledge.

[Form A] The more accurately you answer, the better we can service the needs of private businesses in Vietnam."

[Form B ONLY] VCCI hopes to use this survey to gauge the current business practices of Vietnamese firms relative to their international competitors, in order to identify potential targets for future training programs and technical advice. The more accurately you answer, the better we can service the needs of private businesses in Vietnam.



Source: PCI 2017 & PCI-FDI 2017 Surveys
Range Bars=95% Confidence Intervals

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OTHER APPENDICES

APPENDIX 1: TABLE OF PCI 2017'S INDICATORS

Summary

Province	Rank	The Weighted PCI Score in 2017	Sub-Index 1: Entry Costs	Sub-Index 2: Land Access & Tenure	Sub-Index 3: Transparency	Sub-Index 4: Time Costs
An Giang	32	62.16	8.67	6.37	6.92	6.88
BRVT	16	64.43	8.19	5.94	6.36	6.42
Bac Giang	30	62.20	7.82	6.54	6.73	5.70
Bac Kan	59	58.82	6.25	5.13	6.65	4.83
Bac Lieu	42	61.09	8.58	6.55	6.47	6.70
Bac Ninh	17	64.36	7.27	6.57	5.93	6.65
Ben Tre	5	66.69	7.88	6.96	6.21	7.61
Binh Dinh	18	64.08	7.75	6.79	6.67	6.48
Binh Duong	14	64.47	7.66	6.83	6.52	7.45
Binh Phuoc	62	56.70	7.95	6.39	6.36	5.76
Binh Thuan	24	63.34	8.19	6.64	6.42	6.22
Ca Mau	51	59.83	7.97	6.19	5.81	7.01
Can Tho	10	65.09	7.86	6.66	6.32	6.78
Cao Bang	58	58.89	7.28	4.35	5.72	5.03
Da Nang	2	70.11	8.55	7.11	6.46	7.76
Dak Lak	31	62.19	6.99	6.89	6.34	6.02
Dak Nong	63	55.12	7.06	6.29	5.94	6.18
Dien Bien	48	60.57	7.74	5.71	6.36	6.23
Dong Nai	26	63.15	8.05	6.55	6.24	6.51
Dong Thap	3	68.78	8.30	7.61	7.25	8.69
Gia Lai	43	60.91	7.13	6.90	6.46	5.23
Ha Giang	55	59.16	7.91	6.08	6.18	7.27
Ha Nam	35	61.97	7.77	6.33	6.35	7.03
Ha Noi	13	64.71	6.72	5.32	6.31	7.19
Ha Tinh	33	61.99	7.56	6.03	6.16	5.65
Hai Duong	49	60.36	7.67	6.68	5.45	6.32
Hai Phong	9	65.15	7.94	5.86	5.73	5.71
Hau Giang	50	60.14	7.91	5.85	6.11	7.89
Hoa Binh	52	59.42	7.60	5.64	6.77	5.10
Hung Yen	56	59.09	7.35	5.81	5.62	5.25
Khanh Hoa	23	63.36	8.05	6.48	6.66	6.23

Province	Rank	The Weighted PCI Score in 2017	Sub-Index 1: Entry Costs	Sub-Index 2: Land Access & Tenure	Sub-Index 3: Transparency	Sub-Index 4: Time Costs
Kien Giang	20	63.65	8.39	6.52	5.78	7.56
Kon Tum	61	58.53	7.79	6.32	6.33	5.55
Lai Chau	60	58.82	8.04	5.82	6.16	5.71
Lam Dong	22	63.50	7.51	6.23	6.65	6.56
Lang Son	53	59.27	6.92	5.58	6.13	5.96
Lao Cai	11	64.98	7.37	6.41	6.34	6.12
Long An	4	66.70	8.71	7.34	6.52	7.60
Nam Dinh	41	61.43	7.62	6.50	5.33	6.69
Nghe An	21	63.52	7.85	6.16	6.38	6.72
Ninh Binh	36	61.86	7.70	6.37	6.09	7.03
Ninh Thuan	38	61.60	7.84	6.20	6.44	7.10
Phu Tho	27	62.55	8.03	6.18	5.95	6.14
Phu Yen	47	60.59	8.05	5.72	5.89	6.30
Quang Binh	45	60.82	8.17	6.08	5.67	6.18
Quang Nam	7	65.41	8.20	6.71	6.80	6.71
Quang Ngai	25	63.16	7.67	6.33	6.70	6.19
Quang Ninh	1	70.69	8.93	6.43	6.80	7.73
Quang Tri	54	59.25	8.03	6.05	6.59	6.31
Soc Trang	44	60.84	8.25	7.26	6.28	7.83
Son La	57	58.90	7.41	5.25	6.41	5.89
HCMC	8	65.19	7.44	6.11	6.16	7.10
TT-Hue	29	62.37	7.93	6.46	6.53	6.41
Tay Ninh	19	63.82	7.42	6.91	6.29	7.48
Thai Binh	34	61.97	7.84	5.20	6.54	6.49
Thai Nguyen	15	64.45	7.27	6.45	6.31	6.17
Thanh Hoa	28	62.46	8.30	6.96	6.36	6.23
Tien Giang	40	61.44	7.48	6.26	6.14	7.15
Tra Vinh	37	61.71	8.09	7.31	6.33	7.91
Tuyen Quang	39	61.51	8.29	6.06	6.59	5.79
Vinh Long	6	66.07	8.47	6.69	6.06	7.40
Vinh Phuc	12	64.90	7.10	5.77	6.59	7.27
Yen Bai	46	60.72	7.65	5.36	6.16	5.89
Ha Noi	13	64.71	6.72	5.32	6.31	7.19
Min		55.12	6.25	4.35	5.33	4.83
Median		62.16	7.84	6.33	6.34	6.48
Max		70.69	8.93	7.61	7.25	8.69

Summary

Province	Sub-Index 5: Informal Charges	Sub-Index 6: Policy Bias	Sub-Index 7: Proactivity	Sub-Index 8: Business Support Services	Sub-Index 9: Labor Policy	Sub-Index 10: Law & Order
An Giang	5.20	4.99	6.44	5.99	5.69	6.15
BRVT	5.04	4.33	5.45	7.08	7.29	5.55
Bac Giang	5.51	4.72	6.05	6.06	6.32	6.10
Bac Kan	4.28	6.42	4.15	6.32	6.09	6.06
Bac Lieu	6.38	5.93	6.04	5.77	5.25	5.68
Bac Ninh	5.90	3.85	5.81	6.86	7.56	5.39
Ben Tre	6.39	6.23	7.01	6.87	6.45	6.78
Binh Dinh	6.46	5.63	6.30	5.82	6.51	6.31
Binh Duong	5.38	5.61	6.04	6.69	6.35	6.39
Binh Phuoc	4.95	4.15	5.34	5.51	5.60	4.02
Binh Thuan	5.58	6.12	5.34	6.95	6.18	4.82
Ca Mau	6.42	6.17	5.21	6.30	5.09	5.45
Can Tho	6.17	5.14	6.11	6.84	6.54	6.51
Cao Bang	4.10	4.49	3.63	7.18	6.89	5.61
Da Nang	6.29	4.95	6.65	6.93	8.07	6.74
Dak Lak	4.88	6.39	5.38	6.80	6.14	5.84
Dak Nong	4.11	4.40	4.73	6.19	5.15	4.27
Dien Bien	4.47	5.86	4.69	6.93	5.70	6.00
Dong Nai	5.01	4.83	5.71	6.75	6.73	5.77
Dong Thap	6.86	5.67	6.96	6.70	5.93	7.10
Gia Lai	4.86	5.42	4.92	7.19	5.56	5.70
Ha Giang	4.49	5.58	5.32	6.26	5.09	7.01
Ha Nam	5.36	3.45	6.11	6.21	6.63	5.77
Ha Noi	4.40	4.07	4.10	7.68	8.09	4.88
Ha Tinh	4.76	3.33	5.73	6.90	7.04	5.75
Hai Duong	5.46	4.45	4.93	6.17	6.91	5.63
Hai Phong	6.02	5.50	5.22	6.74	8.17	5.48
Hau Giang	6.09	6.41	6.68	5.53	5.17	6.14
Hoa Binh	4.14	4.33	5.22	5.94	6.55	5.63
Hung Yen	4.21	4.83	4.50	6.38	7.16	5.37
Khanh Hoa	5.60	4.89	5.16	6.90	6.25	5.46
Kien Giang	6.85	5.75	4.56	7.10	5.79	6.15
Kon Tum	4.46	5.36	5.18	6.32	5.57	5.05
Lai Chau	4.12	6.26	5.15	6.28	5.46	6.82
Lam Dong	5.16	5.43	5.67	6.62	6.54	6.03
Lang Son	4.48	5.08	4.50	6.72	6.19	5.36

Province	Sub-Index 5: Informal Charges	Sub-Index 6: Policy Bias	Sub-Index 7: Proactivity	Sub-Index 8: Business Support Services	Sub-Index 9: Labor Policy	Sub-Index 10: Law & Order
Lao Cai	5.57	4.80	6.80	7.35	6.56	6.32
Long An	6.83	5.55	7.07	6.49	6.06	7.20
Nam Dinh	4.62	5.65	4.47	6.35	7.31	6.73
Nghe An	4.68	3.62	5.14	7.45	6.94	5.13
Ninh Binh	6.10	4.25	6.36	4.94	7.38	6.13
Ninh Thuan	5.16	5.37	5.87	6.00	6.19	6.01
Phu Tho	5.22	4.79	5.35	6.62	6.90	6.28
Phu Yen	5.31	5.60	4.80	6.61	6.24	5.15
Quang Binh	5.16	4.82	5.65	6.45	6.58	5.63
Quang Nam	5.53	5.48	6.63	6.44	6.52	6.99
Quang Ngai	5.59	3.83	5.25	6.74	6.44	6.38
Quang Ninh	5.79	6.35	6.41	7.52	7.76	5.63
Quang Tri	4.16	4.76	5.08	5.83	6.23	5.39
Soc Trang	6.84	4.88	5.22	5.54	5.30	6.03
Son La	5.40	5.13	4.75	6.43	5.32	5.94
HCMC	4.97	4.43	5.26	7.82	7.27	5.13
TT-Hue	5.68	4.44	5.81	5.69	6.86	6.00
Tay Ninh	6.13	5.37	5.67	6.61	6.38	5.43
Thai Binh	5.10	5.15	5.44	6.52	6.47	5.51
Thai Nguyen	5.66	5.16	6.05	6.00	7.70	6.42
Thanh Hoa	4.57	4.61	5.57	6.72	6.51	5.74
Tien Giang	5.28	6.15	5.58	6.57	6.01	4.84
Tra Vinh	7.82	6.31	5.84	4.77	5.30	6.72
Tuyen Quang	4.58	4.91	5.10	6.13	6.72	5.95
Vinh Long	6.64	5.35	6.15	6.73	6.63	7.08
Vinh Phuc	6.05	5.00	5.97	6.81	6.68	6.28
Yen Bai	4.31	5.24	5.21	6.94	6.22	6.17
Ha Noi	4.40	4.07	4.10	7.68	8.09	4.88
Min	4.10	3.33	3.63	4.77	5.09	4.02
Median	5.31	5.14	5.44	6.61	6.45	5.94
Max	7.82	6.42	7.07	7.82	8.17	7.20

Entry Costs

Province	Sub-Index 1: Entry Costs	Length of business registration in days (Median)	Length of business re-registration in days (Median)	Waiting >=1 month to complete all steps necessary to start operations (%)	Waiting >=3 month to complete all steps necessary to start operations (%)
An Giang	8.67	3	2	24%	3%
BRVT	8.19	7	5	13%	0%
Bac Giang	7.82	5	5	17%	3%
Bac Kan	6.25	7	11.5	21%	0%
Bac Lieu	8.58	7	3	8%	0%
Bac Ninh	7.27	7	7	3%	0%
Ben Tre	7.88	4	3	14%	8%
Binh Dinh	7.75	5	3	9%	7%
Binh Duong	7.66	7	6	13%	6%
Binh Phuoc	7.95	3	2.5	12%	3%
Binh Thuan	8.19	5	5	22%	7%
Ca Mau	7.97	7	3	10%	7%
Can Tho	7.86	4	4	19%	0%
Cao Bang	7.28	5	7	17%	7%
Da Nang	8.55	7	3	7%	0%
Dak Lak	6.99	7	5	19%	9%
Dak Nong	7.06	5	5	24%	13%
Dien Bien	7.74	7	6	11%	3%
Dong Nai	8.05	7	7	10%	0%
Dong Thap	8.30	5	3	11%	3%
Gia Lai	7.13	7	5	7%	2%
Ha Giang	7.91	7	4	8%	4%
Ha Nam	7.77	5	7	11%	0%
Ha Noi	6.72	7	5	26%	17%
Ha Tinh	7.56	5	2	11%	7%
Hai Duong	7.67	7	3	9%	0%
Hai Phong	7.94	5	3	17%	4%
Hau Giang	7.91	5	4.5	5%	3%
Hoa Binh	7.60	6	5	17%	4%
Hung Yen	7.35	5	7	18%	6%

Province	Sub-Index 1: Entry Costs	Length of business registration in days (Median)	Length of business re-registration in days (Median)	Waiting >=1 month to complete all steps necessary to start operations (%)	Waiting >=3 month to complete all steps necessary to start operations (%)
Khanh Hoa	8.05	7	7	16%	0%
Kien Giang	8.39	7	5	17%	3%
Kon Tum	7.79	5	2	6%	6%
Lai Chau	8.04	4	3	13%	3%
Lam Dong	7.51	6	5	11%	4%
Lang Son	6.92	7	5	26%	0%
Lao Cai	7.37	5	5	19%	5%
Long An	8.71	5	5.5	4%	0%
Nam Dinh	7.62	7	4	15%	2%
Nghe An	7.85	7	3	10%	5%
Ninh Binh	7.70	7	7	16%	5%
Ninh Thuan	7.84	7	5	10%	0%
Phu Tho	8.03	7	2.5	14%	0%
Phu Yen	8.05	3	2	14%	3%
Quang Binh	8.17	7	3	5%	0%
Quang Nam	8.20	5	4	13%	2%
Quang Ngai	7.67	6	5	18%	2%
Quang Ninh	8.93	7	3	6%	0%
Quang Tri	8.03	3	3	8%	3%
Soc Trang	8.25	5	4	4%	4%
Son La	7.41	7	5	18%	5%
HCMC	7.44	5	5	16%	0%
TT-Hue	7.93	7	7	24%	5%
Tay Ninh	7.42	6	3	11%	3%
Thai Binh	7.84	7	3.5	13%	0%
Thai Nguyen	7.27	5	5	22%	6%
Thanh Hoa	8.30	5	8.5	16%	2%
Tien Giang	7.48	5	3	24%	10%
Tra Vinh	8.09	5	1	6%	0%
Tuyen Quang	8.29	5	3	7%	0%
Vinh Long	8.47	3	3	11%	3%
Vinh Phuc	7.10	7	5	10%	4%
Yen Bai	7.65	7	3	25%	6%

Province	Sub-Index 1: Entry Costs	Length of business registration in days (Median)	Length of business re-registration in days (Median)	Waiting >=1 month to complete all steps necessary to start operations (%)	Waiting >=3 month to complete all steps necessary to start operations (%)
Ha Noi	6.72	7	5	26%	17%
Min	6.25	3	1	3%	0%
Median	7.84	6	4.5	13%	3%
Max	8.93	7	11.5	26%	17%

Entry Costs

Province	Firms registered online, PAC & Posts (%)	Biz (Re-) registraion procedures are transparently listed (%)	Guidance for biz (Re-) registraion procedures is clear (%)	Officials handling Biz (Re-) registraion procedures are knowledgeable(%)	Officials handling Biz (Re-)registraion procedures are friendly(%)	Good IT application in Biz (Re-) registraion procedures (%)
An Giang	16%	91%	100%	91%	88%	87%
BRVT	31%	78%	84%	71%	81%	69%
Bac Giang	19%	74%	92%	75%	79%	55%
Bac Kan	4%	52%	89%	48%	56%	26%
Bac Lieu	13%	88%	96%	80%	88%	72%
Bac Ninh	22%	72%	67%	62%	57%	44%
Ben Tre	14%	81%	92%	76%	85%	58%
Binh Dinh	17%	71%	90%	69%	76%	62%
Binh Duong	34%	78%	85%	64%	68%	56%
Binh Phuoc	17%	81%	87%	77%	74%	53%
Binh Thuan	6%	90%	93%	93%	93%	73%
Ca Mau	22%	71%	94%	76%	83%	60%
Can Tho	11%	71%	89%	71%	74%	73%
Cao Bang	12%	75%	86%	70%	67%	54%
Da Nang	30%	81%	89%	85%	80%	67%
Dak Lak	4%	76%	85%	67%	64%	49%
Dak Nong	16%	72%	90%	70%	70%	48%
Dien Bien	3%	76%	87%	76%	82%	61%
Dong Nai	28%	83%	92%	70%	75%	53%
Dong Thap	14%	88%	95%	77%	80%	68%
Gia Lai	0%	71%	79%	59%	68%	46%
Ha Giang	17%	83%	88%	64%	75%	67%
Ha Nam	13%	71%	83%	78%	76%	57%
Ha Noi	44%	67%	80%	57%	53%	50%
Ha Tinh	12%	80%	88%	64%	68%	53%
Hai Duong	13%	72%	88%	68%	66%	53%
Hai Phong	21%	88%	78%	75%	71%	71%
Hau Giang	6%	78%	89%	72%	86%	54%
Hoa Binh	7%	77%	89%	68%	76%	64%
Hung Yen	3%	78%	89%	77%	70%	53%
Khanh Hoa	13%	90%	87%	73%	79%	69%
Kien Giang	21%	90%	92%	78%	89%	78%
Kon Tum	2%	74%	93%	77%	77%	55%

Province	Firms registered online, PAC & Posts (%)	Biz (Re-) registraion procedures are transparently listed (%)	Guidance for biz (Re-) registraion procedures is clear (%)	Officials handling Biz (Re-) registraion procedures are knowledgeable(%)	Officials handling Biz (Re-)registraion procedures are friendly(%)	Good IT application in Biz (Re-) registraion procedures (%)
Lai Chau	6%	76%	94%	78%	78%	72%
Lam Dong	30%	74%	80%	59%	65%	52%
Lang Son	6%	74%	78%	59%	65%	41%
Lao Cai	13%	80%	84%	66%	70%	50%
Long An	32%	88%	88%	78%	82%	76%
Nam Dinh	11%	75%	86%	67%	78%	57%
Nghe An	16%	84%	91%	65%	74%	58%
Ninh Binh	16%	84%	90%	70%	68%	68%
Ninh Thuan	3%	80%	89%	71%	83%	56%
Phu Tho	9%	83%	90%	80%	77%	58%
Phu Yen	5%	82%	92%	79%	78%	66%
Quang Binh	8%	79%	92%	79%	74%	67%
Quang Nam	29%	83%	92%	68%	73%	69%
Quang Ngai	2%	72%	88%	78%	82%	63%
Quang Ninh	56%	85%	89%	80%	79%	70%
Quang Tri	7%	75%	93%	79%	79%	61%
Soc Trang	6%	84%	97%	78%	81%	67%
Son La	9%	77%	88%	69%	69%	58%
HCMC	69%	69%	70%	43%	43%	48%
TT-Hue	16%	84%	92%	81%	84%	71%
Tay Ninh	5%	66%	85%	63%	71%	59%
Thai Binh	35%	78%	83%	61%	62%	57%
Thai Nguyen	5%	87%	80%	68%	60%	63%
Thanh Hoa	9%	88%	96%	85%	84%	79%
Tien Giang	2%	77%	89%	82%	87%	57%
Tra Vinh	0%	72%	97%	78%	78%	62%
Tuyen Quang	9%	81%	94%	70%	80%	76%
Vinh Long	13%	89%	89%	80%	86%	80%
Vinh Phuc	9%	66%	82%	57%	71%	44%
Yen Bai	7%	84%	87%	82%	75%	62%
Ha Noi	44%	67%	80%	57%	53%	50%
Min	0%	52%	67%	43%	43%	26%
Median	13%	78%	89%	72%	76%	60%
Max	69%	91%	100%	93%	93%	87%

Land Access

Province	Sub-Index 2: Land Access & Tenure	Firms own land & possess of an LURC (%)	Median number of days to wait for LURC	Firms' rating of expropriation risk (1=Very High; 5=Very Low)	Firms do not have difficulties in accessing land (%)	Lack of available land (%)
An Giang	6.37	61%	30.00	1.43	36%	29%
BRVT	5.94	51%	20.00	1.82	14%	15%
Bac Giang	6.54	62%	30.00	1.57	23%	14%
Bac Kan	5.13	64%	30.00	1.63	26%	36%
Bac Lieu	6.55	82%	30.00	1.47	37%	23%
Bac Ninh	6.57	54%	12.50	1.59	27%	6%
Ben Tre	6.96	68%	20.00	1.56	33%	15%
Binh Dinh	6.79	64%	15.00	1.75	19%	12%
Binh Duong	6.83	68%	30.00	1.52	29%	11%
Binh Phuoc	6.39	60%	30.00	1.56	23%	11%
Binh Thuan	6.64	65%	20.00	1.52	21%	9%
Ca Mau	6.19	62%	15.00	1.47	24%	17%
Can Tho	6.66	71%	12.50	1.68	22%	17%
Cao Bang	4.35	38%	15.00	1.88	19%	38%
Da Nang	7.11	43%	17.50	1.48	32%	6%
Dak Lak	6.89	65%	25.00	1.45	21%	15%
Dak Nong	6.29	62%	30.00	1.62	34%	14%
Dien Bien	5.71	49%	17.50	1.48	19%	36%
Dong Nai	6.55	51%	30.00	1.72	26%	8%
Dong Thap	7.61	71%	15.00	1.43	43%	10%
Gia Lai	6.90	59%	30.00	1.65	30%	11%
Ha Giang	6.08	70%	8.50	1.63	25%	39%
Ha Nam	6.33	52%	30.00	1.63	26%	11%
Ha Noi	5.32	37%	30.00	1.88	12%	17%
Ha Tinh	6.03	48%	20.00	1.70	20%	13%
Hai Duong	6.68	62%	20.00	1.69	20%	13%
Hai Phong	5.86	49%	30.00	1.76	25%	9%
Hau Giang	5.85	68%	30.00	1.64	34%	21%
Hoa Binh	5.64	54%	30.00	1.76	25%	24%
Hung Yen	5.81	44%	10.00	1.67	19%	15%
Khanh Hoa	6.48	54%	30.00	1.65	22%	9%
Kien Giang	6.52	77%	30.00	1.64	32%	14%
Kon Tum	6.32	51%	10.00	1.49	30%	16%
Lai Chau	5.82	58%	14.50	1.62	27%	26%

Province	Sub-Index 2: Land Access & Tenure	Firms own land & possess of an LURC (%)	Median number of days to wait for LURC	Firms' rating of expropriation risk (1=Very High; 5=Very Low)	Firms do not have difficulties in accessing land (%)	Lack of available land (%)
Lam Dong	6.23	55%	15.00	1.62	24%	13%
Lang Son	5.58	52%	30.00	1.76	25%	30%
Lao Cai	6.41	48%	15.00	1.74	24%	19%
Long An	7.34	66%	30.00	1.57	28%	18%
Nam Dinh	6.50	56%	15.00	1.49	15%	14%
Nghe An	6.16	40%	15.00	1.70	21%	9%
Ninh Binh	6.37	61%	30.00	1.53	28%	14%
Ninh Thuan	6.20	64%	15.00	1.53	27%	23%
Phu Tho	6.18	49%	20.00	1.45	26%	17%
Phu Yen	5.72	55%	15.00	1.45	21%	11%
Quang Binh	6.08	59%	30.00	1.62	20%	12%
Quang Nam	6.71	53%	15.00	1.51	24%	17%
Quang Ngai	6.33	51%	30.00	1.63	25%	17%
Quang Ninh	6.43	37%	25.00	1.55	26%	10%
Quang Tri	6.05	73%	17.50	1.56	28%	21%
Soc Trang	7.26	68%	30.00	1.62	45%	12%
Son La	5.25	57%	30.00	1.55	17%	28%
HCMC	6.11	39%	30.00	1.52	22%	11%
TT-Hue	6.46	73%	20.50	1.46	25%	19%
Tay Ninh	6.91	63%	15.00	1.38	27%	10%
Thai Binh	5.20	57%	30.00	1.94	24%	25%
Thai Nguyen	6.45	57%	25.00	1.49	27%	20%
Thanh Hoa	6.96	68%	30.00	1.42	17%	16%
Tien Giang	6.26	74%	45.00	1.61	23%	12%
Tra Vinh	7.31	77%	15.00	1.59	39%	9%
Tuyen Quang	6.06	51%	30.00	1.75	29%	22%
Vinh Long	6.69	68%	10.00	1.64	26%	20%
Vinh Phuc	5.77	52%	30.00	1.73	18%	13%
Yen Bai	5.36	52%	15.00	1.55	30%	25%
Ha Noi	5.32	37%	30.00	1.88	12%	17%
Min	4.35	37%	8.50	1.38	12%	6%
Median	6.33	58%	25.00	1.61	25%	15%
Max	7.61	82%	45.00	1.94	45%	39%

Land Access

Province	Slow land clearance progress (%)	Inadequate of land information (%)	Compensation for land is always or highly likely fair (% Agree)	Changes in land prices reflect changes in market prices (%)	No difficulties in land-related procedures in the last 2 years (%)	Don't have LURCs because of complicated procedures and troublesome staffs (%)
An Giang	20%	44%	43%	72%	25%	8%
BRVT	17%	25%	34%	80%	4%	12%
Bac Giang	23%	35%	30%	79%	26%	6%
Bac Kan	28%	30%	26%	74%	13%	28%
Bac Lieu	23%	21%	38%	74%	29%	24%
Bac Ninh	18%	36%	21%	83%	23%	6%
Ben Tre	15%	28%	25%	75%	30%	3%
Binh Dinh	11%	25%	25%	79%	33%	10%
Binh Duong	9%	35%	32%	76%	25%	7%
Binh Phuoc	11%	24%	31%	67%	21%	14%
Binh Thuan	16%	19%	44%	73%	15%	16%
Ca Mau	23%	28%	31%	78%	19%	17%
Can Tho	8%	23%	27%	75%	19%	7%
Cao Bang	32%	32%	18%	58%	13%	23%
Da Nang	6%	28%	28%	77%	30%	5%
Dak Lak	8%	28%	34%	86%	14%	5%
Dak Nong	22%	31%	28%	79%	29%	21%
Dien Bien	25%	34%	33%	73%	31%	20%
Dong Nai	10%	21%	26%	75%	20%	11%
Dong Thap	13%	28%	36%	85%	37%	9%
Gia Lai	5%	27%	26%	81%	29%	12%
Ha Giang	22%	30%	36%	73%	38%	22%
Ha Nam	13%	35%	29%	74%	28%	15%
Ha Noi	17%	34%	20%	64%	17%	13%
Ha Tinh	19%	30%	35%	78%	17%	18%
Hai Duong	11%	18%	25%	86%	26%	17%
Hai Phong	14%	32%	23%	73%	21%	22%
Hau Giang	15%	28%	25%	80%	16%	29%
Hoa Binh	19%	29%	38%	67%	20%	25%
Hung Yen	11%	32%	24%	79%	17%	21%
Khanh Hoa	11%	25%	26%	74%	27%	15%
Kien Giang	14%	33%	39%	76%	15%	13%
Kon Tum	13%	31%	26%	75%	24%	16%

Province	Slow land clearance progress (%)	Inadequate of land information (%)	Compensation for land is always or highly likely fair (% Agree)	Changes in land prices reflect changes in market prices (%)	No difficulties in land-related procedures in the last 2 years (%)	Don't have LURCs because of complicated procedures and troublesome staffs (%)
Lai Chau	12%	34%	40%	72%	26%	32%
Lam Dong	9%	25%	20%	80%	26%	24%
Lang Son	31%	29%	26%	78%	20%	17%
Lao Cai	21%	29%	27%	85%	25%	8%
Long An	20%	21%	33%	87%	44%	10%
Nam Dinh	9%	38%	32%	81%	28%	14%
Nghe An	21%	26%	24%	81%	22%	15%
Ninh Binh	12%	31%	26%	84%	24%	22%
Ninh Thuan	10%	27%	26%	67%	23%	15%
Phu Tho	14%	33%	26%	72%	34%	22%
Phu Yen	21%	32%	29%	65%	23%	26%
Quang Binh	15%	26%	23%	78%	24%	24%
Quang Nam	17%	33%	26%	82%	27%	3%
Quang Ngai	26%	28%	33%	77%	28%	13%
Quang Ninh	23%	27%	26%	79%	31%	14%
Quang Tri	19%	32%	33%	79%	31%	33%
Soc Trang	2%	26%	35%	80%	31%	15%
Son La	29%	24%	26%	76%	22%	34%
HCMC	12%	34%	22%	73%	18%	9%
TT-Hue	19%	30%	34%	79%	29%	21%
Tay Ninh	7%	26%	35%	73%	31%	17%
Thai Binh	22%	46%	30%	83%	20%	31%
Thai Nguyen	19%	37%	38%	77%	26%	12%
Thanh Hoa	20%	36%	42%	80%	35%	6%
Tien Giang	14%	24%	21%	80%	21%	21%
Tra Vinh	9%	23%	32%	79%	34%	14%
Tuyen Quang	22%	24%	19%	80%	26%	16%
Vinh Long	9%	24%	28%	80%	23%	11%
Vinh Phuc	20%	28%	18%	77%	20%	19%
Yen Bai	23%	40%	35%	67%	24%	31%
Ha Noi	17%	34%	20%	64%	17%	13%
Min	2%	18%	18%	58%	4%	3%
Median	16%	29%	28%	78%	25%	15%
Max	32%	46%	44%	87%	44%	34%

Transparency

Province	Sub-Index 3: Transparency	Access to planning documents (1=impossible to access; 5= easy to access)	Access to legal documents (1=impossible to access; 5= easy to access)	Budget documents have enough details (% YES)	Transparency in bidding (% YES)	Received information requested (% YES)	Median days to receive information requested
An Giang	6.92	2.35	3.17	92%	33%	76%	1.00
BRVT	6.36	2.34	2.96	80%	60%	56%	7.00
Bac Giang	6.73	2.39	2.98	87%	44%	84%	3.00
Bac Kan	6.65	2.56	3.16	80%	49%	86%	5.00
Bac Lieu	6.47	2.53	3.14	75%	57%	68%	5.00
Bac Ninh	5.93	2.45	3.01	85%	37%	74%	5.00
Ben Tre	6.21	2.51	3.10	82%	61%	70%	3.00
Binh Dinh	6.67	2.53	3.11	80%	55%	71%	3.50
Binh Duong	6.52	2.34	3.01	80%	47%	62%	7.00
Binh Phuoc	6.36	2.44	3.02	67%	34%	74%	3.00
Binh Thuan	6.42	2.27	2.95	93%	46%	79%	3.00
Ca Mau	5.81	2.42	3.00	74%	57%	62%	2.00
Can Tho	6.32	2.56	3.25	83%	41%	68%	4.00
Cao Bang	5.72	2.32	3.01	82%	48%	58%	3.00
Da Nang	6.46	2.51	3.17	82%	49%	52%	2.00
Dak Lak	6.34	2.47	2.97	100%	58%	85%	4.00
Dak Nong	5.94	2.44	2.91	77%	33%	63%	4.00
Dien Bien	6.36	2.35	3.11	80%	53%	75%	2.00
Dong Nai	6.24	2.36	2.97	86%	39%	47%	7.00
Dong Thap	7.25	2.53	3.23	71%	66%	70%	3.00
Gia Lai	6.46	2.39	3.02	79%	50%	88%	4.00
Ha Giang	6.18	2.57	3.03	89%	44%	79%	3.00
Ha Nam	6.35	2.49	3.07	89%	49%	71%	7.00
Ha Noi	6.31	2.26	3.00	84%	48%	71%	5.00
Ha Tinh	6.16	2.58	3.15	73%	42%	77%	2.25
Hai Duong	5.45	2.27	2.83	87%	33%	66%	5.00
Hai Phong	5.73	2.35	2.98	79%	42%	61%	5.00
Hau Giang	6.11	2.39	3.11	88%	48%	71%	10.00
Hoa Binh	6.77	2.40	2.99	94%	63%	75%	3.00
Hung Yen	5.62	2.26	3.05	81%	38%	65%	5.00
Khanh Hoa	6.66	2.28	2.94	100%	61%	75%	3.00
Kien Giang	5.78	2.45	2.98	93%	39%	78%	3.50
Kon Tum	6.33	2.44	3.04	86%	57%	59%	3.00

Province	Sub-Index 3: Transparency	Access to planning documents (1=impossible to access; 5= easy to access)	Access to legal documents (1=impossible to access; 5= easy to access)	Budget documents have enough details (% YES)	Transparency in bidding (% YES)	Received information requested (% YES)	Median days to receive information requested
Lai Chau	6.16	2.67	3.16	88%	50%	81%	3.00
Lam Dong	6.65	2.45	3.17	86%	51%	69%	4.50
Lang Son	6.13	2.53	3.12	85%	49%	83%	3.00
Lao Cai	6.34	2.63	3.29	93%	54%	64%	6.00
Long An	6.52	2.53	3.20	75%	60%	56%	3.00
Nam Dinh	5.33	2.27	2.86	90%	44%	65%	3.50
Nghe An	6.38	2.38	3.03	91%	57%	73%	4.00
Ninh Binh	6.09	2.39	2.97	75%	52%	75%	2.50
Ninh Thuan	6.44	2.42	3.17	83%	53%	74%	3.00
Phu Tho	5.95	2.40	3.06	58%	51%	60%	4.50
Phu Yen	5.89	2.36	3.08	88%	38%	82%	4.00
Quang Binh	5.67	2.41	2.91	81%	49%	60%	6.50
Quang Nam	6.80	2.63	3.15	86%	55%	81%	4.00
Quang Ngai	6.70	2.60	3.17	88%	52%	73%	2.50
Quang Ninh	6.80	2.60	3.19	84%	52%	59%	2.50
Quang Tri	6.59	2.54	3.15	96%	52%	63%	5.00
Soc Trang	6.28	2.44	3.10	92%	38%	73%	3.00
Son La	6.41	2.53	3.06	74%	55%	75%	3.00
HCMC	6.16	2.26	2.97	80%	53%	57%	7.00
TT-Hue	6.53	2.64	3.14	84%	45%	90%	4.35
Tay Ninh	6.29	2.63	3.15	80%	63%	67%	4.00
Thai Binh	6.54	2.42	3.11	91%	65%	74%	5.00
Thai Nguyen	6.31	2.57	3.13	83%	49%	44%	3.00
Thanh Hoa	6.36	2.36	2.99	82%	48%	80%	3.00
Tien Giang	6.14	2.23	2.83	87%	49%	84%	5.50
Tra Vinh	6.33	2.43	3.06	92%	52%	61%	4.50
Tuyen Quang	6.59	2.48	3.07	81%	55%	85%	5.00
Vinh Long	6.06	2.28	3.01	83%	55%	47%	4.00
Vinh Phuc	6.59	2.50	3.14	70%	52%	75%	2.00
Yen Bai	6.16	2.36	3.07	82%	40%	77%	3.00
Ha Noi	6.31	2.26	3.00	84%	48%	71%	5.00
Min	5.33	2.23	2.83	58%	33%	44%	1.00
Median	6.34	2.44	3.06	83%	50%	71%	4.00
Max	7.25	2.67	3.29	100%	66%	90%	10.00

Province	Relationship is necessary to obtain documents (%)	Negotiations with tax officials are a necessary part of doing biz (%)	Implementation of central laws at prov. level is predictable (% Usually or Always)	Biz associations playing important role in local polices' consultation (%)	Openness and quality of provincial webpage (Hard data)	Percentage of firms have accessed provincial websites (%)
An Giang	58%	55%	17%	55%	33.00	75%
BRVT	72%	59%	5%	64%	35.00	76%
Bac Giang	65%	49%	4%	50%	34.50	80%
Bac Kan	71%	47%	4%	32%	34.50	85%
Bac Lieu	71%	61%	9%	61%	29.00	76%
Bac Ninh	75%	57%	7%	54%	32.50	65%
Ben Tre	66%	49%	5%	40%	33.50	61%
Binh Dinh	62%	55%	6%	47%	34.50	77%
Binh Duong	64%	49%	1%	50%	42.00	80%
Binh Phuoc	70%	44%	4%	49%	39.50	73%
Binh Thuan	75%	48%	8%	45%	31.00	76%
Ca Mau	79%	64%	7%	36%	36.00	61%
Can Tho	62%	58%	5%	64%	34.50	65%
Cao Bang	78%	46%	5%	22%	25.50	78%
Da Nang	62%	56%	5%	38%	36.50	78%
Dak Lak	77%	63%	2%	49%	33.00	69%
Dak Nong	67%	60%	6%	34%	35.00	76%
Dien Bien	82%	45%	7%	50%	24.50	79%
Dong Nai	61%	49%	6%	57%	44.00	67%
Dong Thap	67%	41%	7%	64%	37.00	79%
Gia Lai	77%	53%	3%	39%	34.00	80%
Ha Giang	77%	57%	8%	50%	27.50	70%
Ha Nam	70%	45%	7%	47%	35.00	71%
Ha Noi	71%	57%	6%	46%	40.50	70%
Ha Tinh	71%	53%	8%	33%	30.00	74%
Hai Duong	69%	51%	0%	47%	31.00	63%
Hai Phong	67%	50%	2%	40%	36.00	64%
Hau Giang	61%	54%	4%	56%	30.50	74%
Hoa Binh	68%	51%	4%	46%	34.00	78%
Hung Yen	68%	55%	2%	49%	30.50	65%
Khanh Hoa	80%	60%	7%	51%	36.00	74%
Kien Giang	72%	61%	3%	45%	28.50	65%
Kon Tum	74%	60%	9%	35%	31.00	79%
Lai Chau	73%	52%	7%	39%	22.50	73%

Province	Relationship is necessary to obtain documents (%)	Negotiations with tax officials are a necessary part of doing biz (%)	Implementation of central laws at prov. level is predictable (% Usually or Always)	Biz associations playing important role in local polices' consultation (%)	Openness and quality of provincial webpage (Hard data)	Percentage of firms have accessed provincial websites (%)
Lam Dong	70%	52%	7%	48%	33.00	82%
Lang Son	71%	41%	5%	39%	24.50	71%
Lao Cai	69%	53%	6%	46%	32.00	72%
Long An	67%	50%	9%	49%	36.00	68%
Nam Dinh	72%	56%	6%	45%	22.00	60%
Nghe An	75%	62%	2%	48%	37.50	72%
Ninh Binh	68%	59%	7%	50%	32.00	63%
Ninh Thuan	66%	57%	7%	40%	32.50	74%
Phu Tho	68%	47%	7%	41%	31.00	71%
Phu Yen	78%	54%	6%	42%	27.00	71%
Quang Binh	79%	57%	6%	48%	33.00	64%
Quang Nam	67%	59%	2%	54%	39.00	74%
Quang Ngai	73%	59%	7%	44%	34.50	79%
Quang Ninh	60%	54%	3%	49%	39.00	78%
Quang Tri	73%	50%	10%	55%	27.50	81%
Soc Trang	70%	60%	4%	61%	32.50	70%
Son La	73%	60%	8%	36%	30.00	81%
HCMC	58%	57%	5%	32%	45.00	68%
TT-Hue	80%	59%	6%	39%	37.00	77%
Tay Ninh	69%	57%	6%	46%	31.00	67%
Thai Binh	68%	54%	5%	56%	35.00	66%
Thai Nguyen	64%	41%	1%	54%	34.00	73%
Thanh Hoa	67%	65%	7%	54%	32.00	71%
Tien Giang	73%	58%	8%	56%	35.00	62%
Tra Vinh	73%	42%	5%	42%	36.50	70%
Tuyen Quang	64%	56%	6%	65%	29.00	73%
Vinh Long	74%	47%	8%	56%	35.00	62%
Vinh Phuc	63%	52%	6%	49%	36.50	70%
Yen Bai	75%	53%	4%	46%	32.50	73%
Ha Noi	71%	57%	6%	46%	40.50	70%
Min	58%	41%	0%	22%	22.00	60%
Median	70%	54%	6%	48%	33.50	73%
Max	82%	65%	17%	65%	45.00	85%

Time Costs

Province	Sub-Index 4: Time Costs	Firms spent over 10% of time to comply with law & regulations (%)	Officials are effective (%)	Officials are friendly (%)	Firms don't have to travel many trips to obtain stamps and signatures (%)	Paperwork is simple (%)
An Giang	6.88	29%	78%	73%	62%	64%
BRVT	6.42	37%	67%	62%	47%	46%
Bac Giang	5.70	31%	72%	69%	64%	54%
Bac Kan	4.83	37%	65%	67%	44%	45%
Bac Lieu	6.70	30%	80%	77%	55%	59%
Bac Ninh	6.65	22%	63%	56%	47%	41%
Ben Tre	7.61	35%	78%	76%	56%	54%
Binh Dinh	6.48	34%	76%	71%	60%	62%
Binh Duong	7.45	32%	77%	71%	54%	54%
Binh Phuoc	5.76	23%	75%	75%	60%	52%
Binh Thuan	6.22	36%	66%	60%	54%	42%
Ca Mau	7.01	25%	77%	78%	52%	52%
Can Tho	6.78	46%	79%	71%	49%	52%
Cao Bang	5.03	44%	58%	60%	46%	40%
Da Nang	7.76	34%	84%	80%	56%	64%
Dak Lak	6.02	40%	66%	59%	50%	50%
Dak Nong	6.18	35%	73%	66%	55%	52%
Dien Bien	6.23	23%	62%	68%	52%	52%
Dong Nai	6.51	22%	65%	59%	64%	50%
Dong Thap	8.69	36%	87%	87%	72%	76%
Gia Lai	5.23	35%	67%	55%	47%	49%
Ha Giang	7.27	29%	80%	73%	57%	51%
Ha Nam	7.03	32%	72%	71%	65%	58%
Ha Noi	7.19	32%	62%	52%	49%	43%
Ha Tinh	5.65	26%	67%	53%	58%	51%
Hai Duong	6.32	30%	68%	62%	54%	48%
Hai Phong	5.71	32%	63%	53%	46%	46%
Hau Giang	7.89	22%	84%	81%	74%	66%
Hoa Binh	5.10	26%	64%	68%	50%	52%
Hung Yen	5.25	30%	59%	54%	42%	43%
Khanh Hoa	6.23	37%	66%	51%	40%	43%
Kien Giang	7.56	38%	78%	77%	63%	61%
Kon Tum	5.55	36%	67%	61%	48%	52%

Province	Sub-Index 4: Time Costs	Firms spent over 10% of time to comply with law & regulations (%)	Officials are effective (%)	Officials are friendly (%)	Firms don't have to travel many trips to obtain stamps and signatures (%)	Paperwork is simple (%)
Lai Chau	5.71	36%	77%	69%	69%	59%
Lam Dong	6.56	31%	69%	71%	55%	46%
Lang Son	5.96	38%	66%	67%	49%	57%
Lao Cai	6.12	33%	79%	70%	51%	55%
Long An	7.60	30%	86%	79%	64%	57%
Nam Dinh	6.69	29%	70%	62%	59%	53%
Nghe An	6.72	24%	67%	61%	50%	45%
Ninh Binh	7.03	23%	78%	73%	67%	62%
Ninh Thuan	7.10	37%	82%	73%	66%	62%
Phu Tho	6.14	28%	72%	64%	50%	50%
Phu Yen	6.30	32%	72%	70%	64%	67%
Quang Binh	6.18	28%	73%	62%	53%	48%
Quang Nam	6.71	31%	77%	77%	58%	53%
Quang Ngai	6.19	34%	66%	63%	55%	49%
Quang Ninh	7.73	26%	75%	70%	62%	64%
Quang Tri	6.31	29%	67%	65%	45%	45%
Soc Trang	7.83	33%	83%	79%	63%	58%
Son La	5.89	26%	77%	76%	54%	51%
HCMC	7.10	40%	72%	62%	49%	44%
TT-Hue	6.41	39%	73%	57%	53%	57%
Tay Ninh	7.48	29%	75%	67%	57%	59%
Thai Binh	6.49	26%	72%	65%	56%	54%
Thai Nguyen	6.17	26%	64%	64%	45%	50%
Thanh Hoa	6.23	24%	70%	65%	54%	55%
Tien Giang	7.15	34%	77%	73%	59%	54%
Tra Vinh	7.91	38%	81%	76%	60%	67%
Tuyen Quang	5.79	31%	63%	64%	52%	54%
Vinh Long	7.40	34%	84%	71%	55%	62%
Vinh Phuc	7.27	32%	75%	67%	64%	55%
Yen Bai	5.89	24%	65%	64%	51%	46%
Ha Noi	7.19	32%	62%	52%	49%	43%
Min	4.83	22%	58%	51%	40%	40%
Median	6.48	32%	72%	67%	55%	52%
Max	8.69	46%	87%	87%	74%	76%

Time Costs

Province	Fees are listed publically (%)	Time to do APs is shorter than regulations specified (%)	Firms received 5+ inspections per year (%)	Overlap inspections (%)	Median tax inspection hours	Using inspection to extract rents (%)
An Giang	95%	72%	9%	19%	8.00	20%
BRVT	93%	62%	2%	14%	16.00	22%
Bac Giang	91%	67%	9%	16%	40.00	21%
Bac Kan	89%	59%	15%	21%	24.00	20%
Bac Lieu	94%	68%	11%	17%	5.00	20%
Bac Ninh	93%	65%	6%	13%	4.00	21%
Ben Tre	90%	68%	7%	13%	2.00	9%
Binh Dinh	94%	70%	13%	21%	12.00	14%
Binh Duong	94%	66%	7%	10%	4.00	11%
Binh Phuoc	88%	59%	15%	25%	4.00	23%
Binh Thuan	94%	59%	7%	12%	17.00	16%
Ca Mau	92%	74%	6%	17%	4.00	26%
Can Tho	93%	67%	8%	19%	8.00	10%
Cao Bang	85%	53%	10%	14%	22.50	22%
Da Nang	97%	70%	5%	8%	8.00	18%
Dak Lak	91%	63%	6%	12%	15.50	26%
Dak Nong	88%	65%	6%	17%	18.00	24%
Dien Bien	93%	64%	10%	15%	10.00	22%
Dong Nai	93%	61%	7%	14%	8.00	24%
Dong Thap	92%	83%	5%	9%	4.00	12%
Gia Lai	92%	60%	6%	15%	27.50	34%
Ha Giang	89%	71%	3%	13%	6.00	24%
Ha Nam	86%	76%	7%	8%	24.00	17%
Ha Noi	91%	67%	3%	10%	4.00	14%
Ha Tinh	94%	65%	13%	16%	6.50	31%
Hai Duong	90%	69%	7%	13%	24.00	17%
Hai Phong	90%	65%	11%	13%	16.00	21%
Hau Giang	90%	72%	5%	9%	19.00	14%
Hoa Binh	91%	69%	15%	20%	24.00	28%
Hung Yen	80%	60%	9%	9%	24.00	30%
Khanh Hoa	93%	60%	7%	19%	4.00	13%
Kien Giang	93%	61%	6%	16%	2.00	8%
Kon Tum	94%	63%	10%	17%	24.00	21%

Province	Fees are listed publically (%)	Time to do APs is shorter than regulations specified (%)	Firms received 5+ inspections per year (%)	Overlap inspections (%)	Median tax inspection hours	Using inspection to extract rents (%)
Lai Chau	89%	72%	14%	12%	24.00	30%
Lam Dong	90%	59%	9%	14%	8.00	16%
Lang Son	95%	60%	8%	13%	24.00	22%
Lao Cai	95%	68%	5%	16%	40.00	18%
Long An	94%	66%	8%	13%	8.00	8%
Nam Dinh	93%	64%	5%	7%	16.00	25%
Nghe An	92%	69%	9%	12%	8.00	16%
Ninh Binh	95%	74%	14%	10%	4.50	21%
Ninh Thuan	93%	77%	13%	12%	13.50	10%
Phu Tho	90%	68%	7%	14%	24.00	23%
Phu Yen	90%	68%	16%	15%	8.00	20%
Quang Binh	88%	70%	11%	17%	6.00	23%
Quang Nam	91%	72%	13%	12%	8.00	19%
Quang Ngai	94%	67%	6%	18%	27.00	14%
Quang Ninh	97%	76%	5%	10%	9.00	18%
Quang Tri	82%	54%	6%	11%	22.50	12%
Soc Trang	96%	68%	7%	14%	2.50	9%
Son La	89%	69%	13%	19%	24.00	20%
HCMC	91%	61%	4%	10%	3.00	15%
TT-Hue	89%	68%	12%	12%	11.00	15%
Tay Ninh	92%	74%	6%	10%	8.00	16%
Thai Binh	93%	67%	5%	9%	30.00	22%
Thai Nguyen	93%	65%	4%	9%	40.00	19%
Thanh Hoa	89%	62%	13%	10%	8.00	24%
Tien Giang	96%	67%	7%	18%	4.00	14%
Tra Vinh	97%	77%	9%	13%	4.00	5%
Tuyen Quang	92%	59%	6%	10%	40.00	18%
Vinh Long	93%	64%	7%	16%	2.00	10%
Vinh Phuc	92%	74%	6%	14%	8.00	17%
Yen Bai	88%	56%	8%	14%	24.00	19%
Ha Noi	91%	67%	3%	10%	4.00	14%
Min	80%	53%	2%	7%	2.00	5%
Median	92%	67%	7%	13%	9.00	19%
Max	97%	83%	16%	25%	40.00	34%

Informal Charges

Province	Sub-Index 5: Informal Charges	Firms in my line of business pay bribes (%)	Service was delivered as expected (%)	Local officials uses compliance to extract rents (%)	Firms agreeing informal charges are acceptable (%)
An Giang	5.20	52%	57%	63%	80%
BRVT	5.04	62%	55%	58%	74%
Bac Giang	5.51	62%	70%	57%	77%
Bac Kan	4.28	63%	68%	60%	78%
Bac Lieu	6.38	54%	63%	51%	83%
Bac Ninh	5.90	65%	79%	57%	75%
Ben Tre	6.39	48%	54%	48%	83%
Binh Dinh	6.46	55%	54%	60%	84%
Binh Duong	5.38	49%	60%	59%	86%
Binh Phuoc	4.95	55%	73%	65%	84%
Binh Thuan	5.58	62%	57%	55%	80%
Ca Mau	6.42	54%	55%	60%	85%
Can Tho	6.17	52%	50%	63%	91%
Cao Bang	4.10	68%	69%	70%	74%
Da Nang	6.29	54%	66%	50%	87%
Dak Lak	4.88	65%	64%	63%	81%
Dak Nong	4.11	60%	61%	74%	81%
Dien Bien	4.47	61%	62%	65%	73%
Dong Nai	5.01	59%	77%	67%	76%
Dong Thap	6.86	39%	38%	44%	79%
Gia Lai	4.86	64%	66%	61%	84%
Ha Giang	4.49	60%	77%	64%	75%
Ha Nam	5.36	62%	68%	59%	76%
Ha Noi	4.40	62%	69%	64%	74%
Ha Tinh	4.76	65%	58%	70%	81%
Hai Duong	5.46	59%	74%	62%	77%
Hai Phong	6.02	62%	76%	60%	76%
Hau Giang	6.09	51%	59%	55%	77%
Hoa Binh	4.14	62%	67%	69%	67%
Hung Yen	4.21	55%	67%	66%	73%
Khanh Hoa	5.60	55%	65%	63%	79%
Kien Giang	6.85	53%	56%	57%	89%
Kon Tum	4.46	76%	64%	68%	74%

Province	Sub-Index 5: Informal Charges	Firms in my line of business pay bribes (%)	Service was delivered as expected (%)	Local officials uses compliance to extract rents (%)	Firms agreeing informal charges are acceptable (%)
Lai Chau	4.12	69%	80%	65%	80%
Lam Dong	5.16	54%	59%	61%	82%
Lang Son	4.48	65%	69%	66%	76%
Lao Cai	5.57	60%	78%	59%	83%
Long An	6.83	50%	50%	48%	82%
Nam Dinh	4.62	60%	68%	64%	74%
Nghe An	4.68	58%	61%	57%	77%
Ninh Binh	6.10	51%	58%	54%	88%
Ninh Thuan	5.16	59%	60%	57%	79%
Phu Tho	5.22	63%	70%	56%	79%
Phu Yen	5.31	55%	50%	57%	74%
Quang Binh	5.16	63%	59%	63%	78%
Quang Nam	5.53	65%	54%	61%	86%
Quang Ngai	5.59	59%	57%	66%	80%
Quang Ninh	5.79	56%	67%	49%	78%
Quang Tri	4.16	63%	60%	74%	73%
Soc Trang	6.84	51%	47%	55%	83%
Son La	5.40	59%	72%	56%	83%
HCMC	4.97	59%	61%	64%	78%
TT-Hue	5.68	59%	55%	62%	81%
Tay Ninh	6.13	60%	53%	60%	86%
Thai Binh	5.10	66%	72%	60%	78%
Thai Nguyen	5.66	55%	71%	64%	84%
Thanh Hoa	4.57	55%	66%	65%	76%
Tien Giang	5.28	58%	61%	61%	88%
Tra Vinh	7.82	44%	63%	46%	80%
Tuyen Quang	4.58	66%	61%	62%	74%
Vinh Long	6.64	44%	44%	49%	85%
Vinh Phuc	6.05	55%	65%	63%	75%
Yen Bai	4.31	61%	72%	55%	73%
Ha Noi	4.40	62%	69%	64%	74%
Min	4.10	39%	38%	44%	67%
Median	5.31	59%	63%	61%	79%
Max	7.82	76%	80%	74%	91%

Informal Charges

Province	Paying informal charges to the inspector(%)	Percentage of revenue in informal payments (% >=10%)	Paying informal charges in land APs (%)	Paying informal charges to win the local gov's contract (%)	Firms worry about bribes at courts (%)
An Giang	49%	7%	48%	56%	29%
BRVT	45%	12%	57%	36%	32%
Bac Giang	51%	8%	26%	59%	29%
Bac Kan	52%	24%	57%	46%	37%
Bac Lieu	39%	4%	22%	57%	25%
Bac Ninh	59%	5%	12%	55%	30%
Ben Tre	35%	10%	6%	54%	35%
Binh Dinh	47%	6%	22%	42%	23%
Binh Duong	47%	4%	30%	64%	39%
Binh Phuoc	55%	14%	27%	63%	39%
Binh Thuan	45%	11%	24%	53%	31%
Ca Mau	36%	7%	31%	52%	18%
Can Tho	46%	7%	24%	55%	22%
Cao Bang	65%	17%	33%	64%	35%
Da Nang	46%	6%	31%	49%	28%
Dak Lak	53%	15%	33%	60%	32%
Dak Nong	60%	12%	36%	57%	48%
Dien Bien	52%	25%	35%	48%	37%
Dong Nai	53%	9%	30%	58%	39%
Dong Thap	30%	10%	24%	27%	30%
Gia Lai	57%	19%	40%	57%	28%
Ha Giang	50%	15%	44%	59%	39%
Ha Nam	56%	6%	26%	56%	33%
Ha Noi	56%	9%	49%	61%	37%
Ha Tinh	66%	9%	36%	57%	30%
Hai Duong	54%	11%	27%	51%	33%
Hai Phong	54%	7%	24%	47%	25%
Hau Giang	39%	8%	25%	58%	22%
Hoa Binh	54%	11%	48%	48%	44%
Hung Yen	61%	12%	52%	58%	36%
Khanh Hoa	49%	5%	31%	50%	33%

Province	Paying informal charges to the inspector(%)	Percentage of revenue in informal payments (% >=10%)	Paying informal charges in land APs (%)	Paying informal charges to win the local gov's contract (%)	Firms worry about bribes at courts (%)
Kien Giang	44%	6%	10%	48%	21%
Kon Tum	58%	15%	36%	57%	30%
Lai Chau	61%	24%	38%	70%	33%
Lam Dong	47%	10%	46%	53%	32%
Lang Son	61%	11%	43%	60%	34%
Lao Cai	59%	18%	41%	40%	26%
Long An	34%	4%	7%	48%	29%
Nam Dinh	56%	11%	57%	45%	36%
Nghe An	54%	13%	41%	63%	32%
Ninh Binh	45%	8%	21%	52%	33%
Ninh Thuan	49%	13%	33%	61%	29%
Phu Tho	60%	9%	43%	55%	26%
Phu Yen	40%	8%	26%	59%	33%
Quang Binh	52%	4%	32%	49%	39%
Quang Nam	45%	10%	33%	54%	27%
Quang Ngai	37%	10%	27%	54%	31%
Quang Ninh	45%	8%	40%	54%	26%
Quang Tri	52%	18%	32%	59%	39%
Soc Trang	28%	10%	8%	54%	19%
Son La	53%	12%	44%	54%	27%
HCMC	45%	9%	42%	55%	36%
TT-Hue	55%	8%	29%	54%	21%
Tay Ninh	42%	6%	32%	45%	25%
Thai Binh	59%	7%	38%	63%	26%
Thai Nguyen	52%	10%	29%	45%	36%
Thanh Hoa	58%	11%	32%	62%	40%
Tien Giang	43%	6%	33%	70%	33%
Tra Vinh	21%	9%	14%	32%	18%
Tuyen Quang	51%	20%	30%	55%	36%
Vinh Long	18%	12%	6%	57%	31%
Vinh Phuc	53%	1%	21%	56%	22%
Yen Bai	52%	14%	53%	60%	39%

Province	Paying informal charges to the inspector(%)	Percentage of revenue in informal payments (% >=10%)	Paying informal charges in land APs (%)	Paying informal charges to win the local gov's contract (%)	Firms worry about bribes at courts (%)
Ha Noi	56%	9%	49%	61%	37%
Min	18%	1%	6%	27%	18%
Median	52%	10%	32%	55%	32%
Max	66%	25%	57%	70%	48%

Bias

Province	Sub-Index 6: Policy Bias	Province give privileges to SOEs causing difficulties to firm's business (%)	Land access as a privilege to SOEs (%)	Credit access as a privilege to SOEs (%)	Mineral exploitation license as a privilege to SOEs (%)	Faster and simpler administrative procedures as a privilege to SOEs (%)	Ease in getting local government's contracts as a privilege to SOEs (%)	Province give priority in solving difficulties to FIEs over domestic one (%)
An Giang	4.99	46%	34%	30%	22%	32%	25%	31%
BRVT	4.33	51%	34%	34%	23%	32%	28%	48%
Bac Giang	4.72	43%	36%	33%	24%	27%	24%	38%
Bac Kan	6.42	28%	23%	23%	18%	16%	19%	31%
Bac Lieu	5.93	36%	27%	27%	14%	28%	20%	36%
Bac Ninh	3.85	44%	35%	30%	17%	27%	28%	61%
Ben Tre	6.23	39%	25%	26%	15%	17%	18%	42%
Binh Dinh	5.63	32%	27%	24%	18%	19%	24%	46%
Binh Duong	5.61	35%	22%	25%	18%	20%	23%	43%
Binh Phuoc	4.15	47%	35%	34%	27%	36%	27%	50%
Binh Thuan	6.12	32%	22%	19%	19%	21%	16%	32%
Ca Mau	6.17	33%	22%	29%	14%	19%	15%	34%
Can Tho	5.14	38%	26%	29%	14%	19%	28%	53%
Cao Bang	4.49	46%	33%	25%	25%	24%	29%	41%
Da Nang	4.95	39%	30%	30%	20%	23%	24%	43%
Dak Lak	6.39	37%	24%	26%	13%	25%	18%	32%
Dak Nong	4.40	45%	32%	36%	24%	30%	30%	49%
Dien Bien	5.86	42%	28%	31%	22%	26%	27%	23%
Dong Nai	4.83	41%	26%	25%	16%	27%	26%	49%
Dong Thap	5.67	42%	33%	37%	19%	23%	24%	37%
Gia Lai	5.42	47%	34%	28%	17%	29%	21%	37%
Ha Giang	5.58	41%	32%	30%	25%	30%	25%	37%
Ha Nam	3.45	52%	34%	33%	22%	29%	27%	61%
Ha Noi	4.07	47%	31%	37%	17%	29%	30%	55%
Ha Tinh	3.33	53%	44%	42%	27%	28%	28%	47%
Hai Duong	4.45	45%	36%	31%	19%	30%	23%	50%
Hai Phong	5.50	31%	25%	27%	16%	22%	22%	44%
Hau Giang	6.41	29%	20%	20%	7%	15%	13%	44%
Hoa Binh	4.33	44%	41%	32%	17%	28%	25%	46%
Hung Yen	4.83	32%	32%	26%	19%	27%	18%	56%
Khanh Hoa	4.89	46%	34%	30%	17%	30%	31%	48%

Province	Sub-Index 6: Policy Bias	Province give privileges to SOEs causing difficulties to firm's business (%)	Land access as a privilege to SOEs (%)	Credit access as a privilege to SOEs (%)	Mineral exploitation license as a privilege to SOEs (%)	Faster and simpler administrative procedures as a privilege to SOEs (%)	Ease in getting local government's contracts as a privilege to SOEs (%)	Province give priority in solving difficulties to FIEs over domestic one (%)
Kien Giang	5.75	38%	29%	23%	18%	26%	18%	41%
Kon Tum	5.36	42%	32%	34%	19%	20%	26%	44%
Lai Chau	6.26	30%	23%	24%	19%	17%	13%	31%
Lam Dong	5.43	41%	24%	25%	15%	17%	23%	44%
Lang Son	5.08	43%	31%	33%	23%	26%	27%	41%
Lao Cai	4.80	48%	30%	35%	24%	28%	25%	43%
Long An	5.55	41%	34%	27%	15%	21%	15%	43%
Nam Dinh	5.65	37%	24%	21%	13%	20%	20%	52%
Nghe An	3.62	48%	38%	34%	22%	27%	28%	55%
Ninh Binh	4.25	44%	36%	37%	23%	27%	23%	48%
Ninh Thuan	5.37	40%	32%	28%	19%	26%	16%	40%
Phu Tho	4.79	38%	28%	25%	20%	18%	16%	49%
Phu Yen	5.60	35%	38%	34%	20%	28%	24%	28%
Quang Binh	4.82	38%	32%	29%	25%	24%	18%	46%
Quang Nam	5.48	36%	29%	25%	18%	23%	19%	51%
Quang Ngai	3.83	48%	33%	32%	23%	25%	27%	54%
Quang Ninh	6.35	26%	19%	20%	17%	18%	18%	42%
Quang Tri	4.76	47%	33%	30%	23%	25%	29%	42%
Soc Trang	4.88	41%	26%	26%	19%	27%	20%	41%
Son La	5.13	51%	38%	28%	16%	25%	22%	42%
HCMC	4.43	48%	29%	32%	18%	29%	32%	50%
TT-Hue	4.44	43%	28%	27%	23%	28%	26%	58%
Tay Ninh	5.37	43%	27%	25%	17%	25%	14%	49%
Thai Binh	5.15	38%	32%	30%	16%	23%	15%	48%
Thai Nguyen	5.16	38%	28%	32%	18%	24%	21%	55%
Thanh Hoa	4.61	37%	26%	32%	22%	28%	20%	54%
Tien Giang	6.15	39%	29%	29%	9%	26%	24%	40%
Tra Vinh	6.31	43%	27%	24%	10%	23%	7%	37%
Tuyen Quang	4.91	49%	35%	42%	23%	31%	21%	39%
Vinh Long	5.35	38%	22%	29%	14%	22%	14%	51%
Vinh Phuc	5.00	41%	24%	27%	18%	18%	20%	51%
Yen Bai	5.24	38%	31%	31%	23%	23%	19%	40%
Ha Noi	4.07	47%	31%	37%	17%	29%	30%	55%

Province	Sub-Index 6: Policy Bias	Province give privileges to SOEs causing difficulties to firm's business (%)	Land access as a privilege to SOEs (%)	Credit access as a privilege to SOEs (%)	Mineral exploitation license as a privilege to SOEs (%)	Faster and simpler administrative procedures as a privilege to SOEs (%)	Ease in getting local government's contracts as a privilege to SOEs (%)	Province give priority in solving difficulties to FIEs over domestic one (%)
Min	3.33	26%	19%	19%	7%	15%	7%	23%
Median	5.14	41%	30%	29%	19%	25%	23%	44%
Max	6.42	53%	44%	42%	27%	36%	32%	61%

Bias

Province	Province give priority to FDI attraction than private sector development (%)	Land access as a privilege to FIEs (%)	CIT reduction/ holidays as a privilege to FIEs (%)	Faster and simpler administrative procedures as a privilege to to FIEs (%)	More local government support during FIEs operation (%)	Contracts and resources go to connected firms (%)	Preferential treatment to big companies is an obstacle to firm's operations (%)
An Giang	40%	28%	22%	20%	22%	78%	49%
BRVT	37%	23%	20%	21%	26%	82%	58%
Bac Giang	64%	42%	26%	29%	40%	66%	43%
Bac Kan	29%	16%	13%	12%	18%	71%	55%
Bac Lieu	41%	23%	16%	21%	29%	63%	52%
Bac Ninh	65%	44%	31%	38%	37%	75%	54%
Ben Tre	39%	22%	20%	17%	22%	62%	49%
Binh Dinh	43%	29%	20%	25%	30%	69%	48%
Binh Duong	50%	31%	25%	21%	31%	67%	49%
Binh Phuoc	58%	29%	30%	26%	29%	75%	52%
Binh Thuan	38%	20%	6%	18%	27%	75%	50%
Ca Mau	33%	15%	7%	13%	23%	78%	49%
Can Tho	43%	26%	16%	22%	31%	69%	63%
Cao Bang	47%	28%	15%	20%	29%	84%	57%
Da Nang	48%	33%	26%	23%	32%	69%	58%
Dak Lak	26%	14%	7%	11%	17%	74%	50%
Dak Nong	40%	20%	18%	13%	22%	86%	59%
Dien Bien	28%	11%	9%	15%	14%	75%	55%
Dong Nai	51%	30%	24%	30%	31%	74%	53%
Dong Thap	40%	22%	18%	21%	27%	60%	54%
Gia Lai	34%	20%	6%	15%	23%	79%	50%
Ha Giang	42%	21%	18%	21%	30%	64%	46%
Ha Nam	61%	43%	26%	38%	36%	72%	68%
Ha Noi	49%	29%	24%	25%	27%	83%	58%
Ha Tinh	61%	49%	31%	31%	40%	77%	55%
Hai Duong	59%	42%	22%	27%	36%	70%	53%
Hai Phong	53%	38%	22%	26%	33%	69%	43%
Hau Giang	40%	20%	14%	11%	14%	74%	56%
Hoa Binh	49%	36%	20%	24%	31%	74%	63%
Hung Yen	52%	35%	24%	28%	30%	76%	50%
Khanh Hoa	45%	24%	14%	19%	34%	75%	51%
Kien Giang	41%	21%	17%	13%	21%	69%	56%
Kon Tum	30%	18%	10%	8%	15%	77%	63%

Province	Province give priority to FDI attraction than private sector development (%)	Land access as a privilege to FIEs (%)	CIT reduction/ holidays as a privilege to FIEs (%)	Faster and simpler administrative procedures as a privilege to to FIEs (%)	More local government support during FIEs operation (%)	Contracts and resources go to connected firms (%)	Preferential treatment to big companies is an obstacle to firm's operations (%)
Lai Chau	32%	18%	11%	21%	23%	70%	53%
Lam Dong	43%	27%	21%	17%	22%	77%	53%
Lang Son	34%	28%	18%	14%	18%	77%	56%
Lao Cai	48%	26%	19%	22%	28%	76%	49%
Long An	46%	29%	18%	23%	23%	72%	47%
Nam Dinh	46%	30%	15%	20%	23%	71%	54%
Nghe An	55%	38%	20%	21%	36%	81%	67%
Ninh Binh	46%	32%	14%	23%	24%	77%	68%
Ninh Thuan	48%	28%	20%	22%	27%	65%	57%
Phu Tho	56%	37%	25%	30%	27%	78%	52%
Phu Yen	36%	27%	17%	13%	21%	73%	47%
Quang Binh	46%	32%	18%	23%	27%	75%	60%
Quang Nam	48%	27%	11%	19%	30%	72%	51%
Quang Ngai	55%	42%	17%	26%	39%	76%	67%
Quang Ninh	37%	25%	13%	19%	25%	68%	50%
Quang Tri	44%	33%	16%	26%	39%	69%	56%
Soc Trang	51%	29%	23%	27%	35%	74%	55%
Son La	33%	25%	8%	18%	20%	77%	59%
HCMC	49%	24%	27%	23%	27%	76%	59%
TT-Hue	53%	28%	28%	25%	28%	76%	57%
Tay Ninh	46%	25%	15%	26%	27%	65%	61%
Thai Binh	49%	36%	17%	24%	30%	71%	54%
Thai Nguyen	54%	37%	25%	28%	32%	66%	45%
Thanh Hoa	55%	34%	19%	22%	34%	78%	53%
Tien Giang	35%	23%	10%	14%	18%	73%	42%
Tra Vinh	42%	25%	7%	21%	26%	66%	45%
Tuyen Quang	49%	29%	13%	21%	25%	68%	55%
Vinh Long	45%	29%	12%	16%	30%	74%	58%
Vinh Phuc	61%	42%	25%	25%	30%	71%	49%
Yen Bai	37%	25%	16%	17%	28%	79%	50%
Ha Noi	49%	29%	24%	25%	27%	83%	58%
Min	26%	11%	6%	8%	14%	60%	42%
Median	46%	28%	18%	21%	27%	74%	54%
Max	65%	49%	31%	38%	40%	86%	68%

Proactivity

Province	Sub-Index 7: Proactivity	The PPC is flexible within legal framework to create favorable business environmt(%)	The PPC is very proactive and creative in solving new problems (%)	Attitude of provincial government toward private sector is positive (%)	Good initiatives at prov. level but not well implemented by DEPARTMENTS(%)
An Giang	6.44	86%	58%	61%	68%
BRVT	5.45	72%	56%	47%	84%
Bac Giang	6.05	74%	54%	57%	75%
Bac Kan	4.15	63%	43%	40%	74%
Bac Lieu	6.04	85%	64%	60%	72%
Bac Ninh	5.81	81%	70%	47%	83%
Ben Tre	7.01	87%	67%	55%	68%
Binh Dinh	6.30	82%	65%	49%	76%
Binh Duong	6.04	80%	70%	43%	82%
Binh Phuoc	5.34	69%	54%	47%	80%
Binh Thuan	5.34	68%	55%	38%	70%
Ca Mau	5.21	65%	64%	35%	74%
Can Tho	6.11	86%	67%	46%	77%
Cao Bang	3.63	56%	39%	36%	82%
Da Nang	6.65	89%	80%	59%	78%
Dak Lak	5.38	71%	54%	40%	79%
Dak Nong	4.73	72%	54%	31%	83%
Dien Bien	4.69	53%	47%	45%	69%
Dong Nai	5.71	73%	58%	32%	76%
Dong Thap	6.96	90%	82%	57%	71%
Gia Lai	4.92	69%	47%	33%	81%
Ha Giang	5.32	70%	55%	45%	62%
Ha Nam	6.11	84%	71%	56%	84%
Ha Noi	4.10	68%	52%	36%	84%
Ha Tinh	5.73	81%	61%	58%	86%
Hai Duong	4.93	72%	58%	36%	87%
Hai Phong	5.22	70%	53%	40%	74%
Hau Giang	6.68	83%	70%	55%	72%
Hoa Binh	5.22	68%	59%	37%	76%
Hung Yen	4.50	65%	49%	37%	77%
Khanh Hoa	5.16	79%	56%	42%	82%

Province	Sub-Index 7: Proactivity	The PPC is flexible within legal framework to create favorable business environmt(%)	The PPC is very proactive and creative in solving new problems (%)	Attitude of provincial government toward private sector is positive (%)	Good initiatives at prov. level but not well implemented by DEPARTMENTS(%)
Kien Giang	4.56	80%	67%	43%	74%
Kon Tum	5.18	70%	54%	35%	78%
Lai Chau	5.15	63%	49%	45%	73%
Lam Dong	5.67	76%	58%	38%	78%
Lang Son	4.50	63%	44%	37%	84%
Lao Cai	6.80	79%	67%	57%	72%
Long An	7.07	88%	68%	60%	78%
Nam Dinh	4.47	62%	51%	41%	75%
Nghe An	5.14	67%	58%	40%	83%
Ninh Binh	6.36	86%	75%	53%	78%
Ninh Thuan	5.87	76%	58%	47%	74%
Phu Tho	5.35	73%	56%	46%	75%
Phu Yen	4.80	62%	48%	41%	81%
Quang Binh	5.65	76%	58%	51%	74%
Quang Nam	6.63	82%	73%	48%	75%
Quang Ngai	5.25	72%	52%	39%	82%
Quang Ninh	6.41	85%	69%	56%	64%
Quang Tri	5.08	63%	55%	40%	75%
Soc Trang	5.22	78%	55%	49%	79%
Son La	4.75	62%	48%	42%	75%
HCMC	5.26	82%	68%	37%	83%
TT-Hue	5.81	72%	60%	49%	82%
Tay Ninh	5.67	81%	64%	43%	78%
Thai Binh	5.44	77%	63%	52%	84%
Thai Nguyen	6.05	78%	65%	52%	78%
Thanh Hoa	5.57	71%	48%	39%	79%
Tien Giang	5.58	80%	62%	37%	76%
Tra Vinh	5.84	81%	54%	50%	77%
Tuyen Quang	5.10	65%	51%	41%	76%
Vinh Long	6.15	86%	71%	49%	69%
Vinh Phuc	5.97	81%	74%	50%	83%

Province	Sub-Index 7: Proactivity	The PPC is flexible within legal framework to create favorable business environmt(%)	The PPC is very proactive and creative in solving new problems (%)	Attitude of provincial government toward private sector is positive (%)	Good initiatives at prov. level but not well implemented by DEPARTMENTS(%)
Yen Bai	5.21	58%	46%	49%	77%
Ha Noi	4.10	68%	52%	36%	84%
Min	3.63	53%	39%	31%	62%
Median	5.44	74%	58%	45%	77%
Max	7.07	90%	82%	61%	87%

Proactivity

Province	Good initiatives at prov. level but not well implemented by DISTRICT authorities (%)	Delay or do nothing in case of lack of clarity in central policies(%)	Provincial authorities handle timely firm's difficulties raised in dialogues(%)	Received local authorities' responses to firm's questions/ problems (%)	Satisfied with local authorities' responses(%)
An Giang	45%	29%	65%	93%	79%
BRVT	54%	23%	62%	95%	72%
Bac Giang	49%	34%	68%	95%	82%
Bac Kan	51%	37%	58%	85%	71%
Bac Lieu	61%	42%	77%	89%	82%
Bac Ninh	65%	32%	72%	96%	69%
Ben Tre	52%	29%	79%	97%	76%
Binh Dinh	62%	29%	74%	95%	84%
Binh Duong	60%	27%	69%	98%	72%
Binh Phuoc	67%	30%	57%	97%	85%
Binh Thuan	53%	32%	63%	89%	88%
Ca Mau	59%	37%	73%	89%	79%
Can Tho	70%	28%	72%	94%	84%
Cao Bang	59%	40%	53%	92%	64%
Da Nang	56%	22%	75%	95%	65%
Dak Lak	60%	31%	61%	97%	79%
Dak Nong	61%	27%	60%	94%	65%
Dien Bien	42%	42%	49%	94%	75%
Dong Nai	64%	17%	64%	97%	79%
Dong Thap	48%	24%	75%	94%	71%
Gia Lai	63%	30%	64%	92%	83%
Ha Giang	56%	26%	64%	94%	58%
Ha Nam	58%	20%	65%	91%	81%
Ha Noi	70%	40%	57%	93%	65%
Ha Tinh	64%	24%	65%	94%	73%
Hai Duong	52%	35%	59%	94%	74%
Hai Phong	57%	29%	62%	92%	80%
Hau Giang	64%	39%	80%	100%	77%
Hoa Binh	59%	37%	68%	95%	72%
Hung Yen	54%	41%	51%	96%	71%
Khanh Hoa	70%	38%	65%	97%	70%

Province	Good initiatives at prov. level but not well implemented by DISTRICT authorities (%)	Delay or do nothing in case of lack of clarity in central policies(%)	Provincial authorities handle timely firm's difficulties raised in dialogues(%)	Received local authorities' responses to firm's questions/ problems (%)	Satisfied with local authorities' responses(%)
Kien Giang	69%	38%	71%	87%	52%
Kon Tum	56%	39%	64%	95%	79%
Lai Chau	58%	32%	62%	96%	73%
Lam Dong	64%	26%	67%	98%	74%
Lang Son	54%	39%	60%	94%	73%
Lao Cai	52%	31%	72%	100%	79%
Long An	62%	33%	79%	97%	93%
Nam Dinh	53%	28%	51%	85%	82%
Nghe An	70%	22%	64%	94%	74%
Ninh Binh	62%	38%	76%	94%	81%
Ninh Thuan	54%	32%	68%	94%	81%
Phu Tho	60%	33%	57%	94%	83%
Phu Yen	40%	37%	53%	93%	77%
Quang Binh	57%	35%	74%	90%	76%
Quang Nam	60%	28%	74%	98%	82%
Quang Ngai	66%	35%	70%	95%	78%
Quang Ninh	58%	35%	67%	94%	83%
Quang Tri	57%	31%	59%	97%	69%
Soc Trang	64%	22%	67%	91%	64%
Son La	64%	34%	67%	95%	63%
HCMC	72%	31%	68%	94%	70%
TT-Hue	61%	32%	73%	95%	79%
Tay Ninh	58%	38%	71%	91%	83%
Thai Binh	68%	29%	66%	90%	86%
Thai Nguyen	53%	23%	73%	88%	82%
Thanh Hoa	63%	27%	69%	97%	79%
Tien Giang	64%	37%	72%	98%	67%
Tra Vinh	55%	34%	78%	94%	68%
Tuyen Quang	56%	24%	65%	85%	89%
Vinh Long	59%	26%	76%	90%	70%
Vinh Phuc	63%	26%	68%	94%	77%

Province	Good initiatives at prov. level but not well implemented by DISTRICT authorities (%)	Delay or do nothing in case of lack of clarity in central policies(%)	Provincial authorities handle timely firm's difficulties raised in dialogues(%)	Received local authorities' responses to firm's questions/ problems (%)	Satisfied with local authorities' responses(%)
Yen Bai	46%	31%	63%	93%	76%
Ha Noi	70%	40%	57%	93%	65%
Min	40%	17%	49%	85%	52%
Median	59%	31%	67%	94%	77%
Max	72%	42%	80%	100%	93%

BSS

Province	Sub-Index 8: Business Support Services	Number of trade fairs held by province in previous year (Hard data - MOIT)	Total number of service providers/ Total number of firms (%, Hard data - GSO)	Number of priv. service providers/Total number of serv. Providers (%, Hard data - GSO)	Firm has used biz info. search services(%)	Used priv. provider for above biz info. search services(%)	Intends to use the service provider again for biz info. search (%)	Firm has used legal consulting services (%)	Used priv. provider for legal consulting services (%)
An Giang	5.99	4	1.40%	88%	49%	28%	72%	62%	48%
BRVT	7.08	9	1.89%	91%	43%	67%	50%	47%	57%
Bac Giang	6.06	7	1.19%	57%	54%	70%	65%	54%	56%
Bac Kan	6.32	4	0.88%	25%	53%	75%	85%	40%	58%
Bac Lieu	5.77	11	1.69%	32%	49%	43%	67%	54%	42%
Bac Ninh	6.86	8	0.90%	71%	58%	79%	61%	65%	63%
Ben Tre	6.87	4	1.61%	85%	57%	62%	67%	69%	58%
Binh Dinh	5.82	11	0.62%	37%	50%	62%	73%	45%	60%
Binh Duong	6.69	12	0.71%	71%	50%	58%	62%	66%	66%
Binh Phuoc	5.51	9	0.99%	54%	41%	61%	72%	46%	42%
Binh Thuan	6.95	9	1.55%	75%	57%	60%	80%	61%	47%
Ca Mau	6.30	13	0.87%	63%	63%	60%	50%	75%	50%
Can Tho	6.84	20	0.75%	60%	42%	71%	81%	60%	65%
Cao Bang	7.18	16	2.57%	47%	60%	72%	84%	60%	56%
Da Nang	6.93	7	1.64%	73%	53%	70%	75%	64%	59%
Dak Lak	6.80	10	1.36%	80%	58%	60%	56%	61%	57%
Dak Nong	6.19	17	1.85%	41%	55%	69%	59%	62%	46%
Dien Bien	6.93	10	0.46%	75%	67%	66%	76%	58%	42%
Dong Nai	6.75	20	0.95%	55%	50%	68%	89%	52%	68%

Province	Sub-Index 8: Business Support Services	Number of trade fairs held by province in previous year (Hard data - MOIT)	Total number of service providers/ Total number of firms (%, Hard data - GSO)	Number of priv. service providers/Total number of serv. Providers (%, Hard data - GSO)	Firm has used biz info. search services(%)	Used priv. provider for above biz info. search services(%)	Intends to use the service provider again for biz info. search (%)	Firm has used legal consulting services (%)	Used priv. provider for legal consulting services (%)
Dong Thap	6.70	10	0.69%	75%	65%	50%	70%	66%	42%
Gia Lai	7.19	11	1.78%	80%	61%	58%	81%	62%	41%
Ha Giang	6.26	16	0.92%	71%	68%	47%	63%	59%	53%
Ha Nam	6.21	6	0.23%	60%	43%	57%	67%	45%	56%
Ha Noi	7.68	20	1.64%	82%	46%	81%	79%	58%	70%
Ha Tinh	6.90	14	0.52%	76%	48%	40%	90%	71%	52%
Hai Duong	6.17	12	0.54%	67%	48%	63%	71%	51%	65%
Hai Phong	6.74	19	1.46%	55%	56%	70%	72%	59%	69%
Hau Giang	5.53	10	0.65%	70%	39%	67%	50%	35%	50%
Hoa Binh	5.94	9	1.90%	63%	63%	59%	50%	61%	37%
Hung Yen	6.38	10	0.71%	71%	44%	79%	64%	53%	65%
Khanh Hoa	6.90	9	2.24%	54%	41%	86%	71%	60%	64%
Kien Giang	7.10	20	1.15%	80%	58%	71%	81%	64%	38%
Kon Tum	6.32	5	0.64%	88%	55%	67%	67%	53%	54%
Lai Chau	6.28	7	1.16%	38%	67%	57%	75%	68%	70%
Lam Dong	6.62	9	1.89%	48%	53%	61%	71%	57%	33%
Lang Son	6.72	11	0.60%	67%	51%	76%	76%	53%	61%
Lao Cai	7.35	12	1.13%	82%	53%	68%	89%	72%	45%
Long An	6.49	20	1.56%	89%	65%	45%	75%	66%	33%
Nam Dinh	6.35	9	0.73%	93%	49%	74%	70%	47%	58%
Nghe An	7.45	20	1.32%	78%	66%	58%	89%	63%	50%

Province	Sub-Index 8: Business Support Services	Number of trade fairs held by province in previous year (Hard data - MOIT)	Total number of service providers/ Total number of firms (%, Hard data - GSO)	Number of priv. service providers/Total number of serv. Providers (%, Hard data - GSO)	Firm has used biz info. search services(%)	Used priv. provider for above biz info. search services(%)	Intends to use the service provider again for biz info. search (%)	Firm has used legal consulting services (%)	Used priv. provider for legal consulting services (%)
Ninh Binh	4.94	6	0.16%	25%	42%	72%	56%	49%	45%
Ninh Thuan	6.00	5	0.52%	57%	59%	33%	71%	62%	45%
Phu Tho	6.62	19	1.59%	82%	48%	68%	59%	55%	57%
Phu Yen	6.61	11	1.47%	64%	56%	61%	74%	55%	44%
Quang Binh	6.45	10	0.67%	63%	54%	68%	76%	63%	44%
Quang Nam	6.44	10	1.22%	78%	56%	55%	69%	59%	50%
Quang Ngai	6.74	5	0.87%	92%	54%	54%	69%	75%	47%
Quang Ninh	7.52	20	0.80%	97%	52%	64%	76%	60%	59%
Quang Tri	5.83	7	0.49%	40%	65%	60%	67%	62%	45%
Soc Trang	5.54	10	1.77%	3%	50%	68%	74%	43%	39%
Son La	6.43	13	1.61%	50%	56%	58%	79%	64%	46%
HCMC	7.82	20	3.89%	76%	39%	56%	75%	59%	59%
TT-Hue	5.69	5	1.08%	51%	44%	55%	68%	55%	70%
Tay Ninh	6.61	6	1.65%	87%	54%	63%	56%	57%	58%
Thai Binh	6.52	12	0.86%	58%	51%	70%	78%	60%	53%
Thai Nguyen	6.00	15	0.47%	42%	50%	59%	59%	53%	40%
Thanh Hoa	6.72	4	2.46%	90%	47%	67%	61%	66%	48%
Tien Giang	6.57	5	1.62%	70%	59%	50%	86%	58%	32%
Tra Vinh	4.77	7	0.29%	50%	51%	56%	50%	52%	40%
Tuyen Quang	6.13	11	1.55%	23%	55%	67%	72%	66%	47%

Province	Sub-Index 8: Business Support Services	Number of trade fairs held by province in previous year (Hard data - MOIT)	Total number of service providers/ Total number of firms (%, Hard data - GSO)	Number of priv. service providers/Total number of serv. Providers (%, Hard data - GSO)	Firm has used biz info. search services(%)	Used priv. provider for above biz info. search services(%)	Intends to use the service provider again for biz info. search (%)	Firm has used legal consulting services (%)	Used priv. provider for legal consulting services (%)
Vinh Long	6.73	5	1.95%	92%	55%	43%	71%	58%	28%
Vinh Phuc	6.81	12	1.21%	77%	57%	77%	68%	68%	78%
Yen Bai	6.94	15	0.56%	67%	66%	57%	81%	60%	48%
Ha Noi	7.68	20	1.64%	82%	46%	81%	79%	58%	70%
Min	4.77	4	0.16%	3%	39%	28%	50%	35%	28%
Median	6.61	10	1.15%	70%	54%	62%	71%	60%	50%
Max	7.82	20	3.89%	97%	68%	86%	90%	75%	78%

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Province	Intends to use the service provider again for legal consulting(%)	Firm has used business match making services(%)	Used priv. provider for biz match making services (%)	Intends to use the service provider again for biz match making(%)	Firm has used trade promotion services (%)	Used priv. provider for trade promotion services (%)	Intends to use the service provider again for trade promotion(%)	Firm has used technology related services (%)
An Giang	57%	31%	75%	50%	58%	43%	57%	54%
BRVT	62%	38%	69%	69%	67%	55%	60%	48%
Bac Giang	60%	45%	65%	47%	36%	22%	67%	50%
Bac Kan	92%	41%	92%	92%	43%	83%	83%	55%
Bac Lieu	53%	39%	45%	64%	52%	36%	57%	52%
Bac Ninh	63%	50%	95%	59%	65%	80%	67%	58%
Ben Tre	71%	46%	77%	62%	48%	57%	86%	64%
Binh Dinh	70%	48%	78%	57%	59%	47%	47%	50%
Binh Duong	58%	42%	83%	63%	50%	69%	44%	57%
Binh Phuoc	68%	38%	57%	71%	43%	44%	56%	29%
Binh Thuan	53%	38%	80%	70%	80%	58%	50%	64%
Ca Mau	63%	45%	43%	71%	65%	31%	69%	59%
Can Tho	65%	41%	80%	80%	56%	61%	67%	55%
Cao Bang	84%	66%	81%	67%	75%	33%	58%	56%
Da Nang	67%	53%	63%	68%	67%	47%	60%	55%
Dak Lak	64%	63%	76%	64%	76%	53%	68%	64%
Dak Nong	54%	42%	67%	60%	52%	45%	55%	68%
Dien Bien	77%	53%	42%	84%	61%	35%	82%	60%
Dong Nai	72%	30%	90%	70%	50%	40%	80%	36%
Dong Thap	74%	46%	45%	100%	76%	44%	81%	72%

Province	Intends to use the service provider again for legal consulting(%)	Firm has used business match making services(%)	Used priv. provider for biz match making services (%)	Intends to use the service provider again for biz match making(%)	Firm has used trade promotion services (%)	Used priv. provider for trade promotion services (%)	Intends to use the service provider again for trade promotion(%)	Firm has used technology related services (%)
Gia Lai	83%	46%	84%	84%	76%	21%	84%	55%
Ha Giang	53%	48%	43%	57%	60%	58%	50%	44%
Ha Nam	76%	45%	65%	52%	56%	33%	72%	60%
Ha Noi	71%	41%	85%	78%	55%	66%	70%	55%
Ha Tinh	78%	52%	81%	75%	67%	25%	75%	63%
Hai Duong	73%	40%	67%	78%	58%	64%	36%	40%
Hai Phong	65%	48%	82%	76%	63%	75%	46%	50%
Hau Giang	75%	26%	57%	43%	35%	50%	67%	24%
Hoa Binh	68%	43%	58%	67%	55%	36%	27%	47%
Hung Yen	62%	39%	92%	75%	43%	50%	33%	35%
Khanh Hoa	64%	50%	95%	75%	54%	62%	69%	54%
Kien Giang	71%	44%	71%	64%	55%	36%	91%	39%
Kon Tum	57%	42%	75%	56%	50%	55%	55%	48%
Lai Chau	65%	48%	79%	57%	67%	33%	83%	50%
Lam Dong	83%	41%	76%	81%	59%	53%	84%	56%
Lang Son	74%	33%	60%	100%	52%	23%	62%	38%
Lao Cai	84%	50%	73%	87%	67%	30%	60%	67%
Long An	70%	44%	44%	69%	50%	0%	56%	41%
Nam Dinh	58%	44%	61%	61%	63%	73%	33%	46%
Nghe An	75%	50%	63%	67%	58%	57%	67%	50%
Ninh Binh	45%	35%	78%	67%	68%	53%	47%	37%

Province	Intends to use the service provider again for legal consulting(%)	Firm has used business match making services(%)	Used priv. provider for biz match making services (%)	Intends to use the service provider again for biz match making(%)	Firm has used trade promotion services (%)	Used priv. provider for trade promotion services (%)	Intends to use the service provider again for trade promotion(%)	Firm has used technology related services (%)
Ninh Thuan	66%	50%	60%	65%	62%	58%	50%	68%
Phu Tho	61%	47%	75%	55%	35%	71%	43%	54%
Phu Yen	75%	37%	92%	69%	62%	54%	69%	44%
Quang Binh	59%	49%	84%	60%	68%	37%	74%	44%
Quang Nam	67%	50%	65%	60%	48%	50%	43%	36%
Quang Ngai	57%	54%	59%	68%	65%	27%	60%	62%
Quang Ninh	76%	48%	79%	83%	59%	50%	75%	43%
Quang Tri	62%	61%	68%	64%	60%	44%	44%	63%
Soc Trang	61%	49%	79%	68%	54%	20%	67%	50%
Son La	64%	49%	68%	73%	63%	27%	73%	43%
HCMC	73%	41%	91%	79%	48%	71%	71%	43%
TT-Hue	52%	40%	76%	53%	59%	26%	52%	63%
Tay Ninh	65%	41%	83%	61%	75%	43%	57%	67%
Thai Binh	63%	43%	85%	60%	58%	58%	47%	59%
Thai Nguyen	76%	48%	70%	60%	63%	53%	47%	55%
Thanh Hoa	59%	46%	50%	63%	57%	50%	63%	43%
Tien Giang	68%	50%	78%	67%	76%	44%	50%	61%
Tra Vinh	40%	35%	89%	33%	56%	33%	22%	31%
Tuyen Quang	68%	64%	75%	56%	73%	75%	38%	79%
Vinh Long	78%	56%	56%	67%	80%	44%	56%	59%
Vinh Phuc	58%	58%	81%	65%	55%	59%	47%	54%

Province	Intends to use the service provider again for legal consulting(%)	Firm has used business match making services(%)	Used priv. provider for biz match making services (%)	Intends to use the service provider again for biz match making(%)	Firm has used trade promotion services (%)	Used priv. provider for trade promotion services (%)	Intends to use the service provider again for trade promotion(%)	Firm has used technology related services (%)
Yen Bai	81%	49%	59%	94%	61%	36%	86%	55%
Ha Noi	71%	41%	85%	78%	55%	66%	70%	55%
Min	40%	26%	42%	33%	35%	0%	22%	24%
Median	66%	46%	75%	67%	59%	47%	60%	54%
Max	92%	66%	95%	100%	80%	83%	91%	79%

BSS

Province	Used priv. provider for technology related services (%)	Intends to use the service provider again for technology related(%)	Firm has used accounting/ financing training services (%)	Used priv. provider for above accounting/ financing training services (%)	Intends to use the service provider again for accounting/ financing training (%)	Firm has used business administration (BADM) training(%)	Used priv. provider for above BADM training(%)	Intends to use the service provider again for BADM training(%)
An Giang	57%	43%	50%	67%	50%	50%	44%	44%
BRVT	64%	73%	63%	79%	84%	48%	91%	91%
Bac Giang	38%	63%	43%	54%	92%	38%	60%	90%
Bac Kan	83%	67%	55%	67%	67%	57%	50%	50%
Bac Lieu	75%	67%	63%	60%	60%	55%	50%	67%
Bac Ninh	79%	71%	62%	69%	58%	62%	67%	57%
Ben Tre	50%	79%	56%	50%	71%	42%	60%	70%
Binh Dinh	57%	57%	58%	58%	63%	54%	54%	46%
Binh Duong	75%	63%	44%	71%	94%	45%	85%	77%
Binh Phuoc	100%	25%	34%	69%	38%	36%	60%	50%
Binh Thuan	100%	56%	61%	64%	82%	67%	60%	70%
Ca Mau	62%	62%	52%	86%	57%	52%	58%	42%
Can Tho	56%	63%	59%	58%	53%	50%	69%	54%
Cao Bang	80%	60%	64%	72%	72%	75%	73%	80%
Da Nang	68%	68%	65%	62%	76%	60%	71%	75%
Dak Lak	75%	56%	64%	48%	57%	50%	67%	67%

Province	Used priv. provider for technology related services (%)	Intends to use the service provider again for technology related(%)	Firm has used accounting/ financing training services (%)	Used priv. provider for above accounting/ financing training services (%)	Intends to use the service provider again for accounting/ financing training (%)	Firm has used business administration (BADM) training(%)	Used priv. provider for above BADM training(%)	Intends to use the service provider again for BADM training(%)
Dak Nong	67%	53%	59%	62%	62%	60%	71%	52%
Dien Bien	39%	89%	66%	43%	83%	65%	50%	75%
Dong Nai	100%	40%	30%	80%	70%	36%	90%	90%
Dong Thap	38%	62%	63%	40%	67%	47%	44%	67%
Gia Lai	45%	73%	70%	57%	74%	59%	40%	75%
Ha Giang	50%	63%	52%	25%	75%	63%	40%	67%
Ha Nam	61%	72%	56%	63%	67%	52%	71%	76%
Ha Noi	73%	80%	58%	75%	69%	43%	80%	71%
Ha Tinh	42%	67%	68%	48%	71%	62%	56%	67%
Hai Duong	50%	50%	44%	64%	64%	45%	54%	62%
Hai Phong	76%	59%	58%	59%	54%	54%	71%	65%
Hau Giang	75%	50%	45%	50%	60%	31%	80%	20%
Hoa Binh	86%	43%	57%	56%	63%	50%	60%	40%
Hung Yen	57%	71%	54%	64%	71%	60%	75%	58%
Khanh Hoa	62%	85%	57%	50%	81%	46%	64%	82%
Kien Giang	71%	71%	57%	42%	58%	55%	64%	82%
Kon Tum	58%	67%	52%	47%	80%	43%	33%	67%
Lai Chau	50%	83%	62%	56%	56%	52%	62%	62%
Lam Dong	64%	71%	51%	70%	70%	44%	71%	71%

Province	Used priv. provider for technology related services (%)	Intends to use the service provider again for technology related(%)	Firm has used accounting/ financing training services (%)	Used priv. provider for above accounting/ financing training services (%)	Intends to use the service provider again for accounting/ financing training (%)	Firm has used business administration (BADM) training(%)	Used priv. provider for above BADM training(%)	Intends to use the service provider again for BADM training(%)
Lang Son	63%	88%	57%	43%	86%	53%	50%	88%
Lao Cai	50%	75%	59%	42%	95%	54%	57%	100%
Long An	14%	29%	50%	45%	73%	50%	57%	71%
Nam Dinh	50%	50%	55%	61%	50%	64%	67%	44%
Nghe An	71%	64%	66%	66%	66%	65%	63%	74%
Ninh Binh	57%	43%	43%	67%	33%	48%	50%	40%
Ninh Thuan	68%	47%	54%	71%	62%	41%	67%	58%
Phu Tho	85%	62%	46%	59%	53%	53%	71%	59%
Phu Yen	63%	63%	48%	62%	62%	43%	78%	78%
Quang Binh	58%	67%	51%	65%	60%	61%	74%	61%
Quang Nam	70%	60%	50%	60%	73%	48%	71%	71%
Quang Ngai	54%	62%	66%	61%	74%	68%	68%	63%
Quang Ninh	56%	89%	61%	72%	60%	47%	69%	56%
Quang Tri	41%	41%	74%	52%	55%	77%	65%	43%
Soc Trang	64%	64%	52%	56%	63%	47%	50%	69%

Province	Used priv. provider for technology related services (%)	Intends to use the service provider again for technology related(%)	Firm has used accounting/ financing training services (%)	Used priv. provider for above accounting/ financing training services (%)	Intends to use the service provider again for accounting/ financing training (%)	Firm has used business administration (BADM) training(%)	Used priv. provider for above BADM training(%)	Intends to use the service provider again for BADM training(%)
Son La	46%	62%	55%	48%	83%	59%	50%	68%
HCMC	86%	75%	51%	82%	76%	45%	91%	81%
TT-Hue	80%	33%	50%	61%	57%	51%	68%	42%
Tay Ninh	71%	57%	49%	79%	53%	45%	69%	54%
Thai Binh	74%	74%	63%	69%	56%	60%	64%	64%
Thai Nguyen	64%	64%	50%	67%	71%	42%	50%	64%
Thanh Hoa	56%	67%	57%	80%	70%	55%	63%	63%
Tien Giang	55%	73%	60%	53%	67%	57%	38%	77%
Tra Vinh	100%	25%	41%	67%	33%	36%	100%	0%
Tuyen Quang	55%	55%	55%	42%	58%	62%	77%	69%
Vinh Long	40%	60%	58%	57%	71%	50%	67%	67%
Vinh Phuc	79%	50%	68%	65%	56%	56%	74%	57%
Yen Bai	33%	75%	59%	48%	83%	53%	39%	89%
Ha Noi	73%	80%	58%	75%	69%	43%	80%	71%
Min	14%	25%	30%	25%	33%	31%	33%	0%
Median	63%	63%	57%	61%	67%	52%	64%	67%
Max	100%	89%	74%	86%	95%	77%	100%	100%

Labor Training

Province	Sub-Index 9: Labor Policy	Good general education at the province(%)	Good vocational training at the province(%)	Firm has used labor exchange services (%)	Used private provider for the labor exchange services (%)	Intends to use the service provider again for labor exchange services (%)
An Giang	5.69	70%	48%	54%	50%	71%
BRVT	7.29	61%	37%	62%	67%	58%
Bac Giang	6.32	56%	36%	52%	60%	47%
Bac Kan	6.09	52%	29%	55%	50%	67%
Bac Lieu	5.25	62%	44%	57%	63%	38%
Bac Ninh	7.56	64%	45%	57%	89%	44%
Ben Tre	6.45	68%	47%	59%	50%	50%
Binh Dinh	6.51	66%	49%	65%	58%	62%
Binh Duong	6.35	57%	49%	67%	66%	64%
Binh Phuoc	5.60	54%	28%	41%	73%	60%
Binh Thuan	6.18	49%	36%	75%	60%	60%
Ca Mau	5.09	57%	30%	52%	46%	31%
Can Tho	6.54	69%	48%	63%	67%	74%
Cao Bang	6.89	50%	30%	76%	76%	60%
Da Nang	8.07	69%	55%	65%	80%	78%
Dak Lak	6.14	60%	38%	73%	63%	67%
Dak Nong	5.15	45%	25%	66%	71%	57%
Dien Bien	5.70	52%	21%	66%	43%	81%
Dong Nai	6.73	52%	34%	52%	88%	71%
Dong Thap	5.93	66%	51%	62%	50%	69%
Gia Lai	5.56	61%	27%	64%	64%	64%
Ha Giang	5.09	46%	31%	43%	56%	78%
Ha Nam	6.63	58%	38%	60%	65%	69%
Ha Noi	8.09	49%	32%	63%	91%	75%
Ha Tinh	7.04	50%	31%	69%	67%	61%
Hai Duong	6.91	55%	40%	66%	68%	63%
Hai Phong	8.17	53%	37%	65%	85%	63%
Hau Giang	5.17	65%	39%	56%	80%	70%
Hoa Binh	6.55	58%	32%	63%	58%	50%
Hung Yen	7.16	56%	32%	57%	94%	47%
Khanh Hoa	6.25	51%	38%	74%	65%	65%

Province	Sub-Index 9: Labor Policy	Good general education at the province(%)	Good vocational training at the province(%)	Firm has used labor exchange services (%)	Used private provider for the labor exchange services (%)	Intends to use the service provider again for labor exchange services (%)
Kien Giang	5.79	57%	33%	54%	67%	60%
Kon Tum	5.57	53%	30%	59%	50%	54%
Lai Chau	5.46	42%	26%	65%	62%	54%
Lam Dong	6.54	66%	42%	57%	64%	82%
Lang Son	6.19	56%	25%	59%	50%	63%
Lao Cai	6.56	61%	46%	69%	40%	75%
Long An	6.06	66%	52%	68%	31%	69%
Nam Dinh	7.31	70%	42%	67%	75%	60%
Nghe An	6.94	52%	35%	53%	60%	65%
Ninh Binh	7.38	56%	36%	61%	65%	50%
Ninh Thuan	6.19	57%	34%	75%	63%	50%
Phu Tho	6.90	61%	38%	50%	54%	62%
Phu Yen	6.24	65%	31%	75%	61%	72%
Quang Binh	6.58	58%	30%	66%	70%	48%
Quang Nam	6.52	60%	47%	62%	74%	39%
Quang Ngai	6.44	65%	42%	71%	67%	71%
Quang Ninh	7.76	54%	37%	57%	43%	74%
Quang Tri	6.23	59%	40%	72%	26%	61%
Soc Trang	5.30	65%	43%	64%	52%	61%
Son La	5.32	47%	28%	57%	69%	63%
HCMC	7.27	52%	41%	63%	92%	69%
TT-Hue	6.86	70%	42%	57%	61%	61%
Tay Ninh	6.38	62%	38%	66%	78%	70%
Thai Binh	6.47	55%	33%	64%	64%	52%
Thai Nguyen	7.70	62%	44%	60%	57%	71%
Thanh Hoa	6.51	67%	39%	79%	53%	67%
Tien Giang	6.01	69%	47%	64%	60%	76%
Tra Vinh	5.30	60%	48%	62%	63%	56%
Tuyen Quang	6.72	47%	33%	73%	75%	38%
Vinh Long	6.63	68%	49%	65%	65%	50%
Vinh Phuc	6.68	61%	38%	72%	74%	61%
Yen Bai	6.22	49%	25%	54%	62%	77%

Province	Sub-Index 9: Labor Policy	Good general education at the province(%)	Good vocational training at the province(%)	Firm has used labor exchange services (%)	Used private provider for the labor exchange services (%)	Intends to use the service provider again for labor exchange services (%)
Ha Noi	8.09	49%	32%	63%	91%	75%
Min	5.09	42%	21%	41%	26%	31%
Median	6.45	58%	38%	63%	64%	63%
Max	8.17	70%	55%	79%	94%	82%

Labor Training

Province	Percentage of total business costs spent on labor training (%)	Percentage of total business costs spent on labor recruitment	Overall satisfaction with labor (%)	Ratio of vocational training school graduates to untrained laborers (%, Hard data - MOLISA)	Secondary school graduates as % of workforce (%, Hard data - MOLISA)	Percentage of workers having completed training at vocational schools (%)
An Giang	7.49	6.66	94%	5%	5%	49
BRVT	4.97	6.09	90%	13%	11%	49
Bac Giang	6.51	3.11	95%	6%	8%	53
Bac Kan	3.37	2.75	86%	3%	8%	49
Bac Lieu	5.25	5.64	90%	1%	3%	45
Bac Ninh	4.73	5.09	92%	12%	12%	53
Ben Tre	2.92	3.68	98%	4%	5%	48
Binh Dinh	4.92	5.85	94%	7%	7%	46
Binh Duong	7.89	6.14	94%	7%	7%	45
Binh Phuoc	7.12	6.46	89%	4%	6%	45
Binh Thuan	5.12	4.69	87%	4%	7%	39
Ca Mau	3.87	4.42	86%	2%	3%	47
Can Tho	6.15	4.63	89%	6%	6%	56
Cao Bang	4.74	3.88	85%	5%	12%	46
Da Nang	7.28	5.77	93%	14%	14%	55
Dak Lak	6.62	7.99	97%	4%	7%	52
Dak Nong	7.64	7.06	79%	2%	5%	46
Dien Bien	5.84	4.23	77%	3%	8%	44
Dong Nai	6.18	4.95	90%	8%	9%	45
Dong Thap	5.47	5.68	93%	4%	5%	43
Gia Lai	6.24	7.01	87%	3%	5%	51
Ha Giang	5.28	4.46	81%	1%	5%	44
Ha Nam	6.46	4.65	91%	7%	10%	43
Ha Noi	7.00	4.62	90%	16%	14%	51
Ha Tinh	7.10	3.62	90%	11%	10%	49
Hai Duong	6.31	5.12	92%	10%	11%	45
Hai Phong	5.84	3.95	95%	16%	14%	57
Hau Giang	8.22	7.55	94%	1%	2%	48
Hoa Binh	6.87	3.45	88%	6%	9%	58

Province	Percentage of total business costs spent on labor training (%)	Percentage of total business costs spent on labor recruitment	Overall satisfaction with labor (%)	Ratio of vocational training school graduates to untrained laborers (%, Hard data - MOLISA)	Secondary school graduates as % of workforce (%, Hard data - MOLISA)	Percentage of workers having completed training at vocational schools (%)
Hung Yen	5.63	4.00	87%	11%	11%	45
Khanh Hoa	6.16	8.05	87%	5%	8%	58
Kien Giang	5.03	5.12	91%	3%	4%	41
Kon Tum	5.81	4.11	86%	3%	5%	45
Lai Chau	5.37	4.86	75%	3%	6%	43
Lam Dong	4.58	5.88	91%	5%	7%	47
Lang Son	5.47	3.37	91%	4%	9%	50
Lao Cai	5.98	3.88	87%	4%	9%	57
Long An	5.95	5.47	91%	5%	6%	47
Nam Dinh	5.46	3.52	85%	9%	10%	50
Nghe An	6.79	4.90	95%	10%	11%	54
Ninh Binh	7.42	5.44	92%	16%	14%	52
Ninh Thuan	4.82	4.80	91%	3%	7%	52
Phu Tho	4.74	4.22	85%	10%	11%	50
Phu Yen	5.02	6.43	92%	4%	8%	45
Quang Binh	6.51	4.48	89%	9%	8%	58
Quang Nam	6.49	7.31	90%	6%	9%	57
Quang Ngai	5.73	5.66	89%	5%	8%	53
Quang Ninh	5.21	3.73	92%	16%	14%	59
Quang Tri	6.26	5.88	85%	8%	11%	38
Soc Trang	5.11	6.49	88%	2%	4%	36
Son La	7.83	8.51	86%	4%	6%	45
HCMC	7.60	5.56	92%	11%	10%	49
TT-Hue	7.11	4.90	92%	10%	10%	53
Tay Ninh	6.27	4.86	89%	5%	6%	44
Thai Binh	5.18	3.95	94%	7%	8%	45
Thai Nguyen	3.86	3.50	87%	14%	10%	59
Thanh Hoa	8.22	5.47	88%	8%	8%	54
Tien Giang	7.42	5.12	93%	4%	4%	44
Tra Vinh	6.21	9.11	93%	3%	5%	37

Province	Percentage of total business costs spent on labor training (%)	Percentage of total business costs spent on labor recruitment	Overall satisfaction with labor (%)	Ratio of vocational training school graduates to untrained laborers (%, Hard data - MOLISA)	Secondary school graduates as % of workforce (%, Hard data - MOLISA)	Percentage of workers having completed training at vocational schools (%)
Tuyen Quang	5.11	4.34	85%	8%	9%	48
Vinh Long	3.11	3.35	94%	6%	6%	42
Vinh Phuc	7.92	7.12	86%	10%	11%	50
Yen Bai	6.15	2.79	86%	5%	8%	45
Ha Noi	7.00	4.62	90%	16%	14%	51
Min	2.92	2.75	75%	1%	2%	36
Median	5.98	4.90	90%	5%	8%	48
Max	8.22	9.11	98%	16%	14%	59

Law & Order

Province	Sub-Index 10: Law & Order	Legal system will uphold firms' property rights and contracts (%)	Firms can appeal unjust cadres/ decisions (%)	The provincial leaders will discipline the offending staffs (%)	Willingness to use court in case a dispute arises (%)	Provincial court judges economic cases by the law (%)	Judgement by the court is fair (%)	Provincial court resolve economic cases quickly (%)	Court judgements are enforced quickly (%)
An Giang	6.15	92%	39%	37%	33%	92%	89%	63%	68%
BRVT	5.55	78%	29%	36%	32%	83%	78%	58%	66%
Bac Giang	6.10	84%	44%	42%	34%	90%	85%	71%	77%
Bac Kan	6.06	86%	30%	36%	36%	88%	82%	68%	71%
Bac Lieu	5.68	80%	31%	46%	21%	84%	83%	65%	66%
Bac Ninh	5.39	86%	31%	31%	25%	93%	88%	64%	67%
Ben Tre	6.78	87%	38%	51%	42%	91%	88%	63%	67%
Binh Dinh	6.31	88%	28%	37%	38%	95%	91%	80%	79%
Binh Duong	6.39	86%	31%	40%	38%	96%	85%	69%	75%
Binh Phuoc	4.02	77%	28%	29%	38%	85%	74%	56%	60%
Binh Thuan	4.82	89%	22%	38%	45%	82%	75%	53%	59%
Ca Mau	5.45	83%	33%	33%	45%	84%	84%	64%	68%
Can Tho	6.51	86%	30%	35%	33%	92%	85%	72%	68%
Cao Bang	5.61	81%	27%	29%	36%	85%	82%	53%	51%
Da Nang	6.74	88%	29%	35%	26%	92%	91%	73%	76%
Dak Lak	5.84	89%	30%	38%	41%	86%	81%	64%	67%
Dak Nong	4.27	82%	23%	25%	38%	85%	72%	57%	58%
Dien Bien	6.00	83%	27%	30%	46%	88%	81%	73%	72%
Dong Nai	5.77	83%	30%	41%	31%	87%	85%	62%	68%
Dong Thap	7.10	90%	43%	51%	37%	99%	93%	80%	70%

Province	Sub-Index 10: Law & Order	Legal system will uphold firms' property rights and contracts (%)	Firms can appeal unjust cadres/ decisions (%)	The provincial leaders will discipline the offending staffs (%)	Willingness to use court in case a dispute arises (%)	Provincial court judges economic cases by the law (%)	Judgement by the court is fair (%)	Provincial court resolve economic cases quickly (%)	Court judgements are enforced quickly (%)
Gia Lai	5.70	86%	23%	24%	37%	89%	87%	49%	61%
Ha Giang	7.01	86%	38%	42%	39%	91%	80%	71%	73%
Ha Nam	5.77	86%	38%	31%	36%	88%	83%	68%	67%
Ha Noi	4.88	80%	25%	25%	27%	84%	78%	54%	59%
Ha Tinh	5.75	87%	34%	37%	27%	89%	82%	70%	73%
Hai Duong	5.63	85%	29%	34%	28%	88%	83%	61%	69%
Hai Phong	5.48	85%	29%	28%	32%	89%	86%	60%	69%
Hau Giang	6.14	81%	38%	48%	38%	88%	87%	60%	67%
Hoa Binh	5.63	81%	20%	38%	36%	82%	82%	67%	60%
Hung Yen	5.37	78%	34%	34%	34%	81%	70%	52%	61%
Khanh Hoa	5.46	88%	27%	31%	36%	94%	84%	69%	69%
Kien Giang	6.15	86%	32%	38%	35%	88%	83%	67%	74%
Kon Tum	5.05	79%	21%	27%	34%	83%	78%	64%	62%
Lai Chau	6.82	91%	28%	35%	42%	89%	82%	70%	78%
Lam Dong	6.03	88%	27%	29%	36%	91%	83%	66%	72%
Lang Son	5.36	78%	34%	34%	31%	81%	75%	57%	61%
Lao Cai	6.32	79%	33%	42%	39%	89%	82%	61%	63%
Long An	7.20	90%	45%	46%	34%	94%	91%	76%	82%
Nam Dinh	6.73	85%	26%	38%	29%	93%	85%	76%	74%
Nghe An	5.13	83%	30%	30%	20%	83%	79%	66%	69%
Ninh Binh	6.13	88%	27%	28%	41%	91%	89%	79%	76%

Province	Sub-Index 10: Law & Order	Legal system will uphold firms' property rights and contracts (%)	Firms can appeal unjust cadres/ decisions (%)	The provincial leaders will discipline the offending staffs (%)	Willingness to use court in case a dispute arises (%)	Provincial court judges economic cases by the law (%)	Judgement by the court is fair (%)	Provincial court resolve economic cases quickly (%)	Court judgements are enforced quickly (%)
Ninh Thuan	6.01	85%	36%	40%	29%	87%	84%	68%	67%
Phu Tho	6.28	76%	35%	38%	32%	81%	76%	69%	68%
Phu Yen	5.15	83%	23%	27%	26%	81%	73%	56%	53%
Quang Binh	5.63	80%	26%	33%	36%	87%	80%	73%	69%
Quang Nam	6.99	85%	32%	39%	36%	91%	85%	70%	68%
Quang Ngai	6.38	87%	33%	40%	40%	89%	84%	67%	77%
Quang Ninh	5.63	84%	32%	40%	37%	91%	84%	75%	76%
Quang Tri	5.39	84%	34%	33%	38%	86%	82%	65%	73%
Soc Trang	6.03	84%	37%	49%	33%	88%	82%	67%	63%
Son La	5.94	86%	22%	23%	38%	86%	80%	63%	67%
HCMC	5.13	82%	29%	30%	26%	87%	79%	60%	62%
TT-Hue	6.00	90%	31%	27%	33%	93%	92%	61%	73%
Tay Ninh	5.43	82%	30%	37%	37%	86%	79%	58%	66%
Thai Binh	5.51	85%	33%	30%	30%	88%	81%	63%	68%
Thai Nguyen	6.42	88%	45%	39%	36%	94%	89%	73%	74%
Thanh Hoa	5.74	85%	34%	38%	29%	85%	83%	69%	69%
Tien Giang	4.84	80%	29%	34%	29%	87%	79%	59%	64%
Tra Vinh	6.72	91%	40%	46%	46%	94%	87%	59%	62%
Tuyen Quang	5.95	85%	27%	26%	48%	88%	84%	69%	72%
Vinh Long	7.08	86%	45%	49%	44%	88%	88%	62%	66%
Vinh Phuc	6.28	90%	31%	36%	30%	93%	88%	76%	72%

Province	Sub-Index 10: Law & Order	Legal system will uphold firms' property rights and contracts (%)	Firms can appeal unjust cadres/ decisions (%)	The provincial leaders will discipline the offending staffs (%)	Willingness to use court in case a dispute arises (%)	Provincial court judges economic cases by the law (%)	Judgement by the court is fair (%)	Provincial court resolve economic cases quickly (%)	Court judgements are enforced quickly (%)
Yen Bai	6.17	81%	23%	31%	46%	88%	83%	68%	68%
Ha Noi	4.88	80%	25%	25%	27%	84%	78%	54%	59%
Min	4.02	76%	20%	23%	20%	81%	70%	49%	51%
Median	5.94	85%	30%	36%	36%	88%	83%	66%	68%
Max	7.20	92%	45%	51%	48%	99%	93%	80%	82%

Law & Order

Province	Provincial legal assisting agencies support business quickly (%)	Formal and informal costs are acceptable (%)	Number of cases filed by private domestic firms per 100 enterprises (%, Hard data - Supreme Court)	Ratio of private plaintiffs to total Hard data - Supreme Court)	Ratio of economic cases solved (%, Hard data - Supreme Court)	Good security situation in the province (%)	Was firm a victim of theft or break in last year? (% YES)	Local police handle firm's break-in case effectively (%)	Did firm have to pay money to gangsters groups (% YES)
An Giang	81%	79%	5.83	95%	68%	62%	24%	68%	5%
BRVT	65%	76%	6.49	97%	61%	65%	16%	60%	5%
Bac Giang	74%	80%	0.00	0%	75%	63%	14%	68%	3%
Bac Kan	70%	73%	0.00	0%	59%	64%	5%	67%	1%
Bac Lieu	70%	85%	4.62	64%	81%	53%	25%	75%	4%
Bac Ninh	68%	73%	0.52	67%	75%	55%	11%	62%	4%
Ben Tre	82%	87%	2.88	98%	97%	52%	17%	81%	5%
Binh Dinh	77%	85%	0.25	85%	71%	53%	14%	74%	3%
Binh Duong	80%	82%	0.12	48%	86%	59%	15%	67%	1%
Binh Phuoc	61%	66%	0.00	0%	68%	48%	22%	58%	5%
Binh Thuan	60%	75%	0.23	64%	90%	41%	23%	63%	4%
Ca Mau	75%	81%	1.16	100%	66%	44%	27%	63%	1%
Can Tho	78%	85%	7.15	100%	64%	62%	18%	76%	3%
Cao Bang	58%	79%	0.17	100%	67%	57%	11%	74%	2%
Da Nang	80%	84%	0.09	92%	84%	73%	15%	80%	1%
Dak Lak	72%	80%	0.13	100%	83%	51%	20%	65%	2%
Dak Nong	67%	68%	0.67	89%	67%	49%	23%	69%	7%

Province	Provincial legal assisting agencies support business quickly (%)	Formal and informal costs are acceptable (%)	Number of cases filed by private domestic firms per 100 enterprises (%, Hard data - Supreme Court)	Ratio of private plaintiffs to total Hard data - Supreme Court)	Ratio of economic cases solved (%, Hard data - Supreme Court)	Good security situation in the province (%)	Was firm a victim of theft or break in last year? (% YES)	Local police handle firm's break-in case effectively (%)	Did firm have to pay money to gangsters groups (% YES)
Dien Bien	71%	71%	0.00	0%	100%	64%	10%	77%	2%
Dong Nai	70%	81%	0.47	100%	69%	45%	12%	67%	4%
Dong Thap	84%	88%	3.49	79%	86%	71%	17%	69%	5%
Gia Lai	65%	80%	4.49	80%	90%	51%	12%	80%	4%
Ha Giang	76%	73%	0.92	88%	92%	73%	11%	73%	1%
Ha Nam	77%	78%	0.50	92%	63%	58%	13%	68%	5%
Ha Noi	68%	67%	1.37	85%	57%	53%	14%	62%	2%
Ha Tinh	76%	79%	0.00	0%	100%	53%	15%	77%	3%
Hai Duong	68%	74%	1.14	41%	70%	47%	12%	75%	2%
Hai Phong	75%	82%	0.11	80%	84%	49%	13%	59%	2%
Hau Giang	73%	70%	0.26	100%	93%	62%	17%	55%	3%
Hoa Binh	67%	76%	1.14	55%	68%	63%	14%	77%	4%
Hung Yen	59%	60%	3.47	98%	54%	45%	9%	76%	3%
Khanh Hoa	76%	81%	0.47	100%	71%	34%	22%	61%	0%
Kien Giang	81%	78%	2.39	92%	76%	60%	23%	60%	0%
Kon Tum	69%	74%	5.01	98%	90%	41%	13%	50%	3%
Lai Chau	76%	77%	0.00	0%	100%	77%	7%	89%	3%
Lam Dong	70%	82%	0.19	100%	77%	61%	13%	77%	4%

Province	Provincial legal assisting agencies support business quickly (%)	Formal and informal costs are acceptable (%)	Number of cases filed by private domestic firms per 100 enterprises (%, Hard data - Supreme Court)	Ratio of private plaintiffs to total Hard data - Supreme Court)	Ratio of economic cases solved (%, Hard data - Supreme Court)	Good security situation in the province (%)	Was firm a victim of theft or break in last year? (% YES)	Local police handle firm's break-in case effectively (%)	Did firm have to pay money to gangsters groups (% YES)
Lang Son	62%	67%	0.00	0%	90%	64%	12%	76%	3%
Lao Cai	75%	75%	0.13	50%	80%	63%	9%	76%	2%
Long An	84%	85%	3.14	90%	76%	57%	13%	75%	2%
Nam Dinh	77%	79%	1.10	88%	100%	64%	5%	71%	2%
Nghe An	72%	76%	0.58	86%	88%	54%	17%	67%	4%
Ninh Binh	88%	90%	0.04	5%	85%	62%	12%	73%	3%
Ninh Thuan	73%	78%	0.07	100%	95%	63%	19%	68%	4%
Phu Tho	69%	84%	0.65	56%	94%	65%	10%	74%	1%
Phu Yen	58%	69%	0.70	86%	73%	55%	14%	71%	1%
Quang Binh	75%	80%	0.46	30%	54%	47%	13%	82%	2%
Quang Nam	74%	88%	1.58	96%	90%	69%	11%	69%	0%
Quang Ngai	79%	80%	0.22	35%	88%	56%	14%	73%	1%
Quang Ninh	81%	77%	0.05	25%	78%	55%	14%	57%	4%
Quang Tri	73%	81%	0.30	38%	77%	54%	22%	71%	3%
Soc Trang	71%	79%	3.30	82%	77%	43%	24%	78%	2%
Son La	73%	75%	0.32	67%	60%	70%	11%	70%	0%
HCMC	64%	72%	0.11	100%	50%	52%	11%	51%	2%
TT-Hue	77%	81%	0.00	0%	58%	67%	8%	82%	3%

Province	Provincial legal assisting agencies support business quickly (%)	Formal and informal costs are acceptable (%)	Number of cases filed by private domestic firms per 100 enterprises (%, Hard data - Supreme Court)	Ratio of private plaintiffs to total Hard data - Supreme Court)	Ratio of economic cases solved (%, Hard data - Supreme Court)	Good security situation in the province (%)	Was firm a victim of theft or break in last year? (% YES)	Local police handle firm's break-in case effectively (%)	Did firm have to pay money to gangsters groups (% YES)
Tay Ninh	71%	82%	1.27	61%	98%	59%	19%	44%	2%
Thai Binh	73%	74%	0.20	100%	62%	55%	10%	74%	6%
Thai Nguyen	79%	83%	0.20	100%	53%	51%	11%	68%	3%
Thanh Hoa	73%	79%	0.41	65%	87%	50%	12%	81%	6%
Tien Giang	78%	81%	0.00	0%	84%	40%	23%	65%	1%
Tra Vinh	69%	83%	3.17	66%	89%	48%	15%	64%	0%
Tuyen Quang	77%	80%	0.48	100%	85%	59%	14%	73%	4%
Vinh Long	71%	80%	0.60	92%	86%	54%	10%	70%	0%
Vinh Phuc	79%	80%	0.40	82%	84%	59%	16%	77%	3%
Yen Bai	68%	79%	0.28	43%	95%	64%	7%	80%	4%
Ha Noi	68%	67%	1.37	85%	57%	53%	14%	62%	2%
Min	58%	60%	0.00	0%	50%	34%	5%	44%	0%
Median	73%	79%	0.46	82%	80%	56%	14%	71%	3%
Max	88%	90%	7.15	100%	100%	77%	27%	89%	7%

APPENDIX 2: TABLE OF PCI 2017'S 10 SUBINDICES

Table 1: Comparison of Entry Costs Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011	Notes
1. Length of business registration in days (Median).	PCI Survey Question: C1	Min	12	7	5	6.5	7	7	Phone survey
		Median	20	15	12.25	10	10	8.5	
		Max	58	22.5	15	15	15	15	
		Correlation w/ Previous Year	NA	0.27*	0.46*	0.56*	0.49*	0.41*	
2. Length of business re-registration in days (Median).	PCI Survey Question: C2	Min	6	3	3	3	2.5	3	Phone survey
		Median	10	7	7	7	7	7	
		Max	35	15	10	10	12.5	14.5	
		Correlation w/ Previous Year	NA	0.24*	0.53*	0.67*	0.48*	0.29*	
~~Median number of days to wait for Land Use Rights Certificate~~	~~PCI Survey Questions: B4.2~~	~~Min~~	~~40~~	~~30~~	~~30~~	~~15~~	~~20~~	~~15~~	Move to sub 2
		~~Median~~	~~121~~	~~60~~	~~38.5~~	~~32.5~~	~~30~~	~~30~~	
		~~Max~~	~~338~~	~~180~~	~~105~~	~~180~~	~~150~~	~~90~~	
		~~Correlation w/ Previous Year~~	~~NA~~	~~0.16~~	~~0.43*~~	~~0.23*~~	~~0.26*~~	~~0.12*~~	
3. Percentage of firms waiting for more than one month to complete all steps necessary to start operations	PCI Survey Question: C5	Min	3.23	5.18	6.67	3.84	0	0	Phone survey
		Median	25.81	27.21	21.91	19.35	24.39	14.7	
		Max	44	53.8	39.13	38.46	39.62	33.3	
		Correlation w/ Previous Year	0.24	0.26*	0.15	0.09	0.39*	0.08*	
4. Percentage of firms waiting more than three months to complete all steps necessary to start operations.	PCI Survey Question: C5	Min	0	0	0	0	0	0	Phone survey
		Median	5.78	6.78	5.72	4.44	5.77	3.33	
		Max	25.64	27.27	16	20.72	18.87	14.8	
		Correlation w/ Previous Year	0.02	0.15	0.18	0.02	0.14	0.02*	
~~Percentage of firms registering or re-registering through one-stop-shop.~~	~~PCI Survey Question: C3~~	~~Min~~							Drop
		~~Median~~							
		~~Max~~							
		~~Correlation w/ Previous Year~~							
5. Percentage of firms registering or re-registering through new methods: online, public admnistration center & post offices - New variable in 2017	PCI Survey Question: C3	Min							
		Median							
		Max							
		Correlation w/ Previous Year							

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011	Notes
6. Procedures at one-stop-shop are transparently listed (% Agree)	PCI Survey Question: C3.1.1	Min							Phone survey
		Median							
		Max							
		Correlation w/ Previous Year							
7. Guidance and instruction on procedures at one-stop-shop are clear and adequate (% Agree)	PCI Survey Question: C3.1.2	Min							Phone survey
		Median							
		Max							
		Correlation w/ Previous Year							
8. Staffs at one-stop-shop are professional and knowledgable (% Agree)	PCI Survey Question: C3.1.3	Min							Phone survey
		Median							
		Max							
		Correlation w/ Previous Year							
9. Staffs at one-stop-shop are friendly (% Agree)	PCI Survey Question: C3.1.4	Min							Phone survey
		Median							
		Max							
		Correlation w/ Previous Year							
10. IT application at one-stop-shop is good (% Agree)	PCI Survey Question: C3.1.5	Min							Phone survey
		Median							
		Max							
		Correlation w/ Previous Year							
~~None of the criteria above are met (% Agree)~~	~~PCI Survey Question: C3.1.6~~	~~Min~~							Drop
		~~Median~~							
		~~Max~~							
		~~Correlation w/ Previous Year~~							

* Significant at 5% level; NA = Not applicable
All values are at the provincial level.
Data include only firms registered within two calendar years preceding the survey.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years, reflecting changes in survey questions and ordering in 2006.

Table 1: Comparison of Entry Costs Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Notes
1. Length of business registration in days (Median).	PCI Survey Question: C1	Min	7	7	8	5	3.75	3	Phone survey
		Median	10	10	12	8	7	6	
		Max	15	17.5	19	12	10	7	
		Correlation w/ Previous Year	0.52*	0.48*	0.26*	0.45*	0.44*	0.25*	
2. Length of business re-registration in days (Median).	PCI Survey Question: C2	Min	3	3	2	2	1.5	1	Phone survey
		Median	7	7	7	5	5	4.5	
		Max	15	7	10.5	7	7	11.5	
		Correlation w/ Previous Year	0.24	0.29*	0.47*	0.31*	0.54*	0.33*	
~~Median number of days to wait for Land Use Rights Certificate~~	~~PCI Survey Questions: B4.2~~	~~Min~~	~~15~~	~~15~~	~~15~~	~~10~~	~~7~~		Move to sub 2
		~~Median~~	~~30~~	~~30~~	~~30~~	~~30~~	~~30~~		
		~~Max~~	~~105~~	~~240~~	~~365~~	~~95~~	~~60~~		
		~~Correlation w/ Previous Year~~	~~0.18~~	~~0.12~~	~~0.03~~	~~0.27*~~	~~0.06~~		
3. Percentage of firms waiting for more than one month to complete all steps necessary to start operations	PCI Survey Question: C5	Min	0	0	0	1.16	0.00	2.78	Phone survey
		Median	13.95	16.67	9.80	12.20	13.24	12.90	
		Max	42.42	45.45	27.27	28.57	27.27	26.09	
		Correlation w/ Previous Year	0.2	0.03	0.32*	0.27*	-0.09	-0.21	
4. Percentage of firms waiting more than three months to complete all steps necessary to start operations.	PCI Survey Question: C5	Min	0	0.00	0.00	0.00	0.00	0.00	Phone survey
		Median	2.94	3.57	1.92	2.22	2.08	2.78	
		Max	13.04	18.18	18.18	9.30	10.87	17.39	
		Correlation w/ Previous Year	0.04	0.15	0.23	0.17	-0.12	-0.24	
~~Percentage of firms registering or re-registering through one-stop-shop.~~	~~PCI Survey Question: C3~~	~~Min~~		~~41.58~~	~~35.24~~	~~44.55~~	~~95.31~~	~~100.00~~	Drop
		~~Median~~		~~63.41~~	~~79.17~~	~~84.78~~	~~100.00~~	~~100.00~~	
		~~Max~~		~~85.71~~	~~94.44~~	~~97.22~~	~~100.00~~	~~100.00~~	
		~~Correlation w/ Previous Year~~		~~0.18~~	~~-0.06~~	~~0.24~~	~~0.14~~		
5. Percentage of firms registering or re-registering through new methods: online, public admnistration center & post offices - New variable in 2017	PCI Survey Question: C3	Min						0.00	
		Median						12.50	
		Max						68.89	
		Correlation w/ Previous Year						N.A	
6. Procedures at one-stop-shop are transparently listed (% Agree)	PCI Survey Question: C3.1.1	Min		21.43	40.91	43.42	39.30	51.85	Phone survey
		Median		39.02	61.43	61.43	59.82	78.38	
		Max		66.20	79.17	75.86	76.67	90.91	
		Correlation w/ Previous Year		N.A	0.24	0.53*	0.36*	0.30*	

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Notes
7. Guidance and instruction on procedures at one-stop-shop are clear and adequate (% Agree)	PCI Survey Question: C3.1.2	Min		26.67	52.04	48.83	44.00	67.44	Phone survey
		Median		41.14	75.00	71.13	72.31	88.68	
		Max		66.90	88.37	87.64	84.09	100.00	
		Correlation w/ Previous Year		N.A	0.19	0.57*	0.63*	0.45*	
8. Staffs at one-stop-shop are professional and knowledgable (% Agree)	PCI Survey Question: C3.1.3	Min		10.61	23.47	23.94	23.07	43.18	Phone survey
		Median		25.52	42.50	39.64	40.90	71.88	
		Max		56.38	57.69	53.66	57.49	92.59	
		Correlation w/ Previous Year		N.A	0.23	0.40*	0.50*	0.25*	
9. Staffs at one-stop-shop are friendly (% Agree)	PCI Survey Question: C3.1.4	Min		10.61	15.31	17.51	19.50	43.48	Phone survey
		Median		24.71	42.62	40.63	42.70	75.86	
		Max		56.38	68.42	61.64	62.50	93.33	
		Correlation w/ Previous Year		N.A	0.26*	0.58*	0.67*	0.32*	
10. IT application at one-stop-shop is good (% Agree)	PCI Survey Question: C3.1.5	Min		3.91	14.29	17.05	17.44	26.09	Phone survey
		Median		16.07	28.57	27.72	29.33	60.00	
		Max		44.68	48.08	42.47	50.54	86.67	
		Correlation w/ Previous Year		N.A	0.16	0.04	0.63*	0.19	
~~None of the criteria above are met (% Agree)~~	~~PCI Survey Question: C3.1.6~~	~~Min~~		~~0.00~~	~~0.00~~	~~0.00~~	~~0.00~~		Drop
		~~Median~~		~~1.70~~	~~4.48~~	~~4.49~~	~~5.00~~		
		~~Max~~		~~8.94~~	~~20.41~~	~~12.93~~	~~14.00~~		
		~~Correlation w/ Previous Year~~		~~N.A~~	~~0.41*~~	~~0.56*~~	~~0.47*~~		

* Significant at 5% level; NA = Not applicable
All values are at the provincial level.
Data include only firms registered within two calendar years preceding the survey.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years, reflecting changes in survey questions and ordering in 2006.

Table 2: Comparison of Land Access and Tenure Security Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011	Note
1. Percentage of firms that own land and are in possession of an LURC	PCI Survey Question: B4	Min	23.29	51.35	38.36	46.82	26.67	34.04	DROP
		Median	55.28	75.57	81.16	73.68	72.89	77.55	
		Max	77.78	92.45	94.74	94.51	95.89	97.05	
		Correlation w/ Previous Year		0.76*	0.70*	0.77*	0.80*	0.67*	
~~Percentage of land that has been registered and provided with official LURCs~~	~~Ministry of Natural Resources and the Environment Datasets†~~	~~Min~~	~~11.3~~	~~13.28~~	~~19.52~~	~~23.52~~	~~27.27~~	~~42.82~~	
		~~Median~~	~~69.2~~	~~63.13~~	~~77.56~~	~~77.89~~	~~80.71~~	~~79.24~~	
		~~Max~~	~~96.5~~	~~97.46~~	~~98.75~~	~~98.56~~	~~98.31~~	~~98.03~~	
		~~Correlation w/ Previous Year~~		~~0.85*~~	~~0.78*~~	~~0.87*~~	~~0.87*~~	~~0.73*~~	
2. Percentage of firms that say nonstate enterprises do not have difficulties in accessing land or expanding premises	PCI Survey Question: B6	Min				11.02	8.27	12.2	
		Median				30.72	23.89	30	
		Max				52.32	49	68.5	
		Correlation w/ Previous Year				NA	0.42*	0.23	
3. Firms' rating of expropriation risk (1: Very High to 5: Very Low);	PCI Survey Question: B4.3	Min	1.95	1.74	1.63	2.11	1.91	1.86	
		Median	2.49	2.24	2.04	2.55	2.56	2.90	
		Max	3.05	2.57	2.49	3.05	3.30	3.35	
		Correlation w/ Previous Year		0.28*	0.95*	0.29*	0.31*	-0.0035	
4. Percentage of firms that say compensation for land is always or highly likely fair	PCI Survey Question: B4.4	Min	21.43	22.22	21.25	16.9	19.12	14.7	
		Median	40.00	40.76	38.82	40.54	39.9	35.8	
		Max	58.33	57.14	52.75	55.17	55.38	61.8	
		Correlation w/ Previous Year		0.37*	0.34*	0.42*	0.37*	0.17	
5. Percentage of firms that agree that changes in government land prices reflect changes in market prices	PCI Survey Question: B5	Min				53.33	53.91	41.9	
		Median				69.75	72	68	
		Max				81.11	86.17	86.2	
		Correlation w/ Previous Year				NA	0.43*	0.36*	
6. Percentage of firms that have completed land procedures in the last two years and have encountered no difficulties in land-related procedures	PCI Survey Question: B7.1	Min							
		Median							
		Max							
		Correlation w/ Previous Year							
7. Percentage of firms that want to have LURCs but don't have LURCs because of complicated procedures and troublesome staffs	PCI Survey Question: B4.5	Min							
		Median							
		Max							
		Correlation w/ Previous Year							

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011	Note
8. Median number of days to wait for Land Use Rights Certificate	PCI Survey Questions: B4.2	Min	40	30	30	15	20	15	Full Survey Move from sub 1
		Median	121	60	38.5	32.5	30	30	
		Max	338	180	105	180	150	90	
		Correlation w/ Previous Year	NA	0.16	0.43*	0.23*	0.26*	0.12*	
9. Percentage of firms say lack of available land - New variable in 2017	PCI Survey Question: B6.1	Min							
		Median							
		Max							
		Correlation w/ Previous Year							
10. Percentage of firms say Slow land clearance progress - New variable in 2017	PCI Survey Question: B6.1	Min							
		Median							
		Max							
		Correlation w/ Previous Year							
11. Percentage of firms say inadequate of land information - New variable in 2017	PCI Survey Question: B6.1	Min							
		Median							
		Max							
		Correlation w/ Previous Year							

* Significant at 5% level; NA = Not applicable
All values are at the provincial-level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years, reflecting changes in survey questions and ordering in 2006.
† The Ministry of Natural Resources and the Environment changed the calculation of LURCs between 2003 and 2007 in the 5 national-level cities, leading to major reductions. To address this the old calculation was applied to cities.

Table 2: Comparison of Land Access and Tenure Security Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Note
1. Percentage of firms that own land and are in possession of an LURC	PCI Survey Question: B4	Min	54.32	50.91	29.33	33.33	26.19	36.67	
		Median	75.86	76.54	55.07	57.58	61.90	58.21	
		Max	93.59	88.57	81.43	86.96	83.72	81.82	
		Correlation w/ Previous Year	0.49*	0.56*	0.67*	0.79*	0.70*	0.66*	
~~Percentage of land that has been registered and provided with official LURCs~~	~~Ministry of Natural Resources and the Environment Datasets†~~	~~Min~~	~~29.22~~	~~76.50~~	~~85.83~~	~~85.83~~	~~85.83~~		
		~~Median~~	~~82.21~~	~~90.50~~	~~92.34~~	~~92.43~~	~~92.43~~		
		~~Max~~	~~97.65~~	~~99.40~~	~~99.57~~	~~99.57~~	~~99.57~~		
		~~Correlation w/ Previous Year~~	~~0.85*~~	~~0.30*~~	~~0.74*~~	~~0.99*~~	~~1.00*~~		
2. Percentage of firms that say nonstate enterprises do not have difficulties in accessing land or expanding premises	PCI Survey Question: B6	Min	11.25	16.13	12.39	9.90	10.91	12.34	
		Median	31.32	39.50	22.22	28.33	29.70	25.00	
		Max	52.89	58.44	52.44	45.10	41.43	44.74	
		Correlation w/ Previous Year	0.26*	0.14	0.22	0.62*	0.52*	0.51*	
3. Firms' rating of expropriation risk (1: Very High to 5: Very Low);	PCI Survey Question: B4.3	Min	2.16	2.05	1.84	1.89	1.32	1.38	
		Median	2.71	2.80	2.33	2.34	1.73	1.61	
		Max	3.22	3.59	2.87	2.79	2.07	1.94	
		Correlation w/ Previous Year	-0.1619	0.15	0.05	0.21	0.01	0.36*	
4. Percentage of firms that say compensation for land is always or highly likely fair	PCI Survey Question: B4.4	Min	12.95	22.78	15.56	13.04	10.29	17.57	DROP
		Median	36.67	40.32	34.00	30.00	25.45	27.94	
		Max	69.23	68.66	51.35	50.75	37.70	44.12	
		Correlation w/ Previous Year	0.18	-0.05	0.06	0.34*	0.37*	0.31*	
5. Percentage of firms that agree that changes in government land prices reflect changes in market prices	PCI Survey Question: B5	Min	36.02	60.00	56.55	53.66	53.76	58.24	
		Median	69.57	77.06	71.43	76.09	73.73	77.55	
		Max	87.64	89.87	85.23	87.04	83.33	86.96	
		Correlation w/ Previous Year	0.14	0.29*	0.41*	0.56*	0.46*	0.50*	
6. Percentage of firms that have completed land procedures in the last two years and have encountered no difficulties in land-related procedures	PCI Survey Question: B7.1	Min		21.74	16.67	15.00	15.38	4.17	
		Median		44.44	41.38	34.29	33.33	25.00	
		Max		73.33	61.54	73.08	67.86	44.44	
		Correlation w/ Previous Year		N.A	0.14	0.07	0.27*	0.13	
7. Percentage of firms that want to have LURCs but don't have LURCs because of complicated procedures and troublesome staffs	PCI Survey Question: B4.5	Min		3.03	8.89	12.77	6.67	2.63	
		Median		16.13	27.03	25.71	25.00	15.38	
		Max		50.00	45.24	53.13	50.00	34.21	
		Correlation w/ Previous Year		N.A	0.51*	0.28*	0.41*	0.43*	

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Note
8. Median number of days to wait for Land Use Rights Certificate	PCI Survey Questions: B4.2	Min	15	15	15	10	7	8.5	Full Survey Move from sub 1
		Median	30	30	30	30	30	25	
		Max	105	240	365	95	60	45	
		Correlation w/ Previous Year	0.18	0.12	0.03	0.27*	0.06	0.02	
9. Percentage of firms say lack of available land - New variable in 2017	PCI Survey Question: B6.1	Min						5.97	
		Median						15.28	
		Max						38.89	
		Correlation w/ Previous Year						N.A	
10. Percentage of firms say Slow land clearance progress - New variable in 2017	PCI Survey Question: B6.1	Min						2.38	
		Median						15.52	
		Max						31.82	
		Correlation w/ Previous Year						N.A	
11. Percentage of firms say inadequate of land information - New variable in 2017	PCI Survey Question: B6.1	Min						18.18	
		Median						28.57	
		Max						45.57	
		Correlation w/ Previous Year						N.A	

* Significant at 5% level; NA = Not applicable
All values are at the provincial-level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years, reflecting changes in survey questions and ordering in 2006.
† The Ministry of Natural Resources and the Environment changed the calculation of LURCs between 2003 and 2007 in the 5 national-level cities, leading to major reductions. To address this the old calculation was applied to cities.

Table 3: Comparison of Transparency Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Access to planning documents (1=impossible to access; 5=easy to access)	PCI Survey Question: F1.1-F1.13†	Min	2.25	2.20	2.25	2.13	2.00	2.28
		Median	2.63	2.51	2.55	2.44	2.31	2.51
		Max	3.17	2.96	2.79	3.08	2.62	2.97
		Correlation w/ Previous Year	0.39*	0.64*	0.61*	0.49*	0.48*	0.23
~~2. Access to legal documents (1=impossible to access; 5= easy to access)~~	~~PCI Survey Question: F1.1-F1.13†~~	~~Min~~	~~2.86~~	~~2.63~~	~~2.80~~	~~2.68~~	~~2.79~~	~~2.57~~
		~~Median~~	~~3.15~~	~~3.05~~	~~3.11~~	~~3.11~~	~~3.05~~	~~3.03~~
		~~Max~~	~~3.53~~	~~3.38~~	~~3.36~~	~~3.61~~	~~3.44~~	~~3.83~~
		~~Correlation w/ Previous Year~~	~~0.31*~~	~~0.61*~~	~~0.59*~~	~~0.38*~~	~~0.56*~~	~~0.55*~~
3. Relationship important or very important to get access to provincial documents (% Important or Very Important)	PCI Survey Question: F2	Min	31.48	38.4	33.57	45.57	37.28	41.17
		Median	62.5	56.6	49.82	61.26	78.64	75.00
		Max	77.14	73.4	67.9	78.26	95.71	93.33
		Correlation w/ Previous Year	0.27	0.38*	0.55*	0.37*	0.30*	-0.05
4. Negotiations with tax authority are an essential part of doing business (% Agree or Strongly Agree)	PCI Survey Question: D2.8	Min	47.17	24.1	17.39	29.69	23.75	7.69
		Median	61.05	44.7	36.71	41.32	40.78	41.09
		Max	86.96	73.2	54,25	62.4	67.04	62.67
		Correlation w/ Previous Year	-0.16	0.52*	0.73*	0.36*	0.27*	0.09
5. Predictability of implementation of central laws at the provincial level (% Usually or Always)	PCI Survey Question: F1-4.1	Min	2.76	1.89	1.03	3.57	2.38	0.00
		Median	9.49	7.96	6.94	8.4	8.97	8.57
		Max	37.88	18.3	15.69	22.22	20.24	29.48
		Correlation w/ Previous Year	0.38*	0.46*	0.3*	0.50*	0.10	0.22
6. Business Associations's role in advising and countering provincial polices (% Important or Very Important)**	PCI Survey Question: F2-5.3	Min				18.64	15.15	9.52
		Median				35.71	37.04	31.25
		Max				57.32	55.56	60.60
		Correlation w/ Previous Year				NA	0.32*	0.03
7. Openness and quality of provincial webpage	Analysis by PCI Research Team (For Scorecard See Section)ψ	Min	0.00	0.00	0.00	0.00	0.00	9.00
		Median	9.00	13.75	14.25	15.00	15.00	15.00
		Max	18.00	20.00	20.00	20.00	19.00	20.00
		Correlation w/ Previous Year	0.36*	0.51*	0.70*	0.74*	0.79*	0.69*
8. Percentage of firms have accessed provincial websites (%)	PCI Survey Question: F1-3	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
9. Budget documents have enough details for use in business activities (% YES)	PCI Survey Question: F1-2.2.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
~~Budget documents are published right after being approved (% YES)~~	~~PCI Survey 2013 Question: F2.2~~	~~Min~~						
		~~Median~~						
		~~Max~~						
		~~Correlation w/ Previous Year~~						
10. Received information requested (% YES) - New variable in 2017	PCI Survey 2017 Question: F1-2.3.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
11. Median days to receive information requested (days) -New variable in 2017	PCI Survey 2017 Question: F1-2.3.2	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
12. Transparency in bidding (% YES) - New variable in 2017	PCI Survey 2017 Question: D4-13	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces.
† Indicators result from factor analysis of 13 documents. In 2009, the scale was simplified to reflect the average access on a 5 pt. scale (1 very difficult to 5 very easy)
ψ In 2007 and 2008, 0.5 values were allowed to denote provinces that provided the relevant information, but not in a sufficient manner to be useful.
** Only Business Association members respond

Table 3: Comparison of Transparency Sub-Index (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Access to planning documents (1=impossible to access; 5=easy to access)	PCI Survey Question: F1.1-F1.13†	Min	1.81	2.17	1.90	2.14	2.13	2.23
		Median	2.39	2.61	2.25	2.38	2.39	2.44
		Max	3.14	3.31	2.51	2.65	2.71	2.67
		Correlation w/ Previous Year	0.29*	-0.18	-0.28*	0.05	0.34*	0.45*
~~2. Access to legal documents (1=impossible to access; 5= easy to access)~~	~~PCI Survey Question: F1.1-F1.13†~~	~~Min~~	~~1.98~~	~~2.57~~	~~2.86~~	~~2.79~~	~~2.83~~	~~2.83~~
		~~Median~~	~~2.84~~	~~3.14~~	~~3.10~~	~~3.03~~	~~3.10~~	~~3.06~~
		~~Max~~	~~3.38~~	~~3.59~~	~~3.31~~	~~3.29~~	~~3.30~~	~~3.29~~
		~~Correlation w/ Previous Year~~	~~0.32*~~	~~0.17~~	~~0.18~~	~~0.44*~~	~~0.38*~~	~~0.53*~~
3. Relationship important or very important to get access to provincial documents (% Important or Very Important)	PCI Survey Question: F2	Min	29.73	30.33	63.51	59.52	47.42	58.06
		Median	62.20	51.47	73.21	76.19	66.33	70.00
		Max	82.69	74.68	88.31	89.29	86.41	82.18
		Correlation w/ Previous Year	0.18	0.21	0.20	0.37*	0.45*	0.29*
4. Negotiations with tax authority are an essential part of doing business (% Agree or Strongly Agree)	PCI Survey Question: D2.8	Min	14.53	17.98	32.38	28.57	34.21	41.11
		Median	39.21	39.44	49.25	52.00	49.04	54.32
		Max	67.78	62.60	64.29	66.95	71.84	64.52
		Correlation w/ Previous Year	0.37*	-0.16	0.02	0.57*	0.43*	0.24
5. Predictability of implementation of central laws at the provincial level (% Usually or Always)	PCI Survey Question: F1-4.1	Min	1.30	1.35	1.92	2.08	1.08	0.00
		Median	6.60	8.18	8.27	7.50	6.67	5.88
		Max	13.51	23.17	18.07	18.75	15.30	17.14
		Correlation w/ Previous Year	0.19	0.10	0.19	0.27*	0.33*	0.02
6. Business Associations's role in advising and countering provincial polices (% Important or Very Important)**	PCI Survey Question: F2-5.3	Min	15.33	16.16	21.74	27.27	28.95	22.45
		Median	31.81	30.11	42.64	43.16	40.28	47.69
		Max	66.25	55.75	59.26	61.25	52.56	65.12
		Correlation w/ Previous Year	0.11	0.24	0.35*	0.42*	0.49*	0.31*
7. Openness and quality of provincial webpage	Analysis by PCI Research Team (For Scorecard See Section)ψ	Min	0.00	11.50	15.00	17.00	20.00	22.00
		Median	14.00	25.50	29.00	30.00	31.00	33.50
		Max	20.00	38.00	44.00	42.00	42.00	45.00
		Correlation w/ Previous Year	0.50*	0.57*	0.82*	0.91*	0.72*	0.74*
8. Percentage of firms have accessed provincial websites (%)	PCI Survey Question: F1-3	Min		21.43	47.47	51.43	61.54	59.50
		Median		50.99	64.18	71.91	76.84	72.58
		Max		70.00	78.23	87.03	86.00	84.71
		Correlation w/ Previous Year		N.A	0.25*	0.48*	0.58*	0.41*

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
9. Budget documents have enough details for use in business activities (% YES)	PCI Survey Question: F1-2.2.1	Min		35.71	53.33	70.00	67.86	58.33
		Median		76.92	80.65	83.33	82.93	83.33
		Max		100	94	97	100	100
		Correlation w/ Previous Year		N.A	-0.15	0.01	-0.04	0.06
~~Budget documents are published right after being approved (% YES)~~	~~PCI Survey 2013 Question: F2.2~~	~~Min~~		~~27.27~~	~~48.39~~	~~46.34~~	~~42.86~~	
		~~Median~~		~~66.67~~	~~71.43~~	~~70.00~~	~~69.57~~	
		~~Max~~		~~100~~	~~95~~	~~92.31~~	~~84.62~~	
		~~Correlation w/ Previous Year~~		~~N.A~~	~~0.02~~	~~0.07~~	~~0.04~~	
10. Received information requested (% YES) - New variable in 2017	PCI Survey 2017 Question: F1-2.3.1	Min						44.44
		Median						71.43
		Max						90.00
		Correlation w/ Previous Year						N.A
11. Median days to receive information requested (days) -New variable in 2017	PCI Survey 2017 Question: F1-2.3.2	Min						1.00
		Median						4.00
		Max						10.00
		Correlation w/ Previous Year						N.A
12. Transparency in bidding (% YES) - New variable in 2017	PCI Survey 2017 Question: D4-13	Min						32.61
		Median						50.00
		Max						65.91
		Correlation w/ Previous Year						N.A

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces.
† Indicators result from factor analysis of 13 documents. In 2009, the scale was simplified to reflect the average access on a 5 pt. scale (1 very difficult to 5 very easy)
ψ In 2007 and 2008, 0.5 values were allowed to denote provinces that provided the relevant information, but not in a sufficient manner to be useful.
** Only Business Association members respond

Table 4: Comparison of Time Costs of Regulatory Compliance (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Percentage of firms spending over 10 percent of their time on understanding and complying with regulations	PCI Survey Question: D1-1	Min	6.52	10.94	13.83	7.27	8.13	2.74
		Median	21.24	21.87	22.99	15.38	19	11.26
		Max	39.39	43.75	42.55	30.36	35.37	31.57
		Correlation w/ Previous Year	0.44*	0.62*	0.67*	0.44*	0.24	0.25*
~~Median number of inspections (all agencies)~~	~~PCI Survey Question: D1~~	~~Min~~	0	1	1	1	1	1
		~~Median~~	1	1	1	1	1	1
		~~Max~~	2	2	2	2	2	2
		~~Correlation w/ Previous Year~~	0.35*	0.30*	0.46*	0.34*	0.51*	0.14
2. Median tax inspection hours	PCI Survey Question: D2-7	Min	1	2	1	1	1	1
		Median	8	8	8	5	4	4
		Max	40	40	32	40	28	24
		Correlation w/ Previous Year	0.62*	0.86*	0.88*	0.75*	0.33*	0.30*
3. Local government officials are effective (% Strongly agree or Agree)	PCI Survey Question: D1-3.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
4. Local government officials are friendly (% Strongly agree or Agree)	PCI Survey Question: D1-3.2	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
5. Firms don't have to travel many trips to obtain stamps and signatures (% Strongly agree or Agree)	PCI Survey Question: D1-3.3	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
6. Paperwork is simple (% Strongly agree or Agree)	PCI Survey Question: D1-3.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
7. Fees are listed publically (% Strongly agree or Agree)	PCI Survey Question: D1-3.5	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
~~No noticeable improvements are made (% Strongly agree or Agree)~~	~~PCI Survey Question: D8.7~~	~~Min~~						
		~~Median~~						
		~~Max~~						
		~~Correlation w/ Previous Year~~						
8. Percentage of 5+ visits per years -New variable in 2017	PCI Survey Question: D2-4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
9. Overlap inspection (%) - New variable in 2017	PCI Survey Question: D2-4.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
10. Time to do APs is shorter than regulations specified (%) - New variable in 2017	PCI Survey Question: D1-3.7	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
11. Using inspection to extract rents (%) - New variable in 2017	PCI Survey Question: D2-5.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable

All values are at the provincial level.

2005 data only include 42 provinces.

Time to do APs is shorter than regulations specified (%)

Table 4: Comparison of Time Costs of Regulatory Compliance (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Notes
1. Percentage of firms spending over 10 percent of their time on understanding and complying with regulations	PCI Survey Question: D1-1	Min	3.22	7.88	18.56	21.95	24.71	21.78	DROP
		Median	13.84	20.95	35.62	35.51	35.71	31.53	
		Max	28.57	44.44	51.09	49.41	51.52	46.30	
		Correlation w/ Previous Year	0.45*	0.13	0.24	0.27*	0.31*	-0.08	
~~Median number of inspections (all agencies)~~	~~PCI Survey Question: D1~~	~~Min~~	0	1	1	1	1		
		~~Median~~	1	1	1	2	1		
		~~Max~~	2	2	2	3	2		
		~~Correlation w/ Previous Year~~	0.26*	0.32*	0.45*	0.44*	0.54*		
2. Median tax inspection hours	PCI Survey Question: D2-7	Min	1	2	2	1	1	2	
		Median	4	8	8	4.5	8	9	
		Max	24	40	40	32	40	40	
		Correlation w/ Previous Year	0.21	0.53*	0.70*	0.75*	0.61*	0.53*	
3. Local government officials are effective (% Strongly agree or Agree)	PCI Survey Question: D1-3.1	Min		58.85	50.00	47.04	40.91	58.00	
		Median		75.44	64.58	67.38	58.02	72.09	
		Max		91.76	88.73	87.36	82.65	86.90	
		Correlation w/ Previous Year		N.A	0.64*	0.71*	0.63*	0.64*	
4. Local government officials are friendly (% Strongly agree or Agree)	PCI Survey Question: D1-3.2	Min		40.16	34.78	35.53	47.47	50.96	
		Median		70.00	58.24	59.43	65.56	67.26	
		Max		86.67	82.56	83.72	88.66	87.06	
		Correlation w/ Previous Year		N.A	0.48*	0.71*	0.68*	0.71*	
5. Firms don't have to travel many trips to obtain stamps and signatures (% Strongly agree or Agree)	PCI Survey Question: D1-3.3	Min		51.58	38.20	42.06	46.39	40.38	
		Median		70.13	60.96	61.15	63.28	54.55	
		Max		86.14	78.13	80.00	85.41	74.12	
		Correlation w/ Previous Year		N.A	0.68*	0.74*	0.67*	0.53*	
6. Paperwork is simple (% Strongly agree or Agree)	PCI Survey Question: D1-3.4	Min		44.79	30.30	34.43	31.53	40.40	
		Median		62.50	46.02	51.24	49.52	52.25	
		Max		84.00	68.18	71.74	74.22	76.47	
		Correlation w/ Previous Year		N.A	0.50*	0.67*	0.56*	0.59*	
7. Fees are listed publically (% Strongly agree or Agree)	PCI Survey Question: D1-3.5	Min		80.00	79.35	80.72	78.72	79.81	
		Median		90.51	89.19	89.32	91.11	91.76	
		Max		98.67	97.17	95.87	97.96	97.25	
		Correlation w/ Previous Year		N.A	0.48*	0.19	0.35*	0.39*	

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017	Notes
~~No noticeable improvements are made (% Strongly agree or Agree)~~	~~PCI Survey Question: D8.7~~	~~Min~~		~~43.28~~	~~0.00~~	~~0.00~~	~~0.00~~		
		~~Median~~		~~74.24~~	~~4.30~~	~~4.70~~	~~4.93~~		
		~~Max~~		~~90.74~~	~~12.77~~	~~11.49~~	~~17.71~~		
		~~Correlation w/ Previous Year~~		~~N.A~~	~~0.11~~	~~0.29*~~	~~0.32*~~		
8. Percentage of 5+ visits per years -New variable in 2017	PCI Survey Question: D2-4	Min						2.00	
		Median						7.22	
		Max						15.56	
		Correlation w/ Previous Year						N.A	
9. Overlap inspection (%) - New variable in 2017	PCI Survey Question: D2-4.1	Min				11.63	6.25	6.93	
		Median				25.87	14.12	13.46	
		Max				36.36	25.29	25.33	
		Correlation w/ Previous Year				N.A	0.37*	0.41*	
10. Time to do APs is shorter than regulations specified (%) - New variable in 2017	PCI Survey Question: D1-3.7	Min						55.00	
		Median						67.01	
		Max						82.72	
		Correlation w/ Previous Year						N.A	
11. Using inspection to extract rents (%) - New variable in 2017	PCI Survey Question: D2-5.1	Min						5.08	
		Median						18.92	
		Max						34.09	
		Correlation w/ Previous Year						N.A	

* Significant at 5% level; NA = not applicable

All values are at the provincial level.

2005 data only include 42 provinces.

Time to do APs is shorter than regulations specified (%)

Table 5: Comparison of Informal Charges (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Enterprises in my line of business usually have to pay for informal charges (% agree or totally agree)	PCI Survey Question: D3-9	Min	53.57	40	45.54	35.38	20.78	25
		Median	70	68.25	65.93	59.4	58.23	51.39
		Max	84.62	82.72	83.59	77.47	77.11	75.68
		Correlation w/ Previous Year	0.05	0.56*	0.64*	0.66*	0.73*	0.61*
2. Percentage of firms paying over 10 percent of their revenue for informal charges	PCI Survey Question: D3-10	Min	4.35	1.39	2.13	2.61	0	0
		Median	12.99	11.54	9.89	8.75	6.78	6.56
		Max	34.38	26.19	22.08	20.78	16.92	18.42
		Correlation w/ Previous Year	0.21	0.45*	0.55*	0.60*	0.43*	0.15*
3. Rent-seeking phenomenon is popular in handling administrative procedures for businesses (% strongly agree or agree)	PCI Survey Question: D1-3.9	Min	22.86	17.44	20	23.93	22	18.06
		Median	39.76	38.21	37.12	50.35	50	40.28
		Max	76.74	79.41	64.54	71.64	73.11	73.13
		Correlation w/ Previous Year	NA	0.78*	0.68*	0.66*	0.63*	0.50*
4. Percentage of firms saying that informal charges usually or always deliver expected results	PCI Survey Question: D3-12	Min	20.83	29.03	27.94	35.42	36.4	36.9
		Median	47.89	48.28	48.99	51.51	56.32	61.11
		Max	65.93	59.8	62.91	69.01	71.64	82.35
		Correlation w/ Previous Year	NA	0.2	0.50*	0.50*	0.53*	0.34*
5. Informal charges are at acceptable levels (% Strongly agree or Agree)	PCI Survey Question: D1-3.6	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
6. Percentage of firms paying informal charges in land APs - New variable in 2017	PCI Survey Question: B7.2	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
7. Percentage of firms paying informal payment to the inspector - New variable in 2017	PCI Survey Question: D2-6	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
8. Paying a "commission" is essential to improve chances of winning the contract (% YES) - New variable in 2017	PCI Survey Question: D4-13.2	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
9. Offering bribes to solicit favorable judgment is common - New variable in 2017	PCI Survey Question: H.1-2.5	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years.

Table 5: Comparison of Informal Charges (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Enterprises in my line of business usually have to pay for informal charges (% agree or totally agree)	PCI Survey Question: D3-9	Min	28.57	27.54	44.44	47.37	45.16	39.29
		Median	53.17	50.43	64.56	66.03	66.04	59.26
		Max	74.19	72.38	80.81	79.38	76.04	75.93
		Correlation w/ Previous Year	0.33*	0.42*	0.55*	0.59*	0.67*	0.64*
2. Percentage of firms paying over 10 percent of their revenue for informal charges	PCI Survey Question: D3-10	Min	0	0.72	1.52	3.23	3.49	0.97
		Median	6.45	6.96	10.34	11.11	9.09	9.80
		Max	22.73	26.56	27.91	24.32	24.72	24.69
		Correlation w/ Previous Year	0.23	0.67*	0.54*	0.63*	0.68*	0.70*
3. Rent-seeking phenomenon is popular in handling administrative procedures for businesses (% strongly agree or agree)	PCI Survey Question: D1-3.9	Min	18	20.27	3.59	43.82	40.66	43.75
		Median	43.75	41.18	65.56	65.38	58.54	60.83
		Max	68.85	75.32	78.32	77.52	77.14	74.07
		Correlation w/ Previous Year	0.51*	0.43*	0.46*	0.68*	0.68*	0.69*
4. Percentage of firms saying that informal charges usually or always deliver expected results	PCI Survey Question: D3-12	Min	24.75	36.84	40.32	42.11	38.46	38.10
		Median	60.71	63.16	61.33	62.37	55.68	62.69
		Max	76.81	87.23	84.06	76.25	71.28	79.75
		Correlation w/ Previous Year	-0.0832	0.18	0.22	0.49*	0.64*	0.55*
5. Informal charges are at acceptable levels (% Strongly agree or Agree)	PCI Survey Question: D1-3.6	Min		66.67	61.22	58.54	64.53	66.99
		Median		80.19	77.59	76.84	79.17	78.95
		Max		97.92	92.77	90.09	94.17	90.74
		Correlation w/ Previous Year		N.A	0.43*	0.48*	0.37*	0.42*
6. Percentage of firms paying informal charges in land APs - New variable in 2017	PCI Survey Question: B7.2	Min						5.88
		Median						32.00
		Max						57.14
		Correlation w/ Previous Year						N.A
7. Percentage of firms paying informal payment to the inspector - New variable in 2017	PCI Survey Question: D2-6	Min						17.65
		Median						51.85
		Max						65.56
		Correlation w/ Previous Year						N.A
8. Paying a "commission" is essential to improve chances of winning the contract (% YES) - New variable in 2017	PCI Survey Question: D4-13.2	Min						27.27
		Median						54.90
		Max						69.81
		Correlation w/ Previous Year						N.A

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
9. Offering bribes to solicit favorable judgment is common - New variable in 2017	PCI Survey Question: H.1-2.5	Min						17.65
		Median						31.58
		Max						47.54
		Correlation w/ Previous Year						N.A

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years.

Table 6: Comparison of Policy Bias (2013-2017)

Indicator	Source (2017 Survey)	Measure	2013	2014	2015	2016	2017
1. Province give privileges to state-owned economic group, corporations, causing difficulties to your business (% Agree)	PCI Survey Question: I4	Min	18.26	21.69	25.30	27.43	26.36
		Median	32.14	35.00	39.29	37.89	41.24
		Max	42.86	51.19	50.89	51.68	52.56
		Correlation w/ Previous Year	N.A	-0.30*	0.31*	0.38*	0.24
2. Land access as a privilege to state-owned economic group (% Agree)	PCI Survey Question: I4.1.1	Min	13.04	14.04	14.12	14.93	19.30
		Median	27.59	25.77	26.53	31.39	29.88
		Max	51.11	36.08	36.98	50.55	43.59
		Correlation w/ Previous Year	N.A	0.13	0.42*	0.27*	0.16
3. Credit access as a privilege to state-owned economic group (% Agree)	PCI Survey Question: I4.1.2	Min	13.04	17.31	10.59	18.48	18.82
		Median	27.59	25.51	26.23	26.74	29.07
		Max	47.92	42.86	37.84	38.82	42.31
		Correlation w/ Previous Year	N.A	0.17	0.50*	0.44*	0.17
4. Mineral exploitation license as a privilege to state-owned economic group (% agree)	PCI Survey Question: I4.1.3	Min	5.88	5.26	8.16	6.67	6.56
		Median	19.51	17.00	17.76	21.05	18.52
		Max	35.42	30.93	31.03	40.00	27.27
		Correlation w/ Previous Year	N.A	0.17	0.66*	0.33*	0.40*
5. Faster and simpler administrative procedures as a privilege to state-owned economic group (% agree)	PCI Survey Question: I4.1.4	Min	5.80	6.67	13.92	14.77	14.75
		Median	25.86	19.30	23.00	22.22	25.29
		Max	45.21	33.33	36.25	45.20	36.36
		Correlation w/ Previous Year	N.A	-0.03	0.18	0.13	0.29*
6. Ease in getting state contracts as privilege to state-owned economic group (% agree)	PCI Survey Question: I.4.1.5	Min	13.04	14.52	10.59	13.70	7.14
		Median	35.00	23.86	27.06	25.53	22.86
		Max	56.25	41.67	37.50	43.33	32.04
		Correlation w/ Previous Year	N.A	-0.03	0.35*	0.33*	0.32*
7. Province give priority in solving problems and difficulties to foreign companies over domestic one (% agree)	PCI Survey Question: I2.6	Min	11.54	23.61	25.68	29.63	23.08
		Median	28.30	42.59	47.22	42.35	44.03
		Max	49.25	59.75	66.67	61.39	61.33
		Correlation w/ Previous Year	N.A	0.26*	0.70*	0.52*	0.49*
8. Province give priority to FDI attraction than private sector development (% agree)	PCI Survey Question: I3	Min	17.81	21.57	27.27	23.46	26.14
		Median	29.50	42.86	48.75	45.26	45.71
		Max	46.30	55.41	66.92	63.72	65.22
		Correlation w/ Previous Year	N.A	0.48*	0.65*	0.73*	0.65*

Indicator	Source (2017 Survey)	Measure	2013	2014	2015	2016	2017
9. Advantage in land access for FIEs (% agree)	PCI Survey Question: I3.1.1	Min	4.71	9.09	9.30	15.85	11.11
		Median	12.64	28.30	27.81	32.29	27.85
		Max	26.67	44.34	45.24	55.23	48.75
		Correlation w/ Previous Year	N.A	0.64*	0.68*	0.80*	0.69*
10. CIT reduction and holiday for FIEs (% agree)	PCI Survey Question: I3.1.2	Min	2.86	8.62	10.81	9.86	5.56
		Median	9.64	23.01	21.25	23.81	17.98
		Max	24.81	35.96	40.43	42.39	31.25
		Correlation w/ Previous Year	N.A	0.36*	0.59*	0.58*	0.56*
11. Advantage in procedures (faster, simplifier) for FIEs (% agree)	PCI Survey Question: I3.1.3	Min	3.66	8.62	10.84	11.69	7.53
		Median	10.85	20.91	20.93	20.21	21.33
		Max	22.07	36.36	40.43	36.44	37.84
		Correlation w/ Previous Year	N.A	0.48*	0.62*	0.55*	0.40*
12. More local government support during FIEs operation (% agree)	PCI Survey Question: I3.1.4	Min	6.17	8.62	12.87	13.41	13.58
		Median	13.48	28.30	26.10	24.69	27.47
		Max	26.90	39.33	41.27	40.00	40.26
		Correlation w/ Previous Year	N.A	0.33*	0.50*	0.57*	0.37*
13. "Contracts, land, …, and other economic resources mostly fall in the hands of enterprises that have strong connections to local authorities" (% agree)	PCI Survey Question: I5	Min	75.00	61.64	55.67	46.99	59.68
		Median	96.59	76.47	76.92	72.29	74.00
		Max	100.00	88.89	83.12	84.44	85.88
		Correlation w/ Previous Year	N.A	0.09	0.36*	0.54*	0.52*
14. Preferential treatment to big companies (both state-owned and nonstate) is an obstacle to their business operations (% agree)	PCI Survey Question: I4	Min	17.57	31.48	41.03	37.31	42.35
		Median	34.62	52.00	56.52	54.55	53.68
		Max	60.92	61.40	66.67	71.76	68.33
		Correlation w/ Previous Year	N.A	0.16	0.25	0.34*	0.14

Table 7: Comparison of Proactivity (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Firms' assessment of the attitude of provincial government toward private sector (% Positive or Fairly Positive)	PCI Survey Question: I1	Min	30.21	24.5	32.71	28.42	31.11	26.25
		Median	48.28	44.97	53.4	43.75	47	45.33
		Max	71.56	67.37	72.22	71.96	67.09	82.89
		Correlation w/ Previous Year	0.63*	0.67*	0.53*	0.56*	0.56*	0.37*
2. The PPC is flexible within the legal framework to create favorable business environment for nonstate firms (% Strongly Agree or Agree)	PCI Survey Question: I2.2	Min	51.61	53.68	57.35	54.67	54.37	41.67
		Median	74.44	71.74	77.28	72.65	75.31	65.15
		Max	93.48	92.47	91.41	91.72	90.14	92.15
		Correlation w/ Previous Year	0.60*	0.68*	0.68*	0.70*	0.68*	0.48*
3. The PPC is very proactive and innovative in solving new problems (% Strongly Agree or Agree).	PCI Survey Question: I2.3	Min	40	40.22	40.9	23.94	25	19.35
		Median	61.88	58.12	61.5	42.46	49.38	46.6
		Max	88.64	87.91	85.05	72.59	71.11	78.26
		Correlation w/ Previous Year	0.69*	0.76*	0.75*	0.75*	0.61*	0.47*
4. There are good initiatives at the provincial level but they are not well implemented by departments (% Strongly Agree or Agree).	PCI Survey Question: I2.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
5. Provincial leaders have good policies they are not well implemented at district level (% Strongly Agree or Agree).	PCI Survey Question: I2.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
6. Province's reaction to lack of clarity in central policies/ documents: % "delay and seek instructions" and "do nothing".	PCI Survey Question: I1.3-I1.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
7. Provincial authorities handle timely firm's difficulties raised in PPD dialogues - New variable in 2017	PCI Survey Question: I2.7	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
8. Received local authorities' responses and/or feedback for firm's questions/ problems (% YES) - New variable in 2017	PCI Survey Question: F2-6.3	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
9. Satisfied with local authorities' responses or their ways of handling the issue (% YES) - New variable in 2017	PCI Survey Question: F2-6.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable
** Significant at 10% level
All values are at the provincial level.
2005 data only include 42 provinces.

Table 7: Comparison of Proactivity (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Firms' assessment of the attitude of provincial government toward private sector (% Positive or Fairly Positive)	PCI Survey Question: I1	Min	27.56	26.21	20.99	24.75	29.41	30.93
		Median	44.44	43.88	38.95	35.14	44.33	45.33
		Max	66.94	69.06	65.17	60.44	67.71	60.76
		Correlation w/ Previous Year	0.42*	0.49*	0.34*	0.67*	0.54*	0.54*
2. The PPC is flexible within the legal framework to create favorable business environment for nonstate firms (% Strongly Agree or Agree)	PCI Survey Question: I2.2	Min	34.48	39.66	46.84	51.39	48.35	53.16
		Median	65.57	62.77	67.57	73.56	70.54	73.97
		Max	88.31	90.81	90.91	88.43	89.22	89.71
		Correlation w/ Previous Year	0.44*	0.05	0.20	0.68*	0.72*	0.68*
3. The PPC is very proactive and innovative in solving new problems (% Strongly Agree or Agree).	PCI Survey Question: I2.3	Min	22.48	33.04	35.53	40.96	32.56	38.89
		Median	47.66	52.24	53.13	58.95	56.67	57.78
		Max	71.13	82.76	76.58	82.50	80.81	81.82
		Correlation w/ Previous Year	36*	0.24**	0.15	0.62*	0.73*	0.68*
4. There are good initiatives at the provincial level but they are not well implemented by departments (% Strongly Agree or Agree).	PCI Survey Question: I2.1	Min		32.71	60.94	55.56	61.45	61.76
		Median		56.98	76.92	79.07	78.57	76.81
		Max		87.74	91.55	90.24	87.50	86.96
		Correlation w/ Previous Year		N.A	0.26*	0.45*	0.30*	0.14
5. Provincial leaders have good policies they are not well implemented at district level (% Strongly Agree or Agree).	PCI Survey Question: I2.4	Min		24.30	41.27	47.50	47.06	40.32
		Median		43.40	57.69	61.95	59.46	59.42
		Max		76.47	72.73	72.88	77.00	71.75
		Correlation w/ Previous Year		N.A	0.17	-0.01	0.36*	0.40*
6. Province's reaction to lack of clarity in central policies/ documents: % "delay and seek instructions" and "do nothing".	PCI Survey Question: I1.3-I1.4	Min		11.29	23.33	18.75	19.71	16.95
		Median		33.33	38.54	35.29	33.80	31.15
		Max		58.16	53.19	48.28	50.00	42.19
		Correlation w/ Previous Year		N.A	0.25	0.07	0.27*	0.27*
7. Provincial authorities handle timely firm's difficulties raised in PPD dialogues - New variable in 2017	PCI Survey Question: I2.7	Min						49.35
		Median						67.01
		Max						80.00
		Correlation w/ Previous Year						N.A
8. Received local authorities' responses and/or feedback for firm's questions/ problems (% YES) - New variable in 2017	PCI Survey Question: F2-6.3	Min						84.62
		Median						94.12
		Max						100.00
		Correlation w/ Previous Year						N.A

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
9. Satisfied with local authorities' responses or their ways of handling the issue (% YES) - New variable in 2017	PCI Survey Question: F2-6.4	Min						51.52
		Median						76.67
		Max						93.33
		Correlation w/ Previous Year						N.A

* Significant at 5% level; NA = not applicable
** Significant at 10% level
All values are at the provincial level.
2005 data only include 42 provinces.

Table 8. Comparison of Business Support Services (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Number of trade fairs held by province in previous year**	Data provided by Viet Trade of the Ministry of Trade	Min	0	0	0	0	0	0
		Median	0	0	2.25	6	6	6
		Max	6	12	80	20	166	80
		Correlation w/ Previous Year	NA	0.18	0.62*	0.42*	0.36*	0.23*
2. Ratio of the total number of service providers to the total number of firms (%)	"Tax Authority (Author's Calculation)"	Min						N.A
		Median						N.A
		Max						N.A
		Correlation w/ Previous Year						N.A
3. Ratio of the number of nonstate and FDI service providers to the total number of service providers (%)	"Tax Authority (Author's Calculation)"	Min					0	0
		Median					44.44	66.67
		Max					100	100
		Correlation w/ Previous Year					0.19	0.77*
4. Firm has used business information search services (%)	PCI Survey Question: E2-6.1	Min				29.90	31.48	19.39
		Median				60.36	64.35	46.00
		Max				79.81	87.10	80.46
		Correlation w/ Previous Year				NA	0.47*	0.22*
5. Firm used private provider for above business information search services (%)	PCI Survey Question: E2-6.1	Min				20.59	16.67	20.37
		Median				38.81	39.22	41.89
		Max				58.82	55.56	80.00
		Correlation w/ Previous Year				NA	0.17*	-0.05
6. Firm intends to use above service provider again for business information search services (%)	PCI Survey Question: E2-6.1	Min				5.56	20.59	14.91
		Median				16.44	50.00	35.44
		Max				24.81	65.09	51.92
		Correlation w/ Previous Year				NA	0.57*	0.31*
7. Firm has used consulting on law/ regulatory information (%)	PCI Survey Question: E2-6.2	Min				30.34	27.87	19.39
		Median				62.50	57.50	44.74
		Max				77.42	81.82	77.90
		Correlation w/ Previous Year				NA	0.48*	0.35*
8. Firm used private provider for consulting on regulatory information (%)	PCI Survey Question: E2-6.2	Min				3.03	2.04	4.17
		Median				16.95	13.33	30.00
		Max				43.18	33.33	69.08
		Correlation w/ Previous Year				NA	0.12*	0.19*

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
9. Firm intends to use above service provider again for consulting on regulatory information (%)	PCI Survey Question: E2-6.2	Min				3.17	14.06	10.49
		Median				14.38	38.60	29.31
		Max				22.31	57.14	51.47
		Correlation w/ Previous Year				NA	0.49*	0.33*
10. Firm has used business match making services(%)	PCI Survey Question: E2-6.4	Min				25.29	26.98	14.81
		Median				53.40	56.58	37.50
		Max				73.12	81.82	77.27
		Correlation w/ Previous Year				NA	0.50*	0.23*
11. Firm used private provider for business match making services (%)	PCI Survey Question: E2-6.4	Min				25.00	0.00	21.57
		Median				44.12	54.55	50.00
		Max				70.21	70.37	80.88
		Correlation w/ Previous Year				NA	-0.12	-0.02
12. Firm intends to use above service provider again for business match making services (%)	PCI Survey Question: E2-6.4	Min				4.76	16.67	12.50
		Median				12.68	39.52	24.69
		Max				21.64	59.18	42.22
		Correlation w/ Previous Year				NA	0.61*	0.47*
13. Firm has used trade promotion services (%)	PCI Survey Question: E2-6.5	Min				19.48	22.92	11.29
		Median				45.45	48.61	36.67
		Max				72.62	78.26	74.14
		Correlation w/ Previous Year				NA	0.50*	0.24*
14. Firm used private provider for trade promotion services (%)	PCI Survey Question: E2-6.5	Min				4.44	0.00	0.00
		Median				18.00	15.79	24.14
		Max				38.42	42.31	74.60
		Correlation w/ Previous Year				NA	0.45*	0.21*
15. Firm intends to use above service provider again for trade promotion services (%)	PCI Survey Question: E2-6.5	Min				1.59	8.05	4.54
		Median				7.89	20.71	12.05
		Max				17.46	34.44	25.56
		Correlation w/ Previous Year				NA	0.39*	0.47*
16. Firm has used technology related services (%)	PCI Survey Question: E2-6.6	Min				25.33	21.54	15.38
		Median				50.00	52.63	36.51
		Max				73.49	81.40	74.71
		Correlation w/ Previous Year				NA	0.50*	0.24*

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
17. Firm used private provider for technology related services (%)	PCI Survey Question: E2-6.6	Min				17.65	4.76	0.00
		Median				38.60	40.63	45.00
		Max				65.85	69.23	83.08
		Correlation w/ Previous Year				NA	0.29*	0.26*
18. Firm intends to use above service provider again for technology related services (%)	PCI Survey Question: E2-6.6	Min				3.17	7.81	4.88
		Median				10.71	26.83	15.38
		Max				17.46	38.74	31.00
		Correlation w/ Previous Year				NA	0.50*	0.37*
19. Firm has used accounting and financing training services (%)	PCI Survey Question: E2-6.7							
20. Firm used private provider for above accounting and financing training services (%)	PCI Survey Question: E2-6.7							
21. Firm intends to use above service provider again for accounting and financing training services (%)	PCI Survey Question: E2-6.7							
22. Firm has used business administration training services (%)	PCI Survey Question: E2-6.8							
23. Firm used private provider for above abusiness administration training services (%)	PCI Survey Question: E2-6.8							
24. Firm intends to use above service provider again for business administration training services (%)	PCI Survey Question: E2-6.8							

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years.
**Because the maximum value recorded in HCMC is an outlier on both of these variables (over two standard deviations greater than the mean value), lower values of 10 and 100, the number scored by the second highest province, were used to standardize the sub-index scores.

Table 8. Comparison of Business Support Services (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Number of trade fairs held by province in previous year**	Data provided by Viet Trade of the Ministry of Trade	Min	1	1	1	4	4	4
		Median	11	10	9	12	12	10
		Max	20	44	20	20	20	20
		Correlation w/ Previous Year	0.48*	0.55*	0.59*	0.90*	1.00*	0.58*
2. Ratio of the total number of service providers to the total number of firms (%)	"Tax Authority (Author's Calculation)"	Min	0	0	0.09	0.046	0.14	0.16
		Median	0.84	0.66	1.02	0.77	1.02	1.15
		Max	5	4.6	4.34	3.58	3.75	3.89
		Correlation w/ Previous Year	N.A	0.97*	0.96*	0.88*	0.90*	0.90*
3. Ratio of the number of nonstate and FDI service providers to the total number of service providers (%)	"Tax Authority (Author's Calculation)"	Min	0	0	0	0	0	3
		Median	57.14	66.67	66.67	80.57	67.45	69.64
		Max	100	100	100	100	97	97
		Correlation w/ Previous Year	0.85*	0.95*	0.73*	0.65*	0.83*	0.91*
4. Firm has used business information search services (%)	PCI Survey Question: E2-6.1	Min	19.88	14.75	27.69	20.97	15.94	38.71
		Median	37.50	32.76	41.27	33.80	31.88	54.00
		Max	59.26	54.31	56.96	50.65	55.29	67.86
		Correlation w/ Previous Year	-0.04	0.06	0.36*	0.44*	0.16	0.13
5. Firm used private provider for above business information search services (%)	PCI Survey Question: E2-6.1	Min	4.35	19.23	23.81	21.88	21.74	27.78
		Median	29.73	42.86	46.88	37.25	40.00	61.90
		Max	56.67	71.43	63.64	61.11	68.18	85.71
		Correlation w/ Previous Year	0.09	0.16	0.33*	-0.08	-0.19	0.14
6. Firm intends to use above service provider again for business information search services (%)	PCI Survey Question: E2-6.1	Min	8.67	25.00	46.88	47.62	51.06	50.00
		Median	22.83	61.54	65.52	71.88	76.67	71.43
		Max	40.00	86.96	88.00	86.36	93.94	90.00
		Correlation w/ Previous Year	0.09	0.25*	-0.07	0.16	0.10	0.23
7. Firm has used consulting on law/ regulatory information (%)	PCI Survey Question: E2-6.2	Min	18.64	12.50	32.00	23.60	20.59	35.29
		Median	38.68	38.36	44.78	40.48	38.36	59.52
		Max	62.12	61.11	60.53	55.42	59.09	75.00
		Correlation w/ Previous Year	0.05	-0.06	0.20	0.32*	0.13	0.15
8. Firm used private provider for consulting on regulatory information (%)	PCI Survey Question: E2-6.2	Min	4.35	3.85	9.09	0.00	10.71	27.78
		Median	18.75	28.57	21.62	20.83	26.09	50.00
		Max	50.00	62.07	54.36	50.38	68.38	77.78
		Correlation w/ Previous Year	0.00	0.42*	0.15	0.58*	0.46*	0.38*

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
9. Firm intends to use above service provider again for consulting on regulatory information (%)	PCI Survey Question: E2-6.2	Min	4.10	24.14	42.86	46.88	27.03	40.00
		Median	19.42	56.00	62.50	64.50	62.75	65.52
		Max	33.67	90.63	82.61	84.62	86.36	91.67
		Correlation w/ Previous Year	-0.05	0.29*	-0.09	-0.05	-0.11	0.18
10. Firm has used business match making services(%)	PCI Survey Question: E2-6.4	Min	13.41	12.28	21.57	17.19	15.45	25.93
		Median	31.67	30.91	35.06	30.56	30.14	45.71
		Max	56.96	48.21	46.15	45.88	57.14	65.63
		Correlation w/ Previous Year	-0.06	0.16	0.11	0.11	0.12	-0.05
11. Firm used private provider for business match making services (%)	PCI Survey Question: E2-6.4	Min	5.56	21.74	28.00	27.27	21.05	42.11
		Median	45.45	51.43	52.17	50.00	48.28	75.00
		Max	84.62	79.63	76.92	68.18	78.57	95.45
		Correlation w/ Previous Year	-0.03	0.15	0.44*	0.13	0.09	0.02
12. Firm intends to use above service provider again for business match making services (%)	PCI Survey Question: E2-6.4	Min	6.42	23.33	45.83	47.62	37.93	33.33
		Median	15.73	53.33	65.63	66.67	68.42	66.67
		Max	32.35	81.08	93.33	89.47	90.91	100.00
		Correlation w/ Previous Year	0.10	0.22	-0.11	0.12	0.09	0.12
13. Firm has used trade promotion services (%)	PCI Survey Question: E2-6.5	Min	12.50	10.30	14.06	11.24	9.86	35.00
		Median	26.56	27.27	30.61	24.64	22.97	59.26
		Max	51.61	51.43	46.58	43.75	43.75	80.00
		Correlation w/ Previous Year	-0.03	0.21	0.14	0.34*	0.39*	0.23
14. Firm used private provider for trade promotion services (%)	PCI Survey Question: E2-6.5	Min	0.00	0.00	0.00	0.00	0.00	0.00
		Median	17.65	23.81	18.18	17.24	18.18	47.37
		Max	70.00	72.73	46.67	36.36	50.00	83.33
		Correlation w/ Previous Year	-0.16	0.33*	0.12	0.23	0.23	0.00
15. Firm intends to use above service provider again for trade promotion services (%)	PCI Survey Question: E2-6.5	Min	3.54	9.52	23.81	8.33	12.50	22.22
		Median	10.00	39.13	50.00	50.00	52.63	60.00
		Max	18.69	66.67	75.51	80.00	81.25	90.91
		Correlation w/ Previous Year	0.24	0.25*	0.02	0.18	-0.05	0.05
16. Firm has used technology related services (%)	PCI Survey Question: E2-6.6	Min	13.51	8.05	15.38	22.99	18.06	23.53
		Median	29.55	29.51	39.13	35.14	31.58	54.17
		Max	50.00	52.21	54.17	47.87	46.03	78.57
		Correlation w/ Previous Year	-0.02	0.20	0.20	0.47*	0.06	-0.01

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
17. Firm used private provider for technology related services (%)	PCI Survey Question: E2-6.6	Min	6.45	23.53	29.03	21.88	11.76	14.29
		Median	33.33	46.67	52.00	42.86	47.83	62.50
		Max	62.50	85.11	74.19	61.21	71.05	100.00
		Correlation w/ Previous Year	0.11	0.24	0.27*	0.24	0.11	0.12
18. Firm intends to use above service provider again for technology related services (%)	PCI Survey Question: E2-6.6	Min	3.67	16.13	26.09	28.57	18.75	25.00
		Median	9.90	37.29	47.62	47.83	47.06	62.50
		Max	22.86	66.67	66.67	70.59	71.43	88.89
		Correlation w/ Previous Year	0.21	0.23	-0.01	0.15	0.06	0.21
19. Firm has used accounting and financing training services (%)	PCI Survey Question: E2-6.7			18.24	20.25	19.77	18.92	30.30
				35.94	37.66	39.44	35.14	56.76
				65.26	58.44	59.21	50.00	74.36
				N.A	0.32*	0.56*	0.25	0.16
20. Firm used private provider for above accounting and financing training services (%)	PCI Survey Question: E2-6.7			4.76	8.89	3.70	4.17	25.00
				31.82	34.29	29.03	35.56	60.87
				78.26	57.52	53.73	61.90	85.71
				N.A	0.28*	0.36*	0.36*	0.28*
21. Firm intends to use above service provider again for accounting and financing training services (%)	PCI Survey Question: E2-6.7			12.50	30.77	35.71	23.53	33.33
				41.94	59.09	54.84	58.33	66.67
				72.73	78.57	80.00	90.00	94.74
				N.A	0.39*	0.32*	0.14	0.30*
22. Firm has used business administration training services (%)	PCI Survey Question: E2-6.8			10.84	14.86	13.92	9.09	31.25
				29.19	27.87	27.72	26.53	52.00
				57.89	45.95	43.84	48.72	76.67
				N.A	0.21	0.47*	0.28*	0.10
23. Firm used private provider for above abusiness administration training services (%)	PCI Survey Question: E2-6.8			0.00	9.09	3.57	5.26	33.33
				36.36	31.82	29.41	30.00	64.00
				73.27	73.33	57.14	66.67	100.00
				N.A	0.39*	0.38*	0.36*	0.40*
24. Firm intends to use above service provider again for business administration training services (%)	PCI Survey Question: E2-6.8			7.14	19.23	26.32	22.22	0.00
				38.89	50.00	50.00	52.94	66.67
				67.57	84.21	91.67	79.31	100.00
				N.A	0.08	0.16	0.28*	0.08

* Significant at 5% level; NA = not applicable
All values are at the provincial level.
2005 data only include 42 provinces and do not include the full set of indicators used in subsequent years.
**Because the maximum value recorded in HCMC is an outlier on both of these variables (over two standard deviations greater than the mean value), lower values of 10 and 100, the number scored by the second highest province, were used to standardize the sub-index scores.

Table 9: Comparison of Labor Policies (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Services provided by provincial agencies: general education (% Very Good or Good)	PCI Survey Question: E1-2.7	Min	7.43	51.51	17.71	22.08	20.27	28.77
		Median	19.16	73.29	35.20	45.45	46.99	52.05
		Max	35.52	87.34	58.90	68.93	68.97	75.80
		Correlation w/ Previous Year	NA	0.21	0.61*	0.76*	0.72*	0.54*
2.Services provided by provincial agencies: vocational training (% Very Good or Good)	PCI Survey Question: E1-2.8	Min	31.25	24	6.25	10.25	10.67	16.46
		Median	55.43	55.9	19.81	27.11	27.40	34.88
		Max	73.17	79.49	46.28	48.51	64.37	68.25
		Correlation w/ Previous Year	NA	0.66*	0.78*	0.57*	0.57*	0.39*
3. Firm has used labor exchange services (%)	PCI Survey Question: E2-6.3	Min				15.65	4.39	23.76
		Median				33.33	31.11	52.56
		Max				47.13	48.08	83.17
		Correlation w/ Previous Year				NA	0.37*	0.31*
4. Firm used private provider for above labor exchange services (%)	PCI Survey Question: E2-6.3	Min				25.53	0.00	3.45
		Median				40.43	39.06	22.72
		Max				75.61	84.42	61.80
		Correlation w/ Previous Year				NA	0.39*	0.13*
5.Firm intends to use above service provider again for labor exchange services (%)	PCI Survey Question: E-6.3	Min				8.51	32.65	6.90
		Median				27.78	62.50	27.78
		Max				42.86	93.94	53.70
		Correlation w/ Previous Year				NA	0.02	0.23*
6.Percentage of total business costs spent on labor training.	PCI Survey Question: E3-9 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min				0 (-3.6)	0 (-3.37)	0(-3.31)
		Median				1 (-2.5)	1.25 (-2.44)	1(-2.14)
		Max				2.5 (-1.19)	3 (0.917)	5(1.02)
		Correlation w/ Previous Year				NA	0.37*	-0.08

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
7. Percentage of total business costs spent on labor recruitment	PCI Survey Question: E3-8 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min				0 (-3.5)	0 (-3.99)	0(-2.92)
		Median				1 (-2.3)	1 (-2.8)	0(-2.30)
		Max				2 (-1.27)	3 (1.99)	1(-0.94)
		Correlation w/ Previous Year				NA	0.21	0.11
8. Overall Satisfaction with Labor (% Agreeing labor meets firm needs).	PCI Survey Question: E3-10	Min				50.38	58.40	429.90
		Median				74.15	73.47	75.60
		Max				83.85	90.11	93.75
		Correlation w/ Previous Year				NA	0.28*	0.21*
9. Ratio of vocational training school graduates to untrained laborers	Ministry of Labor, Invalids and Socal Affairs: General Labor Department	Min				1.42	0.89	1.03
		Median				5.45	3.13	3.60
		Max				29.02	20.51	20.08
		Correlation w/ Previous Year				NA	0.58*	0.93*
10. Secondary school graduates as % of workforce	General Statistical Office	Min				4.36	4.36	2.73
		Median				10.33	8.65	7.10
		Max				30.24	28.02	16.17
		Correlation w/ Previous Year				NA	0.91*	0.65*
11. Percentage of workers having completed training at vocational schools	PCI Survey Question: E3-11	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable
All values are at the provincial level. Parenthes in indicators E8& E9 indicate residuals.

Table 9: Comparison of Labor Policies (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Services provided by provincial agencies: general education (% Very Good or Good)	PCI Survey Question: E1-2.7	Min	7.43	51.51	17.71	22.08	20.27	28.77
		Median	19.16	73.29	35.20	45.45	46.99	52.05
		Max	35.52	87.34	58.90	68.93	68.97	75.80
		Correlation w/ Previous Year	NA	0.21	0.61*	0.76*	0.72*	0.54*
2.Services provided by provincial agencies: vocational training (% Very Good or Good)	PCI Survey Question: E1-2.8	Min	31.25	24	6.25	10.25	10.67	16.46
		Median	55.43	55.9	19.81	27.11	27.40	34.88
		Max	73.17	79.49	46.28	48.51	64.37	68.25
		Correlation w/ Previous Year	NA	0.66*	0.78*	0.57*	0.57*	0.39*
3. Firm has used labor exchange services (%)	PCI Survey Question: E2-6.3	Min				15.65	4.39	23.76
		Median				33.33	31.11	52.56
		Max				47.13	48.08	83.17
		Correlation w/ Previous Year				NA	0.37*	0.31*
4. Firm used private provider for above labor exchange services (%)	PCI Survey Question: E2-6.3	Min				25.53	0.00	3.45
		Median				40.43	39.06	22.72
		Max				75.61	84.42	61.80
		Correlation w/ Previous Year				NA	0.39*	0.13*
5.Firm intends to use above service provider again for labor exchange services (%)	PCI Survey Question: E-6.3	Min				8.51	32.65	6.90
		Median				27.78	62.50	27.78
		Max				42.86	93.94	53.70
		Correlation w/ Previous Year				NA	0.02	0.23*
6.Percentage of total business costs spent on labor training.	PCI Survey Question: E3-9 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min				0 (-3.6)	0 (-3.37)	0(-3.31)
		Median				1 (-2.5)	1.25 (-2.44)	1(-2.14)
		Max				2.5 (-1.19)	3 (0.917)	5(1.02)
		Correlation w/ Previous Year				NA	0.37*	-0.08

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
7. Percentage of total business costs spent on labor recruitment	PCI Survey Question: E3-8 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min				0 (-3.5)	0 (-3.99)	0(-2.92)
		Median				1 (-2.3)	1 (-2.8)	0(-2.30)
		Max				2 (-1.27)	3 (1.99)	1(-0.94)
		Correlation w/ Previous Year				NA	0.21	0.11
8. Overall Satisfaction with Labor (% Agreeing labor meets firm needs).	PCI Survey Question: E3-10	Min				50.38	58.40	429.90
		Median				74.15	73.47	75.60
		Max				83.85	90.11	93.75
		Correlation w/ Previous Year				NA	0.28*	0.21*
9. Ratio of vocational training school graduates to untrained laborers	Ministry of Labor, Invalids and Socal Affairs: General Labor Department	Min				1.42	0.89	1.03
		Median				5.45	3.13	3.60
		Max				29.02	20.51	20.08
		Correlation w/ Previous Year				NA	0.58*	0.93*
10. Secondary school graduates as % of workforce	General Statistical Office	Min				4.36	4.36	2.73
		Median				10.33	8.65	7.10
		Max				30.24	28.02	16.17
		Correlation w/ Previous Year				NA	0.91*	0.65*
11. Percentage of workers having completed training at vocational schools	PCI Survey Question: E3-11	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

* Significant at 5% level; NA = not applicable
All values are at the provincial level. Parenthes in indicators E8& E9 indicate residuals.

Table 9: Comparison of Labor Policies (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Services provided by provincial agencies: general education (% Very Good or Good)	PCI Survey Question: E1-2.7	Min	24.62	31.25	32.88	34.44	34.41	41.94
		Median	54.65	54.84	56.99	51.82	47.79	57.73
		Max	80.00	75.29	73.14	69.07	69.23	70.41
		Correlation w/ Previous Year	0.35*	0.46*	0.64*	0.76*	0.62*	0.54*
2.Services provided by provincial agencies: vocational training (% Very Good or Good)	PCI Survey Question: E1-2.8	Min	15.25	17.33	16.30	18.07	20.56	20.62
		Median	42.15	43.10	33.08	31.11	33.03	37.50
		Max	73.39	67.78	57.47	59.04	58.89	55.25
		Correlation w/ Previous Year	0.26*	0.37*	0.56*	0.68*	0.63*	0.63*
3. Firm has used labor exchange services (%)	PCI Survey Question: E2-6.3	Min	13.58	9.52	13.11	8.99	9.43	40.54
		Median	33.33	30.10	27.94	29.76	32.10	62.94
		Max	53.85	47.83	47.78	51.22	52.94	78.95
		Correlation w/ Previous Year	0.14	0.09	0.25	0.65*	0.42*	0.28*
4. Firm used private provider for above labor exchange services (%)	PCI Survey Question: E2-6.3	Min	2.00	5.88	5.56	10.00	8.33	26.09
		Median	15.62	45.00	40.00	34.38	38.10	64.00
		Max	38.55	80.00	84.21	82.61	81.82	94.12
		Correlation w/ Previous Year	0.09	0.25	0.34*	0.43*	0.43*	0.44*
5.Firm intends to use above service provider again for labor exchange services (%)	PCI Survey Question: E-6.3	Min	4.76	5.56	13.33	7.69	23.08	30.77
		Median	19.56	40.00	50.00	52.38	58.33	62.50
		Max	34.54	75.00	66.67	70.00	80.00	82.14
		Correlation w/ Previous Year	0.15	0.29*	0.16	0.35*	0.21	0.28*
6.Percentage of total business costs spent on labor training.	PCI Survey Question: E3-9 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min	0.87(-2.42)	1.2(-1.54)	3.38 (-1.54)	2.00(-2.71)	2.37(-2.59)	2.92(-3.35)
		Median	3.9(-0.039)	2.9(-.20)	5.56(-.20)	4.57(-.018)	4.66(-.046)	5.98 (0.02)
		Max	7.47(4.03)	5.2(2.68)	8.09(2.68)	7.15(2.27)	7.99(3.49)	8.22 (2.87)
		Correlation w/ Previous Year	0.01	0.31*	0.14	0.27*	0.18	0.29*

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
7. Percentage of total business costs spent on labor recruitment	PCI Survey Question: E3-8 (Data is the residual after regresssing labor costs on firm type, sector, size, number of enterprises in province, average industrial wage in province.)	Min	1.48(-2.29)	0.47(-2.41)	1.25(- 2.53)	1.44(- 2.78)	1.47(- 2.55)	2.75 (-2.85)
		Median	3.82(-0.18)	2.09(- 0.23)	4.32(-.16)	4.26(.025)	4.1(.039)	4.90 (-.08)
		Max	9.39(4.866)	6.19(4.48)	9(4.87)	8.14(4.34)	9.24(4.06)	9.11 (2.82)
		Correlation w/ Previous Year	-0.22	0.25*	0.27*	0.49*	0.39*	0.27*
8. Overall Satisfaction with Labor (% Agreeing labor meets firm needs).	PCI Survey Question: E3-10	Min	71.64	85.00	77.46	82.61	82.11	75.29
		Median	92.73	95.12	93.59	93.51	90.43	89.69
		Max	100.00	99.04	100.00	98.89	98.88	97.56
		Correlation w/ Previous Year	-0.10	0.24	0.55*	0.49*	0.25*	0.30*
9. Ratio of vocational training school graduates to untrained laborers	Ministry of Labor, Invalids and Socal Affairs: General Labor Department	Min	0.95	1.20	0.63	0.60	0.81	0.78
		Median	3.72	4.60	4.56	4.36	4.92	5.35
		Max	22.42	22.37	12.00	12.00	12.00	16.29
		Correlation w/ Previous Year	0.93*	0.91*	0.93*	0.91*	0.95*	0.93*
10. Secondary school graduates as % of workforce	General Statistical Office	Min	2.05	2.98	2.14	2.57	2.80	2.17
		Median	7.69	7.59	7.61	7.91	8.47	8.08
		Max	19.09	19.53	12.86	12.86	12.86	13.53
		Correlation w/ Previous Year	0.85*	0.92*	0.89*	0.88*	0.93*	0.91*
11. Percentage of workers having completed training at vocational schools	PCI Survey Question: E3-11	Min		23.18	23.19	20.59	34.06	36.12
		Median		42.80	42.49	36.80	49.91	48.04
		Max		67.25	55.06	51.23	67.79	58.71
		Correlation w/ Previous Year		N.A	0.45*	0.63*	0.69*	0.62*

* Significant at 5% level; NA = not applicable
All values are at the provincial level. Parenthes in indicators E8& E9 indicate residuals.

Table 10: Comparison of Law & Order (2006-2017)

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
1. Legal system provided mechanism for firms to appeal against officials' corrupt behavior (% Always or Usually)	PCI Survey Question: F2-7	Min	7.44	17.70	17.22	13.04	14.16	0.00
		Median	19.16	28.80	27.31	25.17	25.00	23.70
		Max	35.53	41.41	42.53	43.94	53.33	55.80
		Correlation w/ Previous Year	NA	-0.24	0.48*	0.38*	0.27*	-0.08*
2. Firm confident that legal system will uphold property rights and contracts (% Strongly Agree or Agree)	PCI Survey Question: H1-1	Min	50.00	53.57	55.05	45.63	43.36	0.00
		Median	69.42	66.11	67.00	62.32	62.69	69.94
		Max	82.14	77.55	78.23	75.76	71.11	88.76
		Correlation w/ Previous Year	NA	0.50*	0.40*	0.29*	0.16	-0.14*
3. Cases filed by by non-state entities at Provincial Economic Court per 100 firms.	People's Supreme Court	Min	0	0	0	0	0.00	0.00
		Median	0.41	0.58	1.29	3.05	1.74	2.11
		Max	9.49	8.12	6.97	35.64	62.10	14.82
		Correlation w/ Previous Year		0.66*	0.32*	0.84*	0.84*	0.70*
4. Non-state claimants as a percentage of claimants at Provincial Economic Court.	People's Supreme Court	Min	0.00	0.00	0.00	0.00	0.00	0.00
		Median	50.00	50.00	65.48	72.41	73.47	84.81
		Max	100.00	100.00	100.00	100.00	100.00	100.00
		Correlation w/ Previous Year	NA	0.38*	0.05	0.41*	0.40*	0.27*
5. Ratio of economic cases solved(%) (2014)	People's Supreme Court	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
6. Provincial court judge economic cases by the law (% Agree or strongly agree)	PCI Survey Question: H1-2.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
7.Provincial court resolve economic cases quickly (% Agree or strongly agree)	PCI Survey Question: H1-2.2	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
8. Court judgements are enforced quickly (% Agree or strongly agree)	PCI Survey Question: H1-2.3	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
9. Legal aid agencies support businesses in the use of laws when disputes arise (% Agree)	PCI Survey Question: H1-2.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
10.Formal and informal costs are acceptable (% Agree or strongly agree)	PCI Survey Question: H1-2.5	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
11.Judgement by the court is fair (% Agree or strongly agree)	PCI Survey Question: H1-2.6	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
12.Willingness to use court in case a dispute arises (% Yes)	PCI Survey Question: H1.3	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
13 .Security situation in the province (% Good or Very good) - New variable in 2017	PCI Survey Question: H2-6	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
14 . Was firm a victim of theft or break in last year (%Yes) - New variable in 2017	PCI Survey Question: H2-6.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
15 . Local police handled firm's case effectively (%Yes) - New variable in 2017	PCI Survey Question: H2-6.4	Min						
		Median						
		Max						
		Correlation w/ Previous Year						
16 . Did firm have to pay money to gangsters groups (%Yes) - New variable in 2017	PCI Survey Question: H2-7	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Indicator	Source (2017 Survey)	Measure	2006	2007	2008	2009	2010	2011
17 . The leaders will discipline the offending staffs (%Agree) - New variable in 2017	PCI Survey Question: F2-7.1	Min						
		Median						
		Max						
		Correlation w/ Previous Year						

Table 10: Comparison of Law & Order (2006-2017)

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
1. Legal system provided mechanism for firms to appeal against officials' corrupt behavior (% Always or Usually)	PCI Survey Question: F2-7	Min	9.00	16.07	15.53	18.29	19.63	19.54
		Median	23.72	32.56	31.58	31.39	31.68	30.43
		Max	51.75	69.86	53.41	47.67	43.75	45.24
		Correlation w/ Previous Year	-0.12	0.25*	0.30*	0.55*	0.41*	0.34*
2. Firm confident that legal system will uphold property rights and contracts (% Strongly Agree or Agree)	PCI Survey Question: H1-1	Min	41.73	58.20	71.58	70.36	65.38	75.76
		Median	63.75	83.16	80.95	81.20	81.25	85.19
		Max	81.82	92.59	88.64	88.89	90.67	92.31
		Correlation w/ Previous Year	-0.04	0.22	0.16	0.31*	0.36*	0.22
3. Cases filed by by non-state entities at Provincial Economic Court per 100 firms.	People's Supreme Court	Min	0.00	0.00	0.00	0.00	0.00	0.00
		Median	1.32	2.09	1.52	0.63	0.68	0.46
		Max	9.01	21.74	14.24	12.25	10.13	7.15
		Correlation w/ Previous Year	0.68*	0.57*	0.65*	0.78*	0.74*	0.61*
4. Non-state claimants as a percentage of claimants at Provincial Economic Court.	People's Supreme Court	Min	0.00	0.00	0.00	0.00	0.00	0.00
		Median	90.00	85.71	85.71	85.14	81.82	82.35
		Max	100.00	100.00	100.00	100.00	100.00	100.00
		Correlation w/ Previous Year	0.46*	0.30*	0.26*	0.46*	0.41*	0.57*
5. Ratio of economic cases solved(%) (2014)	People's Supreme Court	Min			44.44	16.67	42.94	50.45
		Median			80.73	76.78	75.00	80.00
		Max			100.00	100.00	100.00	100.00
		Correlation w/ Previous Year			N.A	0.80*	0.73*	0.57*
6. Provincial court judge economic cases by the law (% Agree or strongly agree)	PCI Survey Question: H1-2.1	Min		78.13	72.68	77.82	69.32	81.11
		Median		89.29	85.98	87.90	83.33	88.00
		Max		98.84	94.74	93.51	92.50	98.53
		Correlation w/ Previous Year		N.A	0.45*	0.47*	0.22	0.32*
7.Provincial court resolve economic cases quickly (% Agree or strongly agree)	PCI Survey Question: H1-2.2	Min		29.47	42.03	48.00	46.04	49.49
		Median		58.00	56.00	63.41	59.38	65.83
		Max		80.65	67.80	74.71	71.28	80.30
		Correlation w/ Previous Year		N.A	0.11	0.37*	0.31*	0.51*
8. Court judgements are enforced quickly (% Agree or strongly agree)	PCI Survey Question: H1-2.3	Min		38.64	43.06	50.00	47.25	50.56
		Median		60.00	59.78	65.26	62.82	67.86
		Max		86.02	73.13	76.32	73.53	82.43
		Correlation w/ Previous Year		N.A	0.03	0.36*	0.57*	0.53*

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
9. Legal aid agencies support businesses in the use of laws when disputes arise (% Agree)	PCI Survey Question: H1-2.4	Min		40.00	53.13	55.95	44.83	58.43
		Median		68.75	65.28	72.15	66.67	72.88
		Max		86.67	79.59	86.30	84.44	87.50
		Correlation w/ Previous Year		N.A	0.17	0.31*	0.26*	0.39*
10.Formal and informal costs are acceptable (% Agree or strongly agree)	PCI Survey Question: H1-2.5	Min		57.35	57.35	63.41	53.09	59.74
		Median		77.78	71.03	74.73	72.93	79.17
		Max		93.26	83.33	83.56	85.37	90.28
		Correlation w/ Previous Year		N.A	0.32*	0.40*	0.35*	0.43*
11.Judgement by the court is fair (% Agree or strongly agree)	PCI Survey Question: H1-2.6	Min		71.67	66.14	68.75	65.67	70.13
		Median		85.96	80.00	81.98	78.41	83.33
		Max		96.70	92.86	90.67	89.86	92.54
		Correlation w/ Previous Year		N.A	0.25*	0.43*	0.35*	0.53*
12.Willingness to use court in case a dispute arises (% Yes)	PCI Survey Question: H1.3	Min		29.31	36.05	23.42	26.81	20.44
		Median		59.74	50.48	37.50	35.79	36.08
		Max		77.87	63.10	50.00	55.67	48.15
		Correlation w/ Previous Year		N.A	0.04	0.22	0.39*	0.34*
13 .Security situation in the province (% Good or Very good) - New variable in 2017	PCI Survey Question: H2-6	Min						33.98
		Median						56.48
		Max						77.38
		Correlation w/ Previous Year						N.A
14 . Was firm a victim of theft or break in last year (%Yes) - New variable in 2017	PCI Survey Question: H2-6.1	Min						4.71
		Median						13.59
		Max						26.73
		Correlation w/ Previous Year						N.A
15 . Local police handled firm's case effectively (%Yes) - New variable in 2017	PCI Survey Question: H2-6.4	Min						43.75
		Median						70.59
		Max						89.47
		Correlation w/ Previous Year						N.A
16 . Did firm have to pay money to gangsters groups (%Yes) - New variable in 2017	PCI Survey Question: H2-7	Min						0.00
		Median						2.86
		Max						6.98
		Correlation w/ Previous Year						N.A

Indicator	Source (2017 Survey)	Measure	2012	2013	2014	2015	2016	2017
17. The leaders will discipline the offending staffs (%Agree) - New variable in 2017	PCI Survey Question: F2-7.1	Min						22.58
		Median						35.56
		Max						50.68
		Correlation w/ Previous Year						N.A

APPENDIX 3: TABLE OF CORE PCI INDICATORS

Indicators used in Core PCI

Item	Source
Sub-Index 1 – Entry	
1. Length of business registration in days (median)	PCI Survey Question: C1
2. Length of business re-registration in days (median)	PCI Survey Question: C2
3. Median number of days to wait for Land Use Rights Certificate	PCI Survey Question: B4.2
4. Percentage of firms waiting for more than one month to complete all steps necessary to start operations	PCI Survey Question: C5
5. Percentage of firms waiting more than three months to complete all steps necessary to start operations.	PCI Survey Question: C5
Sub-Index 2 – Land Access and Security	
1. Percentage of firms that own land and are in possession of an LURC	PCI Survey Question: B1 and B4
2. Percentage of land that has been registered and provided with official LURCs	Ministry of National Resources and Environment (MONRE)
3. Firms' rating of expropriation risk (from 1-Very High to 5-Very Low)	PCI questionaire: B4.3
Sub-Index 3 – Transparency	
1. Access to planning documents (1=impossible to access; 5= easy to access)	PCI Survey Question: F1.1-F1.13
2. Access to legal documents (1=impossible to access; 5= easy to access)	PCI Survey Question: F1.1-F1.13
3. Relationship important or very important to get access to provincial documents (% Important or Very Important)	PCI Survey Question: F2
4. Negotiations with tax authority are an essential part of doing business (% Agree or Strongly Agree)	PCI Survey Question: D2.8
5. Predictability of implementation of central laws at the provincial level (% Usually or Always)	PCI Survey Question: F1.4.1
Sub-Index 4 - Time Costs of Regulatory Compliance	
1. Percentage of firms spending over 10 percent of their time on understanding and complying with regulations	PCI Survey Question: D11
2. Median number of inspections (all agencies)	PCI Survey Question: D2.4
3. Median tax inspection hours	PCI Survey Question: D2.7

Item	Source
Sub-Index 5 - Informal Charges	
1. Enterprises in my line of business usually have to pay for informal charges (% agree or totally agree)	PCI Survey Question: D3.9
2. Percentage of firms paying over 10 percent of their revenue for informal charges	PCI Survey Question: D2.10
3. Rent-seeking phenomenon is popular in handling administrative procedures for businesses (% strongly agree or agree)	PCI Survey Question: D1.3.9
4. Percentage of firms saying that informal charges usually or always deliver expected results	PCI Survey Question: D2.12
Sub-Index 6 - Policy Bias	
Province give privileges to state-owned economic group, corporations, causing difficulties to your business (% Agree)	PCI Survey Question: I4
Province give priority in solving problems and difficulties to foreign companies over domestic one (% agree)	PCI Survey Question: I2.6
"Contracts, land, …, and other economic resources mostly fall in the hands of enterprises that have strong connections to local authorities" (% agree)	PCI Survey Question: I5
Preferential treatment to big companies (both state-owned and nonstate) is an obstacle to their business operations (% agree)	PCI Survey Question: I.2.5
Sub-Index 7 - Proactivity	
1. Firms' assessment of the attitude of provincial government toward private sector (% Very Positive or Very Positive)	PCI Survey Question: I1
2. The PPC is flexible within the legal framework to create favorable business environment for nonstate firms (% Strongly Agree or Agree)	PCI Survey Question: I2.2
3. The PPC is very proactive and innovative in solving new problems (% Strongly Agree or Agree)	PCI Survey Question: I2.3
Sub-Index 8 - Business Support Services	
1. Number of trade fairs held by province in previous year and registered for present year (Ministry of Industry and Trade)	VietTrade, Ministry of Industry and Trade
2. Ratio of the number of service providers to the total number of firms	General Department of Taxation
3. Ratio of the number of nonstate and FDI service providers to the total number of service providers (General Department of Taxation data)	General Department of Taxation
4. Firm has used business information search services (%) (e7_1_1)	PCI Survey Question: E.2.6.1
5. Firm used private provider for business information search services (%)	PCI Survey Question: E2.6.1
6. Firm intends to use business information search services again (%)	PCI Survey Question: E2.6.1
7. Firm has used consulting on regulatory information (%)	PCI Survey Question: E2.6.2
8. Firm used private provider for consulting on regulatory information (%)	PCI Survey Question: E2.6.2
9. Firm intends to use regulatory consulting services again (%)	PCI Survey Question: E2.6.2

Item	Source
10. Firm has used business match making services(%)	PCI Survey Question: E2.6.4
11. Firm used private provider for business match making services (%)	PCI Survey Question: E2.6.4
12. Firm intends to use business match making services again (%)	PCI Survey Question: E2.6.4
13. Firm has used trade promotion services (%)	PCI Survey Question: E2.6.5
14. Firm used private provider for trade promotion services (%)	PCI Survey Question: E2.6.5
15. Firm intends to use trade promotion services again (%)	PCI Survey Question: E2.6.5
16. Firm has used technology related services (%)	PCI Survey Question: E2.6.6
17. Firm used private provider for technology related services (%)	PCI Survey Question: E2.6.6
18. Firm intends to use above service provider again for technology related services (%)	PCI Survey Question: E2.6.6
Sub-index 9 – Labor quality	
1. Services provided by provincial agencies - general education (% Very Good or Good)	PCI Survey Question: E1..2.7
2.Services provided by provincial agencies – vocational training (% Very Good or Good)	PCI Survey Question: E1..2.8
3. Firm has used labor exchange services (%)	PCI Survey Question: E2.6.3
4. Firm used private provider for above labor exchange services (%)	PCI Survey Question: E2.6.3
5.Firm intends to use labor exchange services again (%)	PCI Survey Question: E2.6.3
6. Overall Satisfaction with Labor (% Agreeing labor meets firm needs)	PCI Survey Question: E3.10
7. Ratio of vocational training school graduates to untrained laborers	Ministry of Labor, Invalids and Social Affairs
8. Laborers with technical training as % of workforce	Ministry of Labor, Invalids and Social Affairs
Sub-index 10 – Legal institutions	
1. Legal system provided mechanism for firms to appeal against officials' corrupt behavior (% Always or Usually)	PCI Survey Question: F2.7
2. Firm confident that legal system will uphold property rights and contracts (%Strongly Agree or Agree)	PCI Survey Question: H1.1
3. Cases filed by by non-state entities at Provincial Economic Courts per 100 firms (Supreme Court)	People's Supreme Court
4. Non-state claimants as a percentage of claimants at Provincial Economic Courts (Supreme Court)	People's Supreme Court

APPENDIX 4: TABLE OF PCI 2017'S INFRASTRUCTURE INDICATORS

Infras_2017

Province	Rank	Quality of Infrastructure Index Score	Quality of Infrastructure Index - DTF*	Industrial Zones/ Clusters Score (1-25)	Industrial Zones/ Clusters - DTF	Roads Score (1-25)	Roads - DTF	Energy/ Telecom Score (1-25)	Energy/ Telecom - DTF	Internet Score (1-25)	Internet - DTF
An Giang	45	61.98	79.04	10.38	45.55	17.20	74.81	14.76	76.69	19.65	86.80
BRVT	3	76.15	97.09	18.14	79.62	20.08	87.35	16.71	86.84	21.21	93.70
Bac Giang	32	64.40	82.12	12.35	54.21	16.20	70.47	16.07	83.52	19.78	87.36
Bac Kan	51	61.02	77.81	7.97	34.98	16.69	72.58	18.05	93.80	18.32	80.90
Bac Lieu	33	64.39	82.10	10.37	45.52	18.42	80.13	15.71	81.64	19.89	87.85
Bac Ninh	5	72.97	93.05	16.58	72.77	20.93	91.03	15.37	79.87	20.10	88.77
Ben Tre	11	68.82	87.75	13.26	58.21	22.27	96.84	15.29	79.46	18.00	79.52
Binh Dinh	15	67.59	86.19	12.73	55.89	18.97	82.51	15.18	78.87	20.72	91.51
Binh Duong	1	78.42	100.00	22.78	100.00	20.99	91.31	14.79	76.87	19.86	87.72
Binh Phuoc	38	63.28	80.69	12.81	56.25	16.76	72.90	14.96	77.74	18.75	82.80
Binh Thuan	58	58.04	74.00	10.33	45.37	17.03	74.06	13.75	71.48	16.92	74.74
Ca Mau	49	61.24	78.09	10.41	45.69	17.58	76.47	14.28	74.22	18.97	83.79
Can Tho	31	64.46	82.19	14.72	64.63	14.76	64.20	15.43	80.18	19.55	86.35
Cao Bang	57	58.66	74.80	5.32	23.38	16.69	72.60	18.50	96.14	18.15	80.15

Province	Rank	Quality of Infrastructure Index Score	Quality of Infrastructure Index - DTF*	Industrial Zones/ Clusters Score (1-25)	Industrial Zones/ Clusters - DTF	Roads Score (1-25)	Roads - DTF	Energy/ Telecom Score (1-25)	Energy/ Telecom - DTF	Internet Score (1-25)	Internet - DTF
Da Nang	2	76.55	97.60	16.03	70.39	22.99	100.00	16.23	84.35	21.29	94.04
Dak Lak	29	64.48	82.22	9.51	41.75	19.76	85.95	15.86	82.44	19.35	85.46
Dak Nong	61	57.61	73.46	7.56	33.18	18.27	79.49	14.36	74.64	17.41	76.90
Dien Bien	63	57.02	72.70	6.54	28.70	13.92	60.53	17.56	91.26	19.00	83.93
Dong Nai	4	74.05	94.43	21.15	92.85	19.36	84.21	14.33	74.46	19.21	84.85
Dong Thap	10	68.93	87.90	12.68	55.66	18.53	80.60	15.08	78.38	22.64	100.00
Gia Lai	34	63.76	81.30	10.25	45.00	16.88	73.42	16.57	86.12	20.06	88.59
HCMC	23	65.87	83.99	14.93	65.53	18.19	79.13	15.91	82.71	16.83	74.34
Ha Giang	27	64.71	82.51	8.68	38.11	19.47	84.69	16.92	87.91	19.64	86.77
Ha Nam	14	68.00	86.71	12.18	53.46	20.17	87.74	16.11	83.75	19.53	86.28
Ha Noi	17	66.83	85.22	14.47	63.50	19.84	86.30	13.58	70.58	18.94	83.66
Ha Tinh	62	57.04	72.74	7.31	32.09	16.51	71.81	15.64	81.30	17.58	77.66
Hai Duong	6	70.53	89.94	14.83	65.08	20.65	89.82	14.98	77.88	20.07	88.65
Hai Phong	21	66.05	84.22	13.36	58.63	16.84	73.26	16.00	83.14	19.85	87.68
Hau Giang	20	66.27	84.50	12.11	53.14	18.74	81.50	14.78	76.84	20.64	91.18

Province	Rank	Quality of Infrastructure Index Score	Quality of Infrastructure Index - DTF*	Industrial Zones/ Clusters Score (1-25)	Industrial Zones/ Clusters - DTF	Roads Score (1-25)	Roads - DTF	Energy/ Telecom Score (1-25)	Energy/ Telecom - DTF	Internet Score (1-25)	Internet - DTF
Hoa Binh	41	63.06	80.41	8.79	38.57	18.99	82.62	16.66	86.57	18.62	82.26
Hung Yen	52	60.26	76.84	10.71	47.02	20.28	88.19	13.66	70.98	15.62	68.99
Khanh Hoa	53	60.21	76.77	10.94	48.02	18.81	81.79	14.83	77.05	15.64	69.06
Kien Giang	39	63.20	80.58	10.47	45.97	20.09	87.37	14.10	73.27	18.54	81.89
Kon Tum	48	61.50	78.42	8.58	37.65	18.06	78.54	16.36	85.04	18.51	81.75
Lai Chau	42	63.03	80.38	6.85	30.09	18.89	82.18	17.64	91.65	19.65	86.80
Lam Dong	37	63.41	80.85	9.69	42.54	18.21	79.22	15.71	81.65	19.79	87.43
Lang Son	43	62.51	79.70	8.48	37.22	17.28	75.17	19.00	98.75	17.75	78.38
Lao Cai	19	66.41	84.68	11.93	52.36	18.21	79.21	17.21	89.47	19.06	84.18
Long An	18	66.46	84.75	17.48	76.73	15.67	68.16	15.26	79.29	18.05	79.75
Nam Dinh	40	63.09	80.45	12.07	52.98	18.34	79.78	14.79	76.84	17.89	79.04
Nghe An	60	57.84	73.76	8.33	36.55	17.51	76.14	13.47	69.98	18.55	81.92
Ninh Binh	25	65.48	83.49	10.93	47.97	21.09	91.75	14.44	75.04	19.02	84.00
Ninh Thuan	56	59.08	75.33	9.87	43.31	16.40	71.32	14.29	74.28	18.52	81.80
Phu Tho	13	68.11	86.84	13.18	57.84	19.38	84.28	15.88	82.54	19.67	86.88
Phu Yen	47	61.58	78.52	9.31	40.88	17.64	76.72	15.62	81.16	19.01	83.96

Province	Rank	Quality of Infrastructure Index Score	Quality of Infrastructure Index - DTF*	Industrial Zones/ Clusters Score (1-25)	Industrial Zones/ Clusters - DTF	Roads Score (1-25)	Roads - DTF	Energy/ Telecom Score (1-25)	Energy/ Telecom - DTF	Internet Score (1-25)	Internet - DTF
Quang Binh	55	59.84	76.30	8.32	36.53	19.75	85.89	14.50	75.36	17.27	76.30
Quang Nam	8	69.35	88.44	13.66	59.98	20.24	88.04	14.62	75.98	20.83	92.01
Quang Ngai	12	68.31	87.11	12.19	53.52	18.98	82.55	15.37	79.89	21.77	96.16
Quang Ninh	44	62.28	79.41	11.83	51.94	17.70	76.99	15.20	78.98	17.55	77.51
Quang Tri	36	63.48	80.94	9.32	40.92	16.07	69.88	19.24	100.00	18.85	83.25
Soc Trang	16	67.32	85.84	11.53	50.63	20.69	89.97	15.12	78.59	19.98	88.23
Son La	59	58.02	73.98	6.76	29.69	16.07	69.91	15.72	81.68	19.47	85.98
TT-Hue	30	64.46	82.20	9.97	43.78	19.37	84.26	15.62	81.19	19.50	86.12
Tay Ninh	24	65.60	83.65	13.14	57.68	17.77	77.31	15.04	78.18	19.64	86.77
Thai Binh	35	63.49	80.96	10.52	46.17	20.37	88.60	15.42	80.12	17.19	75.92
Thai Nguyen	9	69.31	88.38	12.43	54.58	19.45	84.62	17.40	90.45	20.02	88.42
Thanh Hoa	26	65.22	83.16	11.36	49.88	17.77	77.27	15.80	82.13	20.29	89.61
Tien Giang	22	65.99	84.14	13.28	58.28	19.47	84.67	15.19	78.94	18.06	79.75
Tra Vinh	46	61.76	78.75	11.56	50.74	17.57	76.40	14.38	74.71	18.26	80.67
Tuyen Quang	54	60.05	76.58	9.91	43.50	17.18	74.72	15.88	82.51	17.09	75.48
Vinh Long	28	64.63	82.41	11.68	51.27	19.95	86.79	14.82	77.00	18.18	80.31

Province	Rank	Quality of Infrastructure Index Score	Quality of Infrastructure Index - DTF*	Industrial Zones/ Clusters Score (1-25)	Industrial Zones/ Clusters - DTF	Roads Score (1-25)	Roads - DTF	Energy/ Telecom Score (1-25)	Energy/ Telecom - DTF	Internet Score (1-25)	Internet - DTF
Vinh Phuc	7	69.89	89.12	15.29	67.12	21.50	93.51	15.12	78.58	17.99	79.44
Yen Bai	50	61.04	77.83	8.48	37.24	15.10	65.70	17.42	90.53	20.03	88.46
Ha Noi	**17**	**66.83**	**85.22**	**14.47**	**63.50**	**19.84**	**86.30**	**13.58**	**70.58**	**18.94**	**83.66**
Min		57.02	72.70	5.32	23.38	13.92	60.53	13.47	69.98	15.62	68.99
Median		64.40	82.12	11.36	49.88	18.42	80.13	15.37	79.89	19.02	84.00
Max		78.42	100.00	22.78	100.00	22.99	100.00	19.24	100.00	22.64	100.00

*DTF means distant to frontier which varies from 1 to 100 with 100 being the best province
Methodological notes: The Infrastructure Index is simple average of four sub-index which include: (i) Industrial Zones/Clusters; (ii) Roads; (iii) Energy and Telecommunication; (iv) Internet

Comparison of Infrastructure Index (2009-2017)

Indicator	Source (2017 Survey)	Measure	2015	2016	2017
1. Good Quality of Industrial Zones/Clusters (%)	PCI Survey Question: E1.2.5	Min	15.87	10.42	13.46
		Median	39.51	40.91	46.38
		Max	73.03	73.48	73.91
		Correlation w/ Previous Year	NA	0.85*	0.77*
2. Number of Industrial Zones	Ministry of Planning and Investment	Min	0.00	0.00	Same as 2016
		Median	3.00	3.00	
		Max	31.00	31.00	
		Correlation w/ Previous Year	0.97*	1*	
3. Good Quality of Roads (%)	PCI Survey Question: E1.2.1	Min	20.19	23.86	23.00
		Median	38.60	42.06	41.30
		Max	77.27	79.81	80.43
		Correlation w/ Previous Year	0.79*	0.76*	0.71*
4. Roads were Blocked last year(Median Number of Days)	PCI Survey Question: E1.3	Min	2.76	2.68	1.96
		Median	6.13	5.81	4.11
		Max	97.70	192.25	6.06
		Correlation w/ Previous Year	-0.06	0.71*	0.22
5. Percentage of District Asphalted Roads	GSO	Min	0.00	0.00	Same as 2016
		Median	55.31	51.67	
		Max	100.00	100.00	
		Correlation w/ Previous Year		0.89*	
6. Percentage of Provincial Asphalted Roads	GSO	Min	14.93	14.93	Same as 2016
		Median	91.99	94.16	
		Max	100.00	100.00	
		Correlation w/ Previous Year		0.79*	
7. Hours of Lost Power in the last Month (Median Number of Hours)	PCI Survey Question: E1.4.2	Min	0.04	1.00	3.00
		Median	8.00	8.00	8.00
		Max	15.91	16.00	11.87
		Correlation w/ Previous Year		0.60*	0.56*

Indicator	Source (2017 Survey)	Measure	2015	2016	2017
8. Percentage of Pre-informed Power Cuts	PCI Survey Question: E.1.4.4	Min	5.00	10.00	42.87
		Median	47.28	50.00	57.08
		Max	70.00	80.00	80.00
		Correlation w/ Previous Year	-0.14	0.31*	0.52*
9. Average Electricity Price per KW	EVN	Min	845	968	Same as 2016
		Median	1241	1312	
		Max	1637	1720	
		Correlation w/ Previous Year	0.86*	0.90*	
10. Good Quality of Telephones Supply (%)	PCI Survey Question: E.1.2.3	Min	59.07	65.26	67.74
		Median	75.00	76.84	78.17
		Max	84.54	88.46	90.12
		Correlation w/ Previous Year	0.49*	0.40*	0.43*
11. Lost TEL/FAX in the last Month (Median Number of Hours)	PCI Survey Question: E1.5	Min	0.00	0.00	0.00
		Median	0.12	0.01	1.00
		Max	8.00	5.00	5.40
		Correlation w/ Previous Year		0.45*	0.34*
12. Number of Subscribers/1000 People (Cell and Land Line)	Ministry of Information and Communications	Min		227.49	Same as 2016
		Median		1004.16	
		Max		5762.67	
		Correlation w/ Previous Year		NA	
13. Good Quality of Internet Supply(%)	PCI Survey Question: E1.2.6	Min	42.61	43.00	42.86
		Median	53.27	57.02	61.76
		Max	68.32	70.71	80.23
		Correlation w/ Previous Year	0.55*	0.41*	0.56*
14. Firms Using Email (%)	PCI Survey Question: General Information 5	Min	61.00	64.13	64.29
		Median	80.15	80.73	82.08
		Max	91.98	93.10	89.64
		Correlation w/ Previous Year	0.71*	0.49*	0.58*

Founded in 1963, the Vietnam Chamber of Commerce and Industry (VCCI) is a national organization that assembles and represents the business community, employers, and business associations of all economic sectors in Vietnam. The mission of VCCI is to protect and assist business enterprises, to contribute to the socio-economic development of the country, and to promote economic, commercial, and technological cooperation between Vietnam and other countries in the world.

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