

PROCUREMENT CORRUPTION RISK MITIGATION STRATEGIES FOR
GLOBAL COMPANIES INVESTING IN DEVELOPING NATIONS:
A VIETNAM PERSPECTIVE

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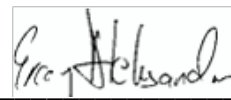
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ABSTRACT

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Foreign companies investing in developing nations have their focus during the initial years of setting up operations on market development and therefore on the sales and marketing side. Generating turnover trumps cost efficiency. Careful external capital spending to develop and maintain operations is often neglected or at least potentials for savings are not identified early on. It is during this crucial period that an organization is most vulnerable to fraudulent behavior as well as victimhood to bribery attempts, and it is fundamental to eradicate such tendencies during the company culture forming years.

This dissertation examined the specific situation for predominantly Europe-originating companies in Vietnam where corruption has been a long-standing problem in the country's rapid economic development. By means of quantitative and, to a lesser degree qualitative methods, it has been evaluated to what degree organizational, procedural

and corporate culture fostering initiatives have been implemented to mitigate integrity risks with the focus being on the procurement area. The survey and research focus primarily on indirect material or non-production material. The subject of procuring components for final products has been sufficiently researched and its results published, especially in the automotive industry. The field of non-production material in comparison is playing a minor role although the spectrum of commodities and complexity is much higher than for component procurement or procurement of direct material.

The thesis recommends an implementation guide for risk mitigating strategies in the form of processes and tools targeting fraud-prone procurement sub-processes. Proposed solutions need to put into consideration the fact that they must be readily available, impactful and proven. In addition, the proposed path to prevent fraud in procurement has considered the size of a company as determining factor for feasibility and affordability.

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CHAPTER I:

INTRODUCTION

1.1. Introduction

Transparency International (TI) annually publishes the well-known and widely recognized corruption perceptions index (CPI) by country. Many global corporate players utilize this index as their primary indicator to allocate countries to their internal risk categorization groups. Vietnam as a country has therefor an inert willingness to positively distinguish itself from other competing economies.

Due to its internationally competitive cost base paired with attractive investments policies and a relative stable political environment, Vietnam has rapidly developed from a low-income to a lower-middle income country with aspirations to becoming a high income, developed country by the year 2045 (The World Bank, 2022). These circumstances are making Vietnam an increasingly popular investment location for foreign entities which strive to secure their share of the growing economy. This has become even more apparent since China has lost part of its competitiveness as a manufacturing hub, partly due to rising costs but also due to political uncertainties (CNBC, 2022). Vietnam has been perceived as being a more stable and reliable investment country, confirmed by a number of manufacturers relocating from China since 2020 (VN Express, 2022). With a population of about 100 Mio people Vietnam is not only an attractive production location but due to its rapidly increasing middle class also a popular consumer market.

In an ever-increasing global competitive environment, paired with the inert desire to make a whole population more affluent, obstacles rooted deep in society and

culture are very hard to overcome. Nevertheless, all relevant areas with inferior economic positions need to be addressed vigorously.

1.2. Research Problem

Historically, Vietnam has suffered from corruption in all areas of the society. According to the 2019 report by the Vietnamese non-profit consultancy company Towards Transparency (Towards Transparency, 2019), corruption is ranked 4th in Vietnamese people's concerns, after poverty reduction, food hygiene and crime. Back in 2017 corruption was ranked 7th in the list of concerns (Towards Transparency, 2019).

According to the same report almost 20% of the surveyed have confirmed that they have paid bribes. That is high, but at the same time it represents a large decline from previous years' surveys. Great improvements have been made, and severe punishments have been carried out by the governmental anti-corruption agency to deter people and corporations from fraudulent activities. The population of Vietnam is supportive of this governmental initiative and considers it as effective (Towards Transparency, 2019). Corruption remains at this time an omnipresent part of people's daily lives and it is perceived difficult to quickly eradicate this unwanted issue.

Vietnam's risk of corruption is not much different from other countries in similar development stages. This can be seen by below Figure 1 which illustrates the correlation of the Transparency International Corruption Perceptions Index by country in relation to the respective GDP per Capita in USD (Our World in Data, 2018). The researcher has highlighted the Asian nations for easier comparison and comprehension.

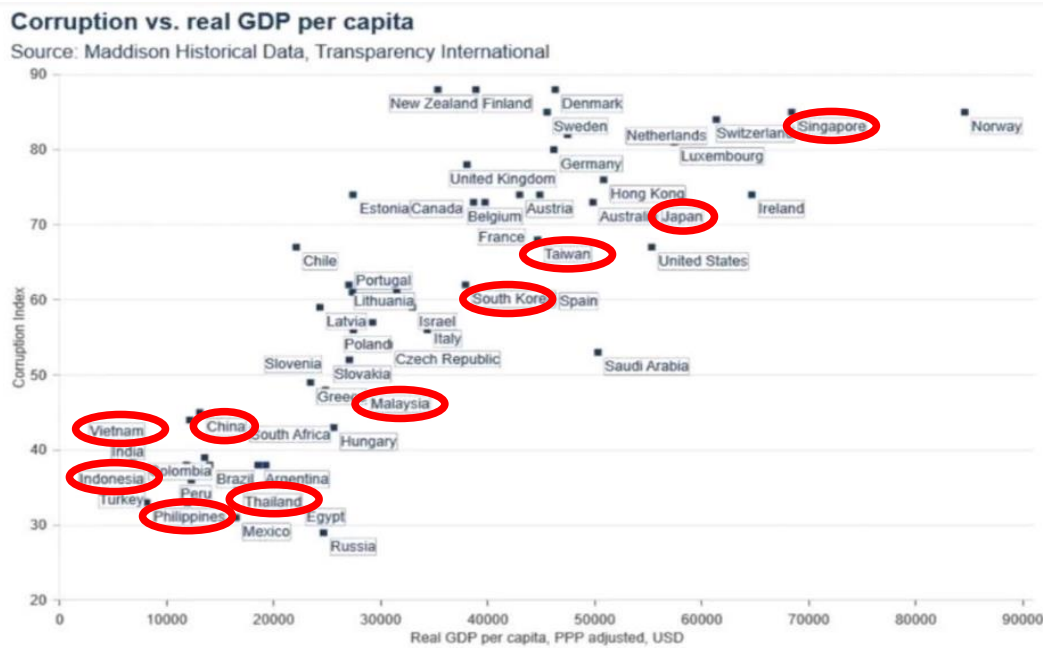


Figure 1: Relationship between Corruption Index and Real GDP per Capita (Transparency International, 2018)

With rising GDP, it can be expected that Vietnam will also become a lesser corruption-risk country. As corruption is considered a serious threat to Vietnam's rapidly developing economy it is therefore understandable that the government undertakes strong efforts to remove this obstacle and become a developed country quickly. This subject has been sufficiently researched in areas of governmental businesses as well as public-private-partnerships (PPP). The private sector has been given an important role in this respect as expressed by the UNDP (UNDP, 2018).

Research as well as data availability in the purely private sector though is very limited. It may be partly attributed to the sensitive nature of the subject as any corruption-related publicity can severely damage a company's reputation and even existence.

1.3. Purpose of Research

In order to achieve a more competitive position and attract foreign direct investments (FDI) this research focuses on the status of awareness and level of corruption preventing strategies and methods at mid to large sized foreign entities in Vietnam. A further reason behind focusing on FDI investors is the assumption that foreign-owned entities have already more rigid processes in implementation and could serve as benchmark for local Vietnamese-owned companies. The research has its focus on the operative procurement process. The annually published corruption report of the Association of Certified Fraud Examiners (ACFE) states in its latest report that among all major fraud risks in the private sector, the purchasing function runs the highest risk for corruption (ACFE, 2022).

At this point, a differentiation into active and passive corruption is needed (OECD, 2007). It appears apparent that in the area of purchasing, passive corruption, i.e., bribery of a buyer by a supplier, is carrying the major risk. Detection of such fraud is extremely difficult due to its off-the-book nature which is why it is believed that a higher effort into prevention will have a very positive effect.

At this stage it also must be defined what “procurement process” means (Knowledge Base for SAPMM, 2009). The procurement process is a sub-process in the overall Procure-to-Pay (P2P) process whereas the procurement department will be the process owner of the sub-process.

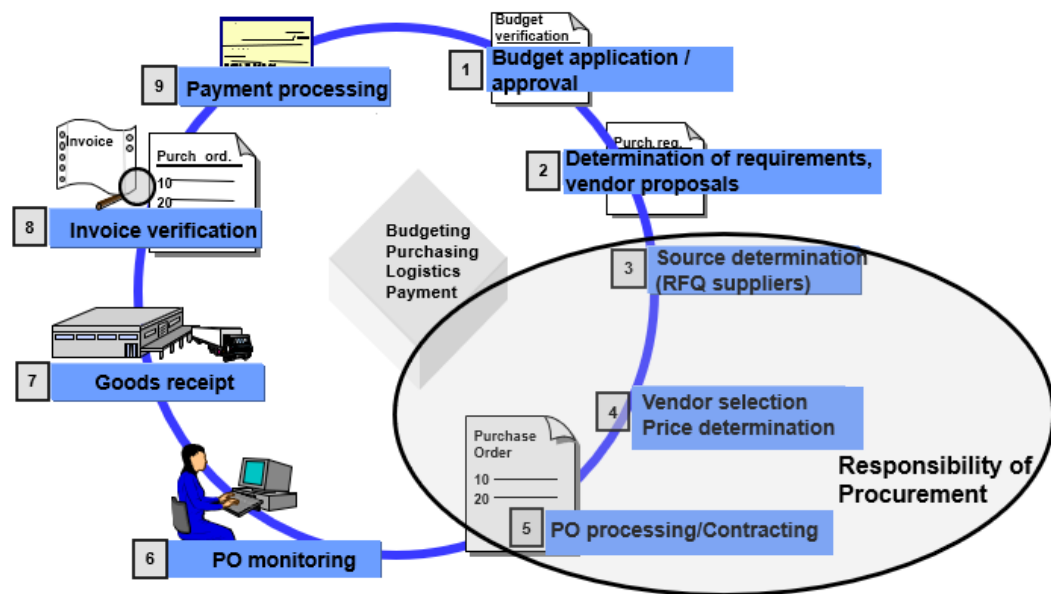


Figure 2: Wikidot.com ([Procurement Cycle - sapmm \(wikidot.com\)](http://Procurement Cycle - sapmm (wikidot.com)))

Figure 2 roughly describes the procurement process which basically covers the selection of the supplier set or RFQ (Request for Quotation) set, the bidding, the negotiations, the final selection until the conclusion of the supplier contract. Invoice settlement, logistics expediting or preceding procedures to determine the specification or scope of work are outside the direct influence or responsibility of buyers and therefore excluded from this research.

Even small to medium sized companies primarily operating out of only an office interact and have contracts with a significant number of business partners and suppliers, be it for office equipment, marketing or IT services and others. Companies which include any form of production have a much higher number of external business partners as commodities like logistics, warehousing, production equipment and services like IT integration, quality assurance and maintenance are added.

People from different cultures may have a different understanding of terms like corruption. What may be perceived as fraud for one person can be perceived as

traditional way of conducting business in another person's view. It is assumed that the gap between the perception of integrity greatly differs between multi-national foreign companies and small to mid-sized local companies in Vietnam. Maintaining such a difference in definition is not an option in an ever-increasing environment of globalization. The possible multiplying impact of a foreign industry-driven approach to risk minimization along the various value chains may be of significance for locally owned businesses.


Most FDI invested companies are focused on expanding their business rapidly and have a legitimate main focus on sales and turnover as that is the primary reason for existence. It should not be forgotten though that even in a service-oriented industry indirect material costs average 20-50% of all expenses whereas manufacturing companies are having an even higher share of business in material costs due to the implied nature of in-house production. As procurement volumes increase over time, the importance of integrity in interacting with a larger number of suppliers will play an ever more important role. With size comes also an often-positive increase in reputation. It may be a double-edged sword as any damage to a brand or reputation can put an enterprise at risk.

It is recommended that investing companies implement solid integrity-related processes at an early stage of their existence in Vietnam. The influence of the chosen organizational setup will also be touched upon, namely the identified point as of when a centralized procurement department has preference over a decentralized purchasing function.

Looking at the general procurement process and its main steps, theoretical fraud-prone process steps can be easily identified as following non-exhaustive table suggests.

Table 1: Procurement process, risks and impact (Kottmann 2023)

Procurement Process and Identified Risk Areas



Main	Vulnerability / Risk	Reason for conduct	Consequences	Impact
Determination of specification	Internal department asks supplier to write the specification (often used in technical areas and IT Services)	Lack of competence or time to describe the desired specification.	1. Preferential supplier treatment. 2. Exclusion of other suppliers as they may not fulfill the specification	Higher costs Reduced competition Weaker negotiating position
Sending out RFQs to suppliers	Inadequate selection of potential suppliers	Lack of market knowhow. Lack of market observation for new competitors. Omission of good suppliers.	1. Preferential supplier treatment through elimination of competitors. 2. Insufficient number of competitive quotes. 3. New suppliers with increased risks of uncertainties, miscalculations 4. Fewer quotes with wrong reasoning of limited interest by suppliers to quote (alibi tender)	Higher costs Reduced competition Weaker negotiating position Demotivation of new suppliers
	Short deadline for suppliers to prepare good quotations	Inadequate planning. No overview of expiring contracts. Late budget approvals.	1. Inferior quality of quotes 2. Loss of interest to quote 3. Insufficient number of received quotes	Higher costs Reduced competition Demotivation for new suppliers
	No standard Terms & Conditions in RFQ document package	Often in case of decentralized procurement	1. Unidentified risks until after contract signature 2. Entry point for suppliers to hide unethical contract conditions	Higher costs, hidden cost elements (i.e. minimum order quantities, automatic contract extensions, penalties, reduced liabilities, ...)
Quote analysis and quote comparison	Unwarranted elimination of quotations due to technical reasons. Risk of weighing technical content unreasonably higher than commercial content.	Reluctance to work with new partners. Insufficient technical knowhow on buyer side to fairly evaluate technical quote analysis.	1. Inflexible supplier pool 2. Reduced innovation as new suppliers are discouraged 3. Biased technical evaluation of quotes	Higher cost position Demotivation for new suppliers
	Missing price plausibility	Lack of cost calculation competency. Lack of standardized cost calculation breakdown requirement	1. Easy to be misled regarding actual costs vs. quoted price 2. Disguise higher costs	Higher costs Easier to hide bribery payments.
Negotiation	Insufficient documentation. Missing history of incoming quotations or/and negotiation results.	Missing standardization in documentation requirements.	1. Difficult to reconstruct decision making at later time 2. Preferential supplier treatment possible	Higher costs Demotivation of new suppliers
Vendor selection	Inappropriate vendor selection	Inadequate selection reasoning documented. Missing 4-Eye-Principle, missing segregation-of-duty processes	1. Selection of inferior vendor	Higher costs
	No qualitative feedback to vendors who did not succeed	Lack of time, lack of business ethics	1. Feedback also from supplier regarding perceived fairness of process is important, possibly lost opportunity to improve	Demotivation of new suppliers. Lost opportunity to detect irregular behavior of own staff
Contracting	Usage of supplier forms instead of own standard contract	Missing standardization in contract documentation and/or IT system	1. Hidden unapproved contract clauses with negative outcome 2. Unwanted side conditions leading to higher costs	Higher costs

Upon examining the listed risks / vulnerabilities of the 2nd column, it can be stated that suppliers may try to gain an illicit advantage by utilizing any means to cash in on any opportunity to do exactly that. It can therefore be derived that there are theoretical weaknesses in every single major procurement process step. Consequently,

there cannot be the ONE solution securing to deter, prevent or deflect bribery and fraud attempts; there need to be multiple tools and checks in place to reduce corruption risk in the procurement process. Prevention of attempts to gain an illicit advantage has therefore high priority in defining processes, tools, methods, documentation requirements and staff training, be it professional competency or in integrity.

As derived from the research by (Cressey, 1953) stating that corruption occurs when pressure and opportunity meet rationalization it can be assumed that above risk table predominantly focuses on the area of opportunity as the risks are listed along the operative procurement process. Rationalization is influenced by company culture whereas pressure is much more individualistic. None of the three corners of the fraud triangle must be neglected.

1.4. Significance of the Research

Innovations in the private sector regularly and traditionally outpace initiatives by governmental organizations or government-owned enterprises. There may be exceptions when it comes to military use applications or aerospace endeavors, although the latter has also been proven questionable since the rapid development of Elon Musk's SpaceX and Starlink.

The main reason behind the difference in speed and resulting modernity can be found in the simple fact that competition drives innovation. Governmental organizations are typically operating under monopolistic conditions which hinder rapid progress unless there is high circumstantial pressure to innovate.

It can therefore be assumed that processes, methods and tools in the private sector also develop significantly faster than public sector efforts.

The significance of this research must therefore not be underestimated. The results of the research will not only contribute to the advancement of modern processes, methods and tools for FDI invested companies but also for purely local companies and additionally the results pose a useful foundation for the public sector to absorb proven approaches. The research will also make transparent that corruption mitigation strategies rarely run contractionary to effectiveness and efficiency but in fact mostly go hand in hand. This research therefore also serves as a basis to further advance procedures in pure public sector projects and will additionally enable an eventually higher level of trust in governmental operations.

1.5. Research Questions and Hypotheses

This research not only contributes to rising awareness but, in its conclusions, also gives advice and guidance as to what procurement processes, methods and tools will lead to minimization of risks while at the same time being highly effective. It also illustrates that this effectiveness does not undermine the company's cost position, in other words, risk minimization and cost-effective tools can go hand in hand.

Following questions have been addressed in the thesis:

- What approaches have companies in Vietnam chosen to manifest a culture of integrity in their organization?
- What organizational setup has companies chosen with respect to its procurement function?
- To what extent have companies addressed the specific challenges in their operative procurement procedures?
- Which risk mitigation strategies can be suggested to successfully address gaps in vulnerable procurement procedures?

In principle, anti-fraud measures can be divided into 3 categories:

- I. Developing a corporate culture in which corruption or fraud is discouraged
- II. Developing operative measures, tools and processes which minimize fraud risk
- III. Developing internal controls which serve detection of fraud

The gap in contemporary research and thus the focus of this dissertation is on item II. Nevertheless, there is the need to also touch upon items I. and III. Cressey (1953) indicated that corruption most likely occurs when pressure and opportunity meet rationalization. In this context, corporate culture development (item I.) can be loosely associated with rationalization, operative tools development (item II.) with opportunity and detection methods development (item III.) with pressure. It can therefore be assumed that all categories need to be considered in the effort to avoid fraud and corruption. It should also be assumed that balancing out those 3 categories serves their purpose best.

The research has several hypotheses to be verified:

Hypothesis A: The smaller the company, the less pronounced the risk-based approach

Hypothesis B: The more sophisticated the risk-based approach, the more balanced are all 3 of the categories and the higher the perceived awareness or confidence in the ability to tackle the underlying problem

Hypothesis C: There is neglected focus on countermeasures against risks like hidden preferences represented in the scopes of work, on the selection of the RFQ (Request for Quotation) supplier set, above-described impact of chosen negotiation designs as well as disadvantageous clauses in purchase contracts.

The assumed deficiencies listed in hypothesis C are risks which are typically not mitigated by any IT system functionality, not part of any formal approval process and therefore not on the permanent radar of management. Hence, the study dives deeper into Hypothesis C which will play a major role when it comes to evaluating the advantages and disadvantages of an independent centralized procurement function with the sole mandate to select vendors versus a decentralized setup. The next chapter addresses the theoretical and conceptual framework associated with the realization of mitigating the thesis purpose.

CHAPTER II:

LITERATURE REVIEW

2.1. Introduction

This research is based on the theoretical framework that fraud and corruption predominantly occur in an environment where pressure and opportunity meet rationalization. All three of those variables need to be put into perspective when forming appropriate mitigation strategies. It is understood that fraud and corruption are clearly linked to the human factor. Without the human factor it may be possible to eliminate fraud altogether. One of the approaches to reduce risks in a business process is to reduce the human factor to the minimum. That is a valid approach but typically, at least at the end of any process with a specific degree of complexity and a possible variety of decision factors, a selection needs to be made, and automation still lacks the ability to autonomously perform that. This research thus goes along the three terms pressure, opportunity and rationalization in order to make the eventual conclusions plausible. This theoretical framework is the core foundation of the conducted research.

The conceptual framework can be analyzed from an institutional, societal and / or from a managerial perspective. As Vietnam is still a relatively young self-described market economy, the institutional and societal perspectives remain flawed as regulations, laws and norms as well as social norms did not have the time yet to be formed in a coherent way. The conceptual framework for this research focuses on the managerial perspective, albeit utilizing several dimensions as they all correlate with procurement fraud risk.

2.2. Theoretical Framework

Cressey (1953) developed the so-called fraud triangle which basically states that fraud occurs when pressure and opportunity meet rationalization. Pressure can be understood as having financial difficulties or being vulnerable to greed. Opportunity in procurement can present itself by a bribery offer from a business partner or more blatantly, by demanding a bribery from the supplier by the buyer. Part of opportunity is also the perceived low risk of detection. If corruption is a part of daily life of the general population, then rationalization or justification presents itself as well since everybody seems to be doing it.

According to the research of Yuniarti & Ariandi (2017), internal control and anti-fraud awareness have a significant impact on fraud prevention. Therefore, it can be derived that any company or organization needs to foster a working environment where ethical behavior as well as functioning internal controls are well established. Fraudulent behavior presents itself where internal controls are weak. In a sense, internal controls serve two purposes, deterrence and detection.

The downside of deterrence and detection is that too much focus on that particular approach can have a damaging effect on corporate culture. This has been pointed out by UNODC (United Nations Office on Drugs and Crime, 2022). Surveillance can lead to disengagement and reluctance to disclose questionable observations or misconduct. More effort should therefore be undertaken to foster a culture of integrity and transparency.

The OECD (2007) has analyzed risks in public procurement and summarized available controls, tools and methods in a concise way. Internal controls like hierarchical approval limits, 4-eye principle and documentation requirements are listed which are all also commonly applied in the private sector today.

Another OECD report (OECD, 2016) illustrates in a concise way the risks in public procurement and lists selected remedies and recommendations, supported by actual cases from various countries. It is assumed that these remedies would also have similar efficacy in the private sector.

On a global level, data summarized in the earlier mentioned 2022 ACFE report give an excellent overview of how widespread corruption is. The report also indicates the importance of selected counter measures which has been verified during the research data gathering phase.

The dissertation also examines the role and possible impact of negotiation techniques and negotiation software tools on fraud risk. This subject is insufficiently described in contemporary research.

Fourie & Malan (2021) describe that online bidding and e-procurement significantly reduce manipulation of the bidding process. Especially the automotive industry pioneered the online bidding procedures, already at the end of the 1990's. Automotive News Europe (2000) reported that the marketplace platform Covisint, one of the first of its kind, was created in 2000 by DaimlerChrysler, Ford and General Motors. It was subsequently used for numerous online biddings, securing transparency and manipulation-free negotiations. Its original intention though was to conduct negotiations efficiently and effectively, means optimizing the pricing position of the buying entity.

Hawkins et al., (2014) came to the same conclusion for companies in emerging markets as their research illustrates the acceptance and later preference of e-auctions through apparent fairness and transparency in the bidding process. A case study by Tran

et al., (2008) showed that e-procurement tool implementation in public procurement led to a sharp reduction in bribery costs of a trading company.

Another, rather novel form of negotiation is game theory-based negotiation technique. Game theory can be best described as the study of choice between rational decision makers (Encyclopedia Britannica, 2022). In that endeavor, decision making scenarios are being mathematically analyzed with the intention to calculate the probability of a specific favorable outcome. In general, the buying party determines the procedure, timing and rules of negotiations whereas the suppliers also diligently prepare their negotiation strategy.

Under the assumption of a competitive supplier environment the buyer can maximize the negotiation outcome to his benefit if the rules of negotiation are determined and translated into a more or less automated game. By this approach the human element, the importance of psychology and the individual verbal or tactical negotiation strength can be reduced. Certain conditions apply, like i.e., the suppliers (here: players) abide by the given uniform rules, buyer (here: moderator) as well as the section actually needing the product or service all adhere to the stated rules as well and irrevocably accept the outcome without further intervention.

The suppliers realize that they have no means to gain an advantage through i.e. their close personal or historic contact to a buyer. The buyer takes on the role of an observer whereas the suppliers as players compete with each other for the win. This lastly indirect role of the buyer eliminates all forms of manipulation during the negotiation phase and therefor also eliminates corruption or fraud risk at this critical stage of the supplier selection. This highly effective form of negotiation is still widely unknown and unapplied although the theoretical concept goes back to Neumann & Morgenstern (1944). Applying game theory in negotiations can lead to an optimum of

desired outcome for the buyer, the fact that fraud risk is eliminated is a welcome side effect. This dissertation examines to what degree above mentioned modern tools (e-procurement, applied game theory) are in practice.

Negotiations are particularly difficult in cases without competition. If there is i.e. a unique or proprietary product or service needed, then comparative price levels or bottom-up cost calculations are extremely difficult. Not only does this pose a risk to costing but it also opens the door to fraud vulnerability because the involved profit margins can tempt one party to offer or the other party to demand monetary benefits (Pyman et al., 2009). Sourcing without receiving competitive quotes is described as single sourcing. Observing the single source rate as one of the most important KPIs (Key Performance Indicator) needs to be given a high priority as does the critical questioning of too narrowly defined specifications.

Another identified loophole is the subject of contract management (Small Business Development Corporation, 2022). In order to protect an entity, it is advised to develop and utilize a set of standard Terms & Conditions (T&C). Using a supplier's T&C can bear risks as sneaked-in items like minimum order quantities or discount limitations based on ordered \$-volume etc. can significantly impact a cost position. Whenever a cost position is negatively affected it also represents a vulnerability to corruption.

Utilization of standard T&Cs reduces the internal effort to verify the acceptance of special terms. In the best-case scenario, the buying entity has a more powerful position and can make their T&Cs mandatory to acceptance prior to sending out an RFQ. In the case of dealing with a powerful supplier a legal analysis of the T&Cs of the supplier may need to be conducted by legal counsel. Simplification can be enacted by linking that activity to a minimum value or risk of the contract.

Multiple, special tools and processes have a higher degree of implementation if they are standardized across an organization, here: a company. It seems obvious that it is rather difficult to manifest standard procedures, T&Cs or even KPIs in a company with a decentralized purchasing function. This has been correctly analyzed by Kanepejs & Kirikova (2018) who list 3 categories as advantages of a centralized purchasing function – economies of scale, economies of process as well as economy of information and learning. There is no denial that centralized organizational functions also have disadvantages, especially in the area of higher overhead costs and possibly speed. This dissertation sheds more light on the specific impact of an organizational setup on the subject of fraud and corruption in procurement, knowing that lastly it will remain a balancing act.

Similarly to the known introduction of ISO9000, the International Organization for Standardization has introduced a certificate in 2016 (ISO 37001) proving that an organization has implemented a system to safeguard against corruption and fraud (International Organization for Standardization, n.d.). Such all-encompassing system may be useful but has flaws like other ISO certification products. ISO 37001 has been criticized for its inadequacy in the area of risk assessment and operationalizing compliance in general (Fox, 2018). Fox further states that its effectiveness remains to be confirmed or proven.

It can also be assumed that a company-wide ISO 37001 certification involves a tremendous and therefore unreasonable amount of company resources. An ISO certification has limited validity and permanent reauditing activities may be ineffective or at least too one-sided.

The role of standardization itself though must not be diminished. Standardization is key to process discipline and process improvement. Business process

standardization can be defined as a set of rules, guardrails and formalized procedures which give orientation in practices intended to achieve consistency in action and response to underlying operations.

As previously outlined, standardization of business processes appears rather difficult to achieve in an organizational setup allowing procurement tasks to be performed unsupervised across different departments of a company, thus arguing for a centralized procurement function in an organization. Hence, Cressey's Fraud Triangle, which identifies pressure, opportunity, and rationalization as the three prerequisites for fraudulent behavior, has had profound and lasting impacts on both academic research and practical fraud prevention. Below is a structured analysis of its significance:

1. Foundational Framework for Fraud Analysis

- **Theoretical Grounding:** Cressey's model provided the first systematic framework to explain *why* individuals commit fraud, shifting focus from purely economic motives to psychological and situational factors. It bridged criminology, psychology, and organizational behavior, offering a holistic lens to study white-collar crime.
- **Universal Applicability:** The triad applies across industries (e.g., corporate finance, public sector) and cultures, making it a versatile tool for analyzing fraud in diverse contexts, from embezzlement in multinational corporations to corruption in developing economies

2. Practical Anti-Fraud Strategies

- **Risk Mitigation:** Organizations use the triangle to design targeted controls:
 - **Pressure:** Implement employee financial wellness programs to reduce stressors (e.g., debt, personal crises). For example, an accountant under

debt might manipulate records to embezzle funds, rationalizing it as a temporary fix.

- **Opportunity:** Strengthen internal controls (e.g., segregation of duties, blockchain audits).
- **Rationalization:** Foster ethical cultures through training and transparent communication.

- **Auditing and Compliance:**

Auditors apply the framework to assess fraud risks during audits, aligning with standards like ISA 240 (International Standards on Auditing).

2.3. Conceptual Framework

The research focuses purely on the procurement process, which is a basic business task with, superficially observed, having clearcut boundaries and fixed procedures. The reality shows though that there are many variations of procedures, methods and underlying principles involved. The corruption risk management framework has been chosen to form the basis of the research. It aligns well with the theoretical framework, but the complexity of the managerial perspective is easy to underestimate. The risk dimensions which need to be examined in order to determine effective countermeasures against fraud and corruption are the following:

- **Principles:** Principles are guiding rigid rules which are irrevocably implemented. They form the foundation on which other dimensions are being developed.
- **Knowledge and Knowhow Management:** Knowhow, knowledge and especially the subsequent derivative trainings are main components influencing the dependent factor of reduced fraud risk.

- Company management: Category to describe the operating framework which includes subjects like organization, internal audits, company culture, etc.
- Performance Measurement: Category to describe existing KPIs (key performance indicator), management by objectives and other data points of relevance.
- Risk areas within the operative process steps: Analysis of risk areas along the process chain of an operative procurement process from definition of specification until conclusion of contracting.

It should be noted that the listed dimensions are not independent of each other. They can all indirectly or directly impact the degree of integrity of the overall procurement process. A holistic overview is therefore fundamental to minimize the risk of fraud and corruption, similar to the image of the famous weakest link of a chain determining the overall stability of the construct.

These categories are especially relevant during the final phase of the research when a qualitative analysis and evaluation of risk mitigation strategies is being conducted, and solutions proposed.

Empirical Correlation: Cressey's Fraud Triangle & Procurement Corruption

Mitigation in Developing Nations

Cressey's Fraud Triangle (pressure, opportunity, rationalization) provides a foundational framework for understanding procurement corruption risks in developing nations. Empirical studies and contemporary research reveal nuanced connections between Cressey's model and mitigation strategies, particularly in high-risk environments like Vietnam, Nigeria, or Indonesia.

Below is a synthesized analysis:

1. Pressure: Socioeconomic Drivers of Corruption

- **Economic Disparities:** In developing nations, low wages for public officials and corporate employees create pressure to solicit bribes. For example, a World Bank study (2022) found that procurement officers in Southeast Asia earning below living wages were 3x more likely to accept kickbacks.
- **Organizational Pressures:** Global firms may face demands to meet aggressive cost-cutting targets, incentivizing shortcuts (e.g., bypassing due diligence for cheaper, unvetted suppliers).

Mitigation Strategies:

- **Living Wage Policies:** Align salaries with local living costs to reduce financial desperation.
- **Stakeholder Incentives:** Reward ethical procurement behavior through bonuses tied to compliance metrics.

2. Opportunity: Systemic Weaknesses

- **Weak Governance:** Developing nations often lack robust anti-corruption laws or enforcement. For instance, Transparency International's 2024 report highlighted that 60% of African nations had no centralized procurement monitoring systems.
- **Complex Supply Chains:** Decentralized procurement in multinational operations creates loopholes (e.g., subcontractors paying bribes to expedite permits).

Mitigation Strategies:

- **Digital Procurement Platforms:** Blockchain-based systems (e.g., IBM's Trust Chain) reduce opportunity by ensuring transparent, immutable transaction records.
- **Third-Party Audits:** Partner with firms like Control Risks to conduct unannounced supplier audits.

3. Rationalization: Cultural & Normative Factors

- **Normalization of Corruption:** In some cultures, “facilitation payments” are rationalized as essential for business efficiency. A 2023 study in Vietnam found that 45% of SMEs viewed bribes as “operational costs.”
- **Moral Disengagement:** Employees may justify corruption as “helping” local communities (e.g., favoring nepotistic suppliers).

Mitigation Strategies:

- **Ethics Training:** Localized programs addressing cultural norms (e.g., workshops on OECD Anti-Bribery Convention compliance).
- **Whistleblower Protections:** Secure channels for reporting misconduct, coupled with anti-retaliation policies.

4. Beyond Cressey: Integrating Contemporary Models

To address gaps in Cressey's framework, modern research integrates complementary theories:

Model	Contribution to Mitigation	Example Application
Fraud Diamond (Wolfe & Hermanson, 2004)	Adds <i>capability</i> : Ensure employees lack technical means to execute fraud.	AI-driven background checks to flag suppliers with ties to shell companies.
Institutional Theory	Explains how weak legal systems normalize corruption.	Lobbying for reforms in partnership with groups like UNCAC.
MICE Model	Expands rationalization to include ideology/coercion.	Addressing coercion by cartels in Latin American infrastructure projects.

By empirically correlating Cressey’s model with modern mitigation tactics, firms can build resilient, ethical procurement systems tailored to developing nations’ complexities.

2.4. Conclusion

The underlying theoretical and conceptual framework form an excellent synthesis as their overlap is significant. The research problem identification as well as initial risk analysis of the procurement process along with the selected conceptual framework result in the chance to create a cohesive quantitative analysis followed by a qualitative thorough evaluation of effectiveness. The next chapter highlights the research methodology used in the research.

CHAPTER III:

METHODOLOGY

3.1. Overview of the Research Problem

To verify the existing corruption situation in Vietnam in the private sector, subsequently analyze the status quo of defense mechanisms in a company against corruption risks and in order to ultimately recommend a set of measures to further combat fraud risks in the procurement process, a sequential approach needs to be undertaken. The complexity of the procurement process in the private sector is often underestimated. This is derived from the, on the one hand, very limited research and literature pertaining to the private sector and, on the other hand, the relative simplistic existing countermeasures for procurement issues in the public sector. It must be assumed at the onset that the necessary deep dive into the various risk areas has not been sufficiently undertaken. This fact represents and confirms the novelty of this research.

3.2. Operationalization of Theoretical Construct

As the research encompasses several dimensions and variables, the conducted quantitative analysis is based on varying measured operationalizations. In some instances, constructs or parts thereof can be verified by tangible questions resulting in clear measurables in the form of binary data. Other intangible subjects need to be questioned by appealing to respondents' sentiments, thus requiring a more nuanced selection of answers. The study incorporates all those sentiment and hard data implications in a cohesive way which enables a systematic data analysis. As will be illustrated at a later stage, the research cannot purely rely on a quantitative analysis due

to the complexity and interdependency of analyzed dimensions and variables. As the theoretical construct is based on the theory of corruption being enabled by an involuntary overlay of pressure, opportunity and rationalization, the quantitative data merely result in a trend analysis and need to further be prioritized. Correlation to fraud and finally corruption risk and prevention methods need to be verified by empirically based forensic accounting experts' opinions; also, in order to secure effectiveness and operationalization in the actual business process.

3.3. Research Purpose and Questions

The research examines the degree of perceived corruption in the Vietnamese FDI related private sector, here specifically the operative procurement process, and subsequently the existing prevention means employed by these mostly European originating companies. The research also examines the awareness of fraud and corruption risks along with the status quo regarding the efforts to establish an atmosphere of shared integrity in their respective organization. The qualitative analysis allows to evaluate the stability of the existing firewalls against the corruption risks encountered on an almost daily basis. Lastly, the research will result in a set of recommendations to be implemented at corporations of various development statuses with considerations of feasibility and affordability.

3.4. Research Design

A mixed methodology approach of predominantly quantitative and a limited element of qualitative research has been applied. A survey among a larger group of foreign invested companies in Vietnam was followed up by an in-depth analysis of the previously identified risk areas and finally a set of open discussion interviews was

conducted with accounting firms in Vietnam specifically having global experience and their own unit for investigative forensic fraud analysis.

3.5. Population, Sample and Participant Selection

The pool of companies for the quantitative research consists of approximately 190 member companies of the German Business Association (GBA) in Vietnam as well as a similar number of members from the European Chamber of Commerce in Vietnam (EuroCham). The reason to select predominantly European based companies lies in the perceived advanced procedures of Western based economies when it comes to prevention of fraud and corruption.

Culturally, Western countries have a long-standing tradition to condemn fraudulent behavior which can be partly traced back to Christian values. The diversity within the European community poses an additional advantage. An effort was undertaken to also involve the AmCham members (American Chamber of Commerce) but making the member list available with dedicated personal email addresses was unfortunately refused. The overall number of the EuroCham and GBA members is higher than 400 but many email contacts data were outdated.

Additionally, pure Vietnamese companies can also become a member company, and these companies were, when identified, taken out of the pool of candidates. When it comes to reaching an adequate number of responses, a comparison can be used by looking at the EuroCham in Vietnam which conducts a quarterly business sentiment survey (Decision Lab, 2023) with the result being widely published in local media. According to that report, a response rate of approx. 10% is considered moderately high (Decision Lab, 2023, p.21) even though non-respondents were reminded by several follow-up requests. Follow-up requests could not be performed in this research as total

anonymity was guaranteed and thus there were no technical means to identify non-responders.

The quantitative analysis delivered a surprisingly high response rate of 14% which could be an indicator that the subject at hand is perceived as important. This was also reflected in several personal emails subsequently received by members who expressed their appreciation of the research initiative. The margin of error is still relatively high but lastly of lesser relevance for the ultimate research purpose which is to verify the need for action, the degree of countermeasure implementation and the recommendation of effective and affordable prevention solutions. Ultimately more important was the qualitative analysis verifying the research outcome.

The quantitative analysis delivered results around organizational setup and the extent of existing measures to prevent corruption. This included general integrity supporting measures as well as procurement-specific measures.

The qualitative analysis strived to evaluate the effectiveness of prevention tools from the perspective of companies having experience in investigative forensic analysis of actual fraud cases. Of the “Big 4” global accounting firms only three are offering forensic services to their customers in Vietnam. The objective was to gain two accounting firms’ forensic fraud specialists to participate in discussions, starting with the survey results, evaluating process weaknesses and mitigation ideas, and finally conclude with a recommended table of what measures should be taken up by Vietnamese companies at what stage of their development.

Given the complexity and sensitive nature of the research subject combined with the oligopolist local market for forensic investigations it was expected that two of the three accounting firms would welcome an interview or group discussion without having

concerns. The researcher though was confident that his seniority along with his decades long procurement and senior management experience pose a chance for the collaboration partner to benefit from the exchange and dissertation result rather than seeing risks of exposure of inadequate internal procedures. The subject at hand opens new perspectives which is why the researcher left ample room for unstructured discussions. The qualitative analysis by means of interviews and free discussions resulted in having 4 discussion participants. All discussion partners have been having many years of employment in the accounting industry with individual statements confirming that they have working experience for all the “Big Four” accounting firms. Three of the discussion partners were Vietnamese nationals and one was an Indian national albeit with many years of working experience in Vietnam.

The interest expressed at the end of the discussion for the study outcome was unanimously positive. The fact that several participants were positively surprised about the deep dive into some specific processes or subjects apparently gave them additional food for thought. This was seen as a positive confirming indicator regarding the novelty and thoroughness of the research.

3.6. Instrumentation

The quantitative analysis used the form of an anonymous online questionnaire consisting of several sections including one embedded bifurcation in order to further narrow down a specific analysis. Mostly closed questions were used with and without multiple choice answers depending on the research purpose questions. This serves the purpose to enable a quantitative analysis and also chart visualization. An open question was added at the end of the survey to gain further ideas but this was rarely used by the respondents.

The qualitative analysis used the form of individual free discussions with forensic accounting experts who have daily interaction with client companies regarding their corruption and fraud cases. The undertaken procedure was to start by showing the discussion partners the survey results in the form of generated charts. Important in that aspect was the differentiation of results by the size of the respondent companies as that turned out to be a clear determinant of the degree of countermeasures employed. The discussion was led along the charts in order to receive feedback whether any chart delivered unexpected or expected results. The final but longer part of the interview consisted of the experts being requested to evaluate the necessity, fraud correlation and implementation recommendation of listed processes, methods and tools.

3.7. Data Collection Procedures and Data Analysis

The employed data collection procedure for the quantitative analysis included the selection of participation companies and their primary contact partner, mostly being in the highest hierarchy of a contacted company. The survey consisted of predominantly closed questions requiring an answer. Opting out of an answer was disabled in order to have consistency over all covered subjects required for the later analysis. All answers were collected in a table enabling the most adequate analysis by means of charts giving an immediate overview. The survey was based on Google Forms which has a proven track record for ensuring anonymity.

The opinions and data collected for the qualitative analysis were summarized in a concise and detailed table allowing a clear overview of all processes, methods and tools, their respective correlation to corruption risk, their necessity for implementation depending on company size (affordability) and their recommended implementation aid means which may have to be employed.

3.8. Thematic Analysis

The survey's initial question referred to the indication of the size of the respondent company. The categories given are reflected in the later charts of the results chapter. This served the purpose to analyze the status by size and refers to several research questions and hypotheses.

The second question required the answer as to whether the company has a centralized or decentralized procurement department. The bifurcation in the survey became necessary in dependence on that question in order to find out reasons for choosing a decentralized procurement department (question 3a). In case of the other option (question 3b), means having a centralized procurement department, the follow-up question was regarding the reporting line of that centralized department.

The initial three questions had the purpose to set the stage for the later charts and in-depth analysis as the organization model was assumed to have a great positive or negative impact on countermeasure existence and their effectiveness.

Question four required multiple-choice answers as to the existence of integrity related tools (tone from the top messages, mandatory integrity trainings, employee whistleblower hotline, supplier whistleblower hotline).

Question five requested confirmation regarding existing protocols in Finance & Procurement (4 Eye Principle, Segregation of Duty, Regular audits).

Question six referred to specific buyer responsibilities (spend analysis by commodity groups and vendors, contracts awarded with or without competition, cost savings analysis, price plausibility training, commodity and vendor strategy development).

Question seven required indications regarding other important fringe subjects (contracts based on own terms & conditions, vendor integrity due diligence procedure, only procurement has mandate to give vendor commitments, clear description of procurement process, aware that vendors sometimes offer unethical personal benefits to employees)

Question eight specifically asked about the application online auction as a negotiation or supplier selection tool.

Question nine required a qualitative evaluation regarding Vietnam's status as a country when it comes to fraud and corruption). More details regarding the various sub-questions are in the results chapter.

Question ten finally asked for confirmation whether there is further need for action to deter and detect vulnerable corruption areas in the respondent's own organization.

These ten rather detailed questions allowed the study to answer or at least give valuable input to all research questions. The analysis allowed to formulate a clear opinion of the status of FDI invested companies in Vietnam and derive further need for process adjustments. The necessity for pure Vietnamese companies can merely be derived from the results and the eventual need for action.

The online survey and analysis formed the basis for the qualitative part of the chosen methodology of focused discussions with forensic accounting experts.

3.9. Ethical Considerations

The online survey was conducted in a guaranteed anonymous way which gave the respondents confidence that their data cannot be misused. Also, the questions allowed no analysis which could eventually lead back to individual companies. Still,

the subject at hand is a very sensitive one. The discussions with the forensic accounting experts confirmed many suspicions which may not be known to the public. Several discussion partners confirmed that the real corruption situation in Vietnam is much worse than most people are aware of. This research cannot go into that specific detail as the received statements are a mere opinion.

Nevertheless, these experts have almost daily interaction with companies requiring their assistance in detecting and verifying fraudulent behavior of individuals and companies. Due to the sensitive nature of the subject, one can only assume that a vast number of fraud cases remain undetected or remain willingly undisclosed. This assumption only confirms that much more publicity would help the cause of eradicating corruption in Vietnam and slowly but steadily become a respected member of the international business community.

3.10. Research Design Limitations

An area mentioned above but covered to a lesser degree by this research is the subject of fraud detection. Detection plays an important role as it can verify effectiveness of measures and at the same time it serves a deterring purpose. It is encouraged that fraud detection methods and the underlying need for comprehensive data analysis be researched in the near future. With recent advancement in Artificial Intelligence (AI), new opportunities to speed up detection should be analyzed.

It is undoubtedly the case that IT systems play a major role when it comes to analyzing data within an entity. The research study assumes that any mid-to-large-sized company has a modern legacy system installed and that detailed procurement related data can be retrieved. The researcher does not distinguish between or propose any specific IT system as any proposed change would have a too heavy negative impact on

a company's cost and investment position. It was the intention that the outcome of the research in form of processes, methods and tools would be possible to be implemented independent of the existing legacy system. By this intention the probability of success in transferring the knowledge conclusions of the dissertation is increased, as is the probability of implementing effective methods and tools. In other words, professionalizing the procurement processes in an affordable way while simultaneously reducing certain risks poses a positive business case.

3.11. Conclusion

In conclusion, businesses including FDI newcomers need to constantly weigh their fight against corruption and fraud against their ambition to succeed in business. Fancy terms like “Zero Tolerance” might help to develop into a company where integrity forms the foundation of a company.

Living “Zero Tolerance” is harder than it sounds as even by doing the right thing, one might end up losing as reputational damage is hard to overcome. Companies need to decide to play the long game and constantly improve in all of their business processes. “Consistency beats intensity” is another fancy but benevolent term. It is recommended for companies to form peer groups to discuss the subject of corruption more openly.

Life at CEO or CFO level is sometimes very lonely which is why a platform to share experiences and develop continuous improvement opportunities would be a recommended idea. Change, cultural change always comes from the top. Leadership matters and leaders must walk the talk, live by example every day and celebrate integrity heroes. It is thus recommended to continue conducting regular integrity related

surveys and spread the content to adjacent business processes like sales and logistics which seem to be the other most vulnerable areas.

CHAPTER IV:

RESULTS

4.1. Research Question One

Prior to focusing on the chosen approaches in order to manifest a culture of integrity, it needs to be stated that the questionnaire outcome is consistently broken down into four categories determined by the size of the companies, here, by the number of employees. This is due to the assumption that larger sized corporations have more preventative and defined procedures in place and thus, it should be differentiated from companies still envisioning a certain growth path. According to an article published by McKinsey & Company (McKinsey & Company, 2023), SME (Small Medium sized Enterprise) account for a significant slice of total revenue but there are a broad number of factors limiting their ability to implement meaningful measures. That applies to cost savings opportunities, to coherent procurement processes and to a strategic approach to their spend and category management.

SMEs tend to approach procurement in a transactional way and not in a strategic way. Those are therefore the reasons why this research focused on companies distinguished by size. Number of employees was selected as measure for size as the alternative of selecting revenue would distort the picture due to the ongoing economic growth path of the Vietnamese economy, the exchange rate complexity, general low-cost level and related purchasing power.

The survey was structured in a way that companies initially evaluated their general perception of corruption in Vietnam, gradually narrowing down the answers to specific solutions in place. A bifurcation of answers was embedded to separately

evaluate approaches depending on the chosen organization model. The following survey summary follows the research questions' sequence and also allows the analysis to go along the path of general evaluation to detailed implementation of individual countermeasures or solutions.

A surprisingly mixed reaction was encountered upon the question to the statement whether Vietnam as a country has significantly improved in its fight against corruption (Figure 3).

Only very large corporations with an employee number above 500 are predominantly of the opinion that the country has vastly improved in recent years. The other respondents overwhelmingly have a differing opinion and rather disagree with that statement.

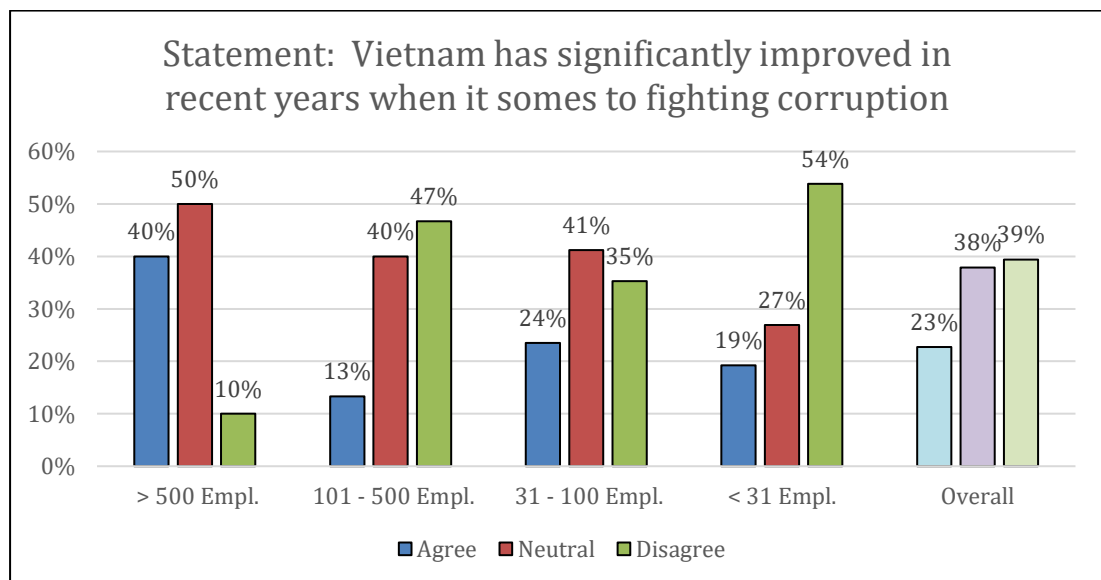


Figure 3: Vietnam has improved in its fight against corruption (Kottmann 2023)

Without any degree of certainty this mixed evaluation may be attributed to large companies having more confidence in the positive effect of their own countermeasures

and status of achievement in their fight against corruption. Another hypothesis is that smaller companies may encounter more offense attempts on a more frequent basis which is why their perception is more pessimistic. It can also be assumed that in companies with more advanced and effective tools against corruption in place, the risks of even trying to approach somebody with illegal offers is considered too high. Then again, small companies typically have a lower salary base which could make employees more vulnerable to illegally enrich themselves.

A further indicator of the confidence of FDI corporations in their fight against corruption can be derived from the evaluation regarding their own contributing role.

More than half of all respondents confirm that FDI companies contribute positively to forming a culture of integrity in Vietnam, whereas that ratio is highest again with large sized companies at 80% agreeing to that statement (Figure 4).

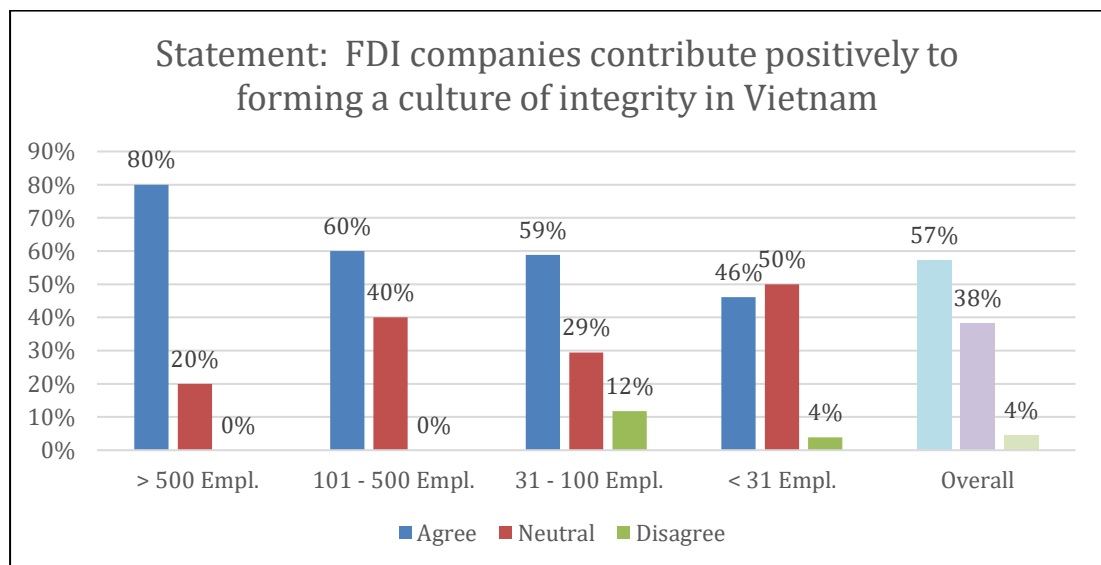


Figure 4: FDI companies' positive contribution to integrity in Vietnam (Kottmann 2023)

In order to comprehensively evaluate the first research question, it is important to additionally find out whether there is awareness among the companies regarding unethical supplier behavior towards their personnel. In their response to that question,

an overwhelming majority of FDI companies have confirmed that they are aware of unethical or illegal offers to their employees by vendors (Figure 5). The level of awareness is decreasing with the size of the responding companies. A large majority of 80% of large corporations responded that they are aware of such unethical offers. In an almost linear fashion, the degree of awareness goes down to still a majority of 58% awareness in case of companies with 30 employees or less.

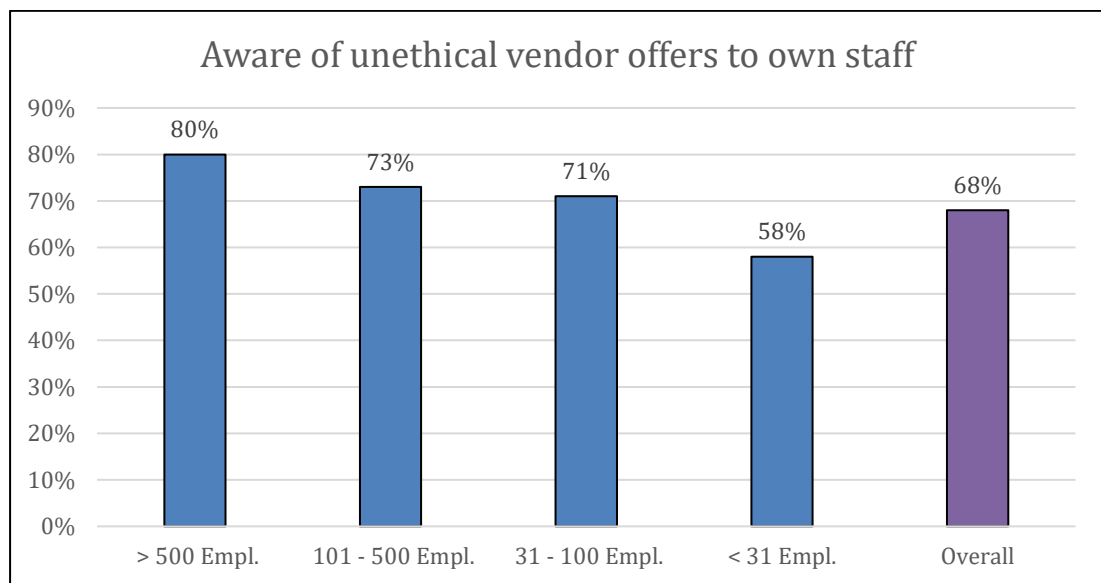


Figure 5: Awareness of unethical vendor offers to own staff (Kottmann 2023)

This leads to the assumption that due to the overwhelming confirmation regarding illicit vendor offers, either companies have undergoing countermeasures in place or, more unlikely, companies have resigned to acceptance of said fact. In either case, the need for action is clearly made visible through the result of that question.

Another survey question focused on the perceived difference between corruption in the private sector versus corruption in the public sector (Figure 6). Interesting is the fact that not even one of the respondents was of the opinion that corruption in the private sector is perceived worse than in the public sector. The overwhelming majority of 85% of all respondents confirmed that the public sector's

anti-corruption effort lags behind the private sector. That leads to the conclusion that progress in the private sector is faster or at least more advanced than in the public sector.

A mitigating factor could be that corruption in the public sector is much more apparent in the media in comparison to corruption in the private sector. The government has an interest in raising the awareness and deems the publication of own staffs' misbehavior as beneficiary to the society whereas it can be assumed that the private sector would rather try to hide own staffs' fraud cases. The reason for that being simple in the sense that government organizations or enterprises do not go bankrupt due to fraud cases, only individuals are being punished. In the private sector, any kind of published fraud case has an immediate impact on the reputation of the whole company, thus endangering its very existence.

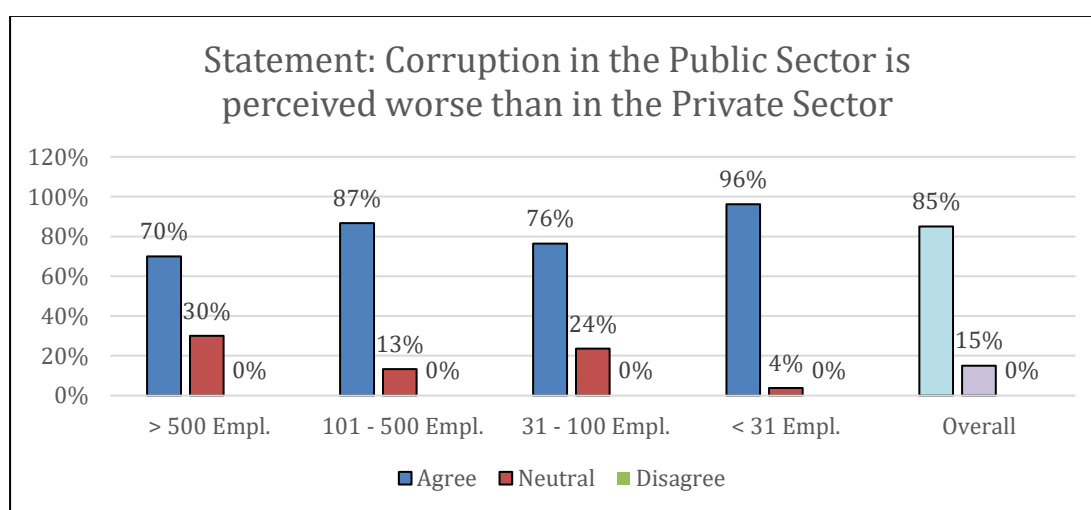


Figure 6: Perceived degree of corruption public vs private sector (Kottmann 2023)

Having confirmed the need for action, paired with the dominating opinion that FDI companies are more or less in a role model situation, it remains to be investigated whether contemporary tools are in place to foster an environment of integrity in the overall corporation.

Although this thesis is focusing on the specific role and procedures related to Procurement, it is the top management's obligation to describe, form and envision a culture free from deceit and corruption. A culture of trust is desired in order to enable autonomy in people's competency with then having the outcome of best business results. But, as a Russian proverb says and famously Ronald Reagan used on several occasions: "Trust, but verify" (Wikipedia, 2001).

Many corporations have implemented a set of measures and procedures to raise employees' awareness and at the same time appeal to conduct business in an ethical and integral manner. Repeated information, intensive trainings, detailed manuals and SOPs (Standards of Procedure) are being used to instill this mindset in all employees. There are some common tools and procedures in place at large global organizations and this thesis shows which ones have been implemented in FDI companies in Vietnam.

Figure 7 gives an overview of the implementation status, again categorized by size of the corporation.

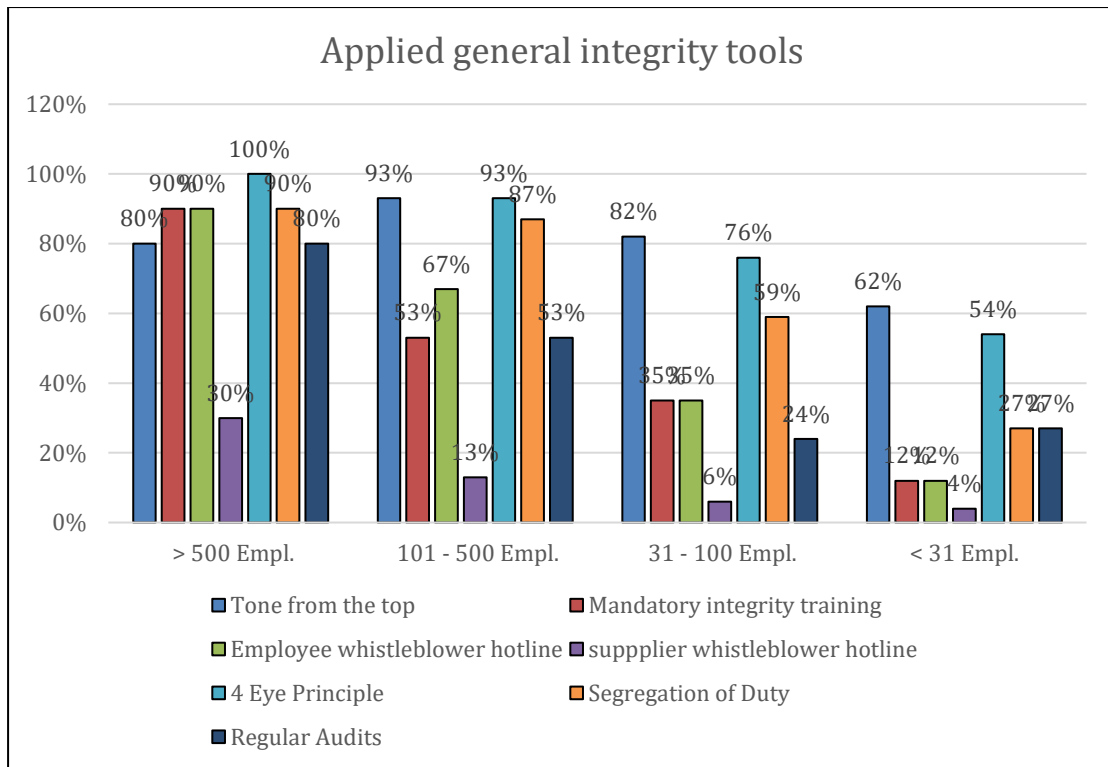


Figure 7: Applied general integrity tools (Kottmann 2023)

Following seven tools and procedures have been suggested to the respondents as to their degree of implementation.

1. Tone from the top

“Tone from the top” is a term used to describe the company’s management and board of directors’ form of communication down through all hierarchical levels, as well as their commitment to being honest and ethical. The repeated tone from the top establishes the cultural environment and corporate values of a company (Financial Crime Academy, n.d.).

Many companies strive to regularly address all their employees by means of an oral (i.e. presentation, speech, dialogue) or written information (email, posters, letters) by the top management and remind people of corporate integrity rules. In general, it is recommended to conduct such an activity on a quarterly basis for high-risk departments (i.e. Procurement, Sales, Finance) and less regular for lower risk units of a company

(i.e. Production, Logistics, Engineering). Especially the format of holding townhalls with practically all employees being invited has been proven to be effective. During such townhall meetings the typical procedure starts with a presentation of the subject of integrity, followed by a data review of the last quarter or year of identified integrity or corruption cases, followed by an illustration of actual or theoretical cases, closing with who to contact in case of doubt and an appeal that integrity affects every employee and the company's reputation. The overall effort including financial implications to conduct such an event (1-2 hours) is very much limited and it is therefore easy to implement.

The results of the survey show that “tone from the top” has been implemented by the vast majority of all companies with an expected slightly lower percentage in the group of smallest responding companies (54%).

2. Mandatory integrity training

Integrity encompasses much more than only corruption or fraud with respect to procurement. Oxford Dictionaries defines integrity as “the quality of being honest and having strong moral principles” (Oxford University Press, n.d.).

In the framework of business conduct, training the term integrity is usually supplemented by the term compliance. The most comprehensive definition of compliance is “Compliance means adherence to laws, guidelines, standards and ethical principles that apply to a company or organization. In a business context, compliance encompasses all measures that ensure that a company adheres to the relevant legal and internal requirements” (Munich Business School, n.d.).

Conducting compliance and integrity trainings shows that a company is serious about those subjects and solidifies that mindset in their staff and the corporate culture.

Additionally, it demonstrates to the outside world that unethical, incompliant and corrupt practices will be severely sanctioned, if encountered. Such trainings can be conducted in-person or online, as a presentation with case studies or as quizzes. Possibilities are manifold and in larger corporations such training can be outsourced. Typically, the staff is categorized in certain risk groups depending on their function in the company (see above). Depending on that, the frequency of trainings can be mandated.

As to the result of the conducted survey among FDI related companies in Vietnam, only very large corporations (>500 employees) have thoroughly implemented compliance and integrity trainings (90%). Contrary to that, in very small companies with less than 30 employees such trainings pose rather rare exceptions (12%). Here, a practice and knowledge transfer within the business community in Vietnam can lead to quick improvements as business associations can take the initiative to conduct general integrity trainings. It is rather hard to acquire all integrity related knowledge and knowhow by oneself to be able to comprehensibly train personnel who may have critical questions or who require specific legal interpretation. Integrity and compliance situations very often are not a black and white subject where only ONE answer to a case is correct. There are gray areas where a decision about a compliant behavior needs to be done in context of the case. Especially for such borderline cases, staff needs to be instructed how to act, who to involve, and how to document their reasoning. A fundamental principle should be to document issues in a way that even years later, unrelated personnel can comprehend the approach and reasons behind a decision.

3. Employee whistleblower hotline

A whistleblower hotline is a service that helps employees and others report suspected malpractice and unlawful or unethical behavior within the workplace (Navex Inc., n.d.).

The smaller an organization, the harder sometimes to discuss critical matters with a superior. Relationships are tighter and nobody wants to hurt or blame any other person, especially in cases of mere suspicion where hard facts are missing. Incriminating a peer is very difficult to do and sometimes implications are not validated enough to have a solid case. In such situations it can also be hard for the whistleblower to continue working with enthusiasm, integrity and dedication. A whistleblower hotline which guarantees anonymity and follow-up can be a powerful tool to deter and detect. But as stated earlier, deterrence and detection risks have a positive influence on prevention.

In the meanwhile, companies can outsource the whistleblower hotline service to a third party with limited financial impact which makes it easy to establish such a hotline permanently.

The results of the survey show that very large corporations have implemented employee whistleblower hotlines to a large degree. The other categories though show a steep decline in the application of such a hotline. As a conclusion, there is ample room to also improve this area since it is easy to set up and affordable.

4. Supplier whistleblower hotline

As the procurement function is a high-risk function it may make sense to also implement a supplier whistleblower hotline where vendors can anonymously report unlawful or unethical behavior. A vendor data analysis can help to make the decision whether to invest in a supplier whistleblower hotline. In case of an outsourced hotline

service, it is rather easy to supplement an existing employee whistleblower hotline with the possibility to include vendors in the concept. In general, the more a company has inhouse production the more it is worthy to include vendors in the concept. Not only to detect internal unethical behavior but also as a signal to the outside business partners that the customer has a zero tolerance when it comes to compliance and integrity.

The result of the survey shows that specific supplier whistleblower hotlines are a rare exception across all company categories. Even among the large corporations only a minority of 30% offers vendors a whistleblower hotline.

5. Four-eye-principle

The four-eye-principle is a widely used internal control mechanism to ensure that a second independent individual authorizes and co-signs specific decisions. Whether a specific decision is covered by the principle is typically determined by a risk-based analysis. In most cases the associated monetary business impact determines whether a second approval is required. In Procurement it would be reflected in the so-called value approval limits. As an example, the contract to purchase a minor item of up until 100 USD may be solely allocated to one buying person. Everything beyond 100 USD would need a second authorization. Additional layers can be implemented with each management level that i.e. everything above 100.000 USD would need a board member approval. It must be noted though that such a rule is purely an internal rule. Legally, a purchase order with only one signature is in almost all cases a fully legal commitment even if internal regulation would require a second signature. The primary purpose of the 4EP (Four Eye Principle) is to have an additional checking layer to verify whether the underlying business decision is good for the company, i.e. the price is acceptable and therefore protects the person making the initial decision.

The more an individual person is granted sole authorization power the higher the risk to fall victim to fraud attempts, independent from whether it is active or passive corruption. The survey's question tried to reveal to what degree companies have implemented the 4-eye-principle in their internal procedures.

The result shows that the 4-eye-principle is a well-established procedure except for companies with a very low number of employees. This is partially comprehensible but the overall recommendation is that it be reviewed on a regular basis under consideration of involved risks.

6. Segregation of duty

The University of Oxford describes the term segregation of duty (SoD) as “a key principle in financial control, aiming to reduce the risk of fraud and error. It involves breaking down processes so that no single person is responsible for every stage in a process”. (University of Oxford, n.d.).

As an example for areas which can be considered procurement-adjacent, an employee issuing the purchase order must not be the same employee who approves vendor invoices. Likewise, an employee confirming goods received must not be the same employee authorizing supplier payments. Unless at least two employees collaborate illegally this type of role segregation is fundamental to securing transparency and avoiding manipulation. A further benefit is that segregation of duty reduces the possibilities to make mistakes or rather increases the probability to discover mistakes. Thus, employees are protected if roles and authorizations are being separated.

Most legacy systems can be programmed to ensure SoD is being performed by different people but there still are loopholes. Some P2P (procurement to pay) systems

include the functionality to run an audit report where a series of approvals by one and the same person raise red flags triggering an investigation.

The result of the survey again shows negligence regarding SoD especially for smaller sized companies. From an auditor perspective even mid to larger sized companies are showing serious deficiencies in this area.

7. Regular Audits

Regular audits in the procurement area can only be conducted if there is a valid SoP (Standards of Procedure) description available. An auditor typically selects a representative set of documented purchase cases out of prescribed value clusters and verifies whether the documentation is complete and whether it matches with the described SoP. Deviations are being further investigated and at the end a report is being drawn with a qualitative result: Passed or not passed. Identified deviations are categorized into low, medium and high risks with one high risk automatically leading to a “not passed” result. In all cases the audit report includes a list of required and suggested improvements which then must be implemented within a given timeline. A re-audit might be scheduled to verify implementation of improvement measures.

In most companies, an audit is not very welcome and often feared as a negative result can have serious career consequences. That attitude though is not recommended. The to-be-audited department should wholeheartedly welcome an audit with confidence and cooperate fully with the auditors to identify improvement areas. Reality is often different with silent opposition and negative atmosphere making a successful audit outcome harder.

The result of the survey again show that the largest companies use a regular audit schedule to ensure compliance within its organization to abide by documented SoPs.

Most of the small to medium sized companies do not follow a regular audit schedule. Smaller sized companies are usually not having capable resources to conduct an audit by themselves; they are dependent on outside service providers. In order to limit costs, the budget for auditing usually is limited to ISO certifications and audits which directly benefit their standing in the industry. Costs for an audit may often be avoided as benefits do not outweigh the effort and expense.

It is assumed that regular audits will be implemented at some point during the growth story of FDI companies in Vietnam. This thesis did not evaluate whether the Vietnamese market has service providers specializing in procurement consulting including auditing. As Vietnam further develops into a market economy, also this consulting market will develop along with increasing demand.

As a summary to this chapter and therefore answer to research question 1, following can be stated:

- FDI companies in Vietnam are very much aware of the high risk of corruption in the country with the public sector suffering more than the private sector
- FDI companies understand their own role in the industry as a more pioneering role with regards to corruption prevention and integrity
- Larger companies have implemented far more countermeasures in their organization to raise awareness and prevent fraud than their peers with a lower number of employees
- Overall, there appears insufficient focus on integrity training and auditing

- Some well-established procedures and principles like the 4-eye-principle and segregation of duty are not on par with advanced western economies, especially in small scale operations with a limited number of employees

4.2. Research Question Two

The organizational setup of an FDI company's procurement function depends on various factors:

- Size of the company by number of employees
- Office function only or additionally having a production facility
- Annual estimated procurement volume in USD

Overlaying above the three factors is the future outlook. If a company expects a rather steep business development with fast growth, then a company would already at the time of incorporation evaluate what type of organization model best suits the procurement function.

As to the organization models it can basically be distinguished between a centralized procurement function and a decentralized procurement function. Some companies also can opt for a hybrid model where a centralized procurement department focuses on high value purchase items, strategic commodities and repetitive buys whereas small buys and so-called C-commodities of low risk would be internally delegated to the requesting department. That internal delegation serves the purpose that small buys can be handled directly by the requestor at higher speed and also with lower documentation requirements. The main focus of the evaluation of the ideal procurement organization in this thesis though is about centralized versus decentralized procurement.

The general main advantages of a centralized organization are cost savings, improved standardization, strategic vendor management, reduced compliance and legal risks. The disadvantages are lack of responsiveness and lack of ownership. A centralized procurement department does not hold the budget for purchase items. Budget responsibility remains with the requesting department.

The primary advantages of a decentralized procurement function are responsiveness and ownership. The corresponding disadvantages are financial loss through overpricing, risk of maverick buying (unauthorized purchasing), inconsistent practices and elevated legal and compliance risks. Performing a meaningful spend analysis in a decentralized procurement area is almost impossible as typically there are no unified commodity codes, harmonized terms and conditions, possibly differing payment terms and no forward planning.

Despite all of those disadvantages, small sized companies may fare better with a decentralized approach if the company will remain small, mostly only spends budget for office material, IT, no marketing, and in general follows a more cost-conscious restrictive spending habit.

Therefore, the numeric result of the survey should have cautionary conclusions or evaluations.

The above-mentioned disadvantage of maverick buying is an often-underestimated problem. Maverick buying is presented as giving unauthorized supplier commitments, thus bypassing purchasing procedures. Commitment here goes further than contracting. A commitment can already be an oral promise to only consider one supplier in a request for quotation (RFQ) or exclude competitors from the bidding process or even the verbal promise to make Procurement buy at least an x number of

services or products in the future. The survey therefore included the question whether only the authorized person for procuring items has the mandate to give supplier commitments.

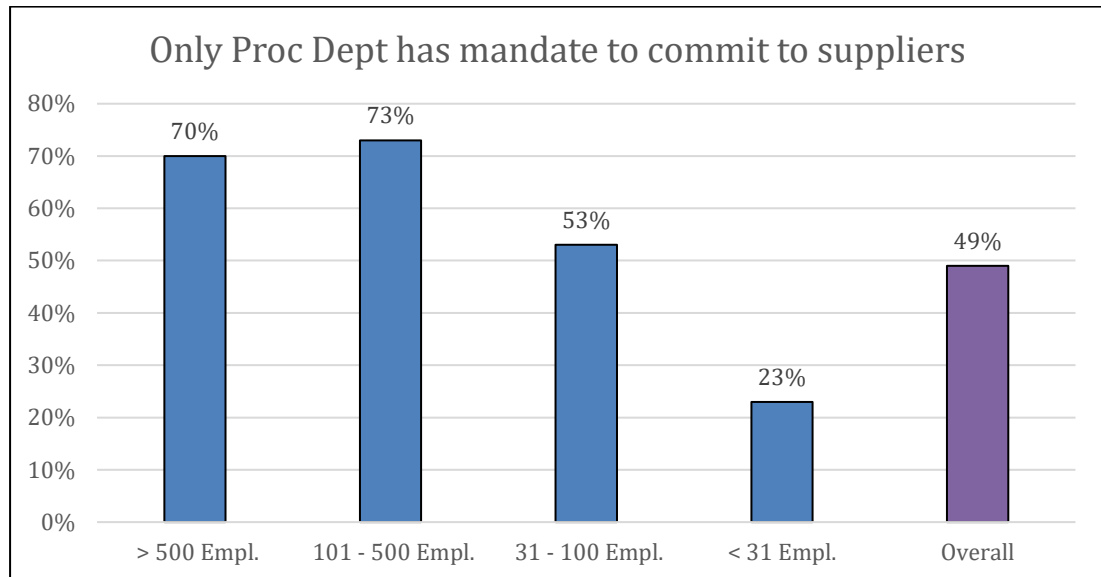


Figure 8: Only Procurement function allowed to give vendor commitments (Kottmann 2023)

The given answers indicate that maverick buying is widely possible and may even be actively tolerated. In strictly run global organizations even a board member is not permitted to give solid supplier commitments. That strict approach safeguards procedures and legal implications and protects all employees, independent of their position in the company.

Also, additionally there is a clear sign towards the suppliers not to try to bypass Procurement. Suppliers' sales employees often try to use their good relationships to gain an advantage which is fine, but to gain an unfair advantage must be avoided. As a consequence, it is important for all staff with supplier contacts to speak in one voice and share the same understanding regarding mandates and authorizations.

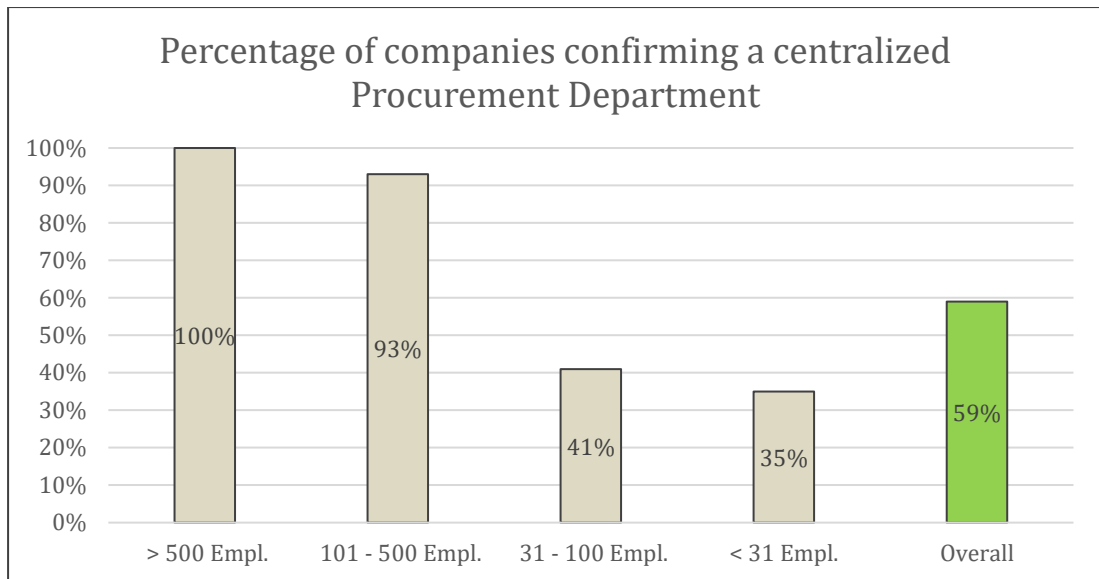


Figure 9: Companies with centralized procurement function (Kottmann 2023)

Figure 9 shows that without exception, all of the large sized companies in the survey have decided for a centralized procurement organization in the form of a separate department. More than 90% of companies with 100 to 500 employees also have a centralized procurement department. Smaller companies have predominantly decided for a decentralized approach, although it is unknown how many of those companies have merely office activity and which of the smaller ones have possibly a significant annual procurement volume.

Companies responding having a decentralized approach were asked for the reasons for choosing that organization model. Companies were given the opportunity for multiple choice.

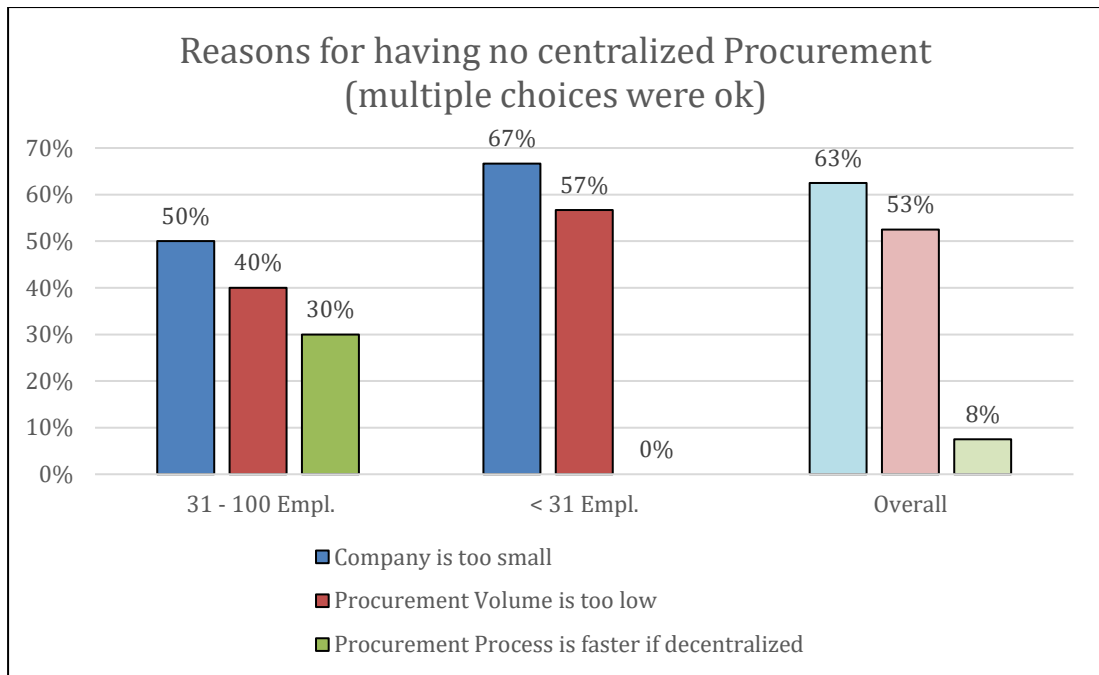


Figure 10: Reasons for decentralized procurement function (Kottmann 2023)

Figure 10 confirms that the primary reason for having chosen a decentralized setup is the size of the company and the corresponding low procurement volume. Only few companies have also selected speedier handling as their reason.

The group of companies having confirmed a centralized procurement function were subsequently asked about the reporting line of the procurement function (Figure 11).

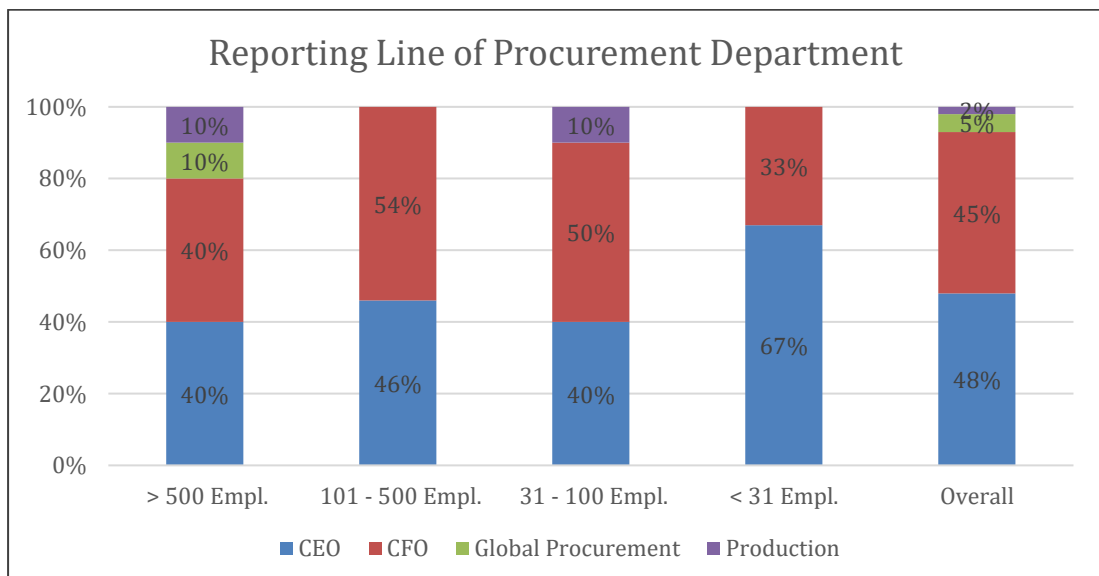


Figure 1: Reporting line of centralized procurement function (Kottmann 2023)

The fact that almost all respondents confirmed a reporting line either to CEO or CFO reflects the increasingly important role of the procurement function. Globally the procurement function is enjoying a more recognized role due to its financial impact on the company but also due to other recent trends. As speed is often of the essence, the role of supply chain risk management is often given to Procurement as is the case for subjects regarding sustainability and adapting to emerging market trends (Owuocha, 2024) .

The survey revealed that only a very small portion (<10%) of companies have Procurement report to the Head of Production or being a part of a global procurement organization.

As a conclusion of research question 2 it can be stated that from a pure organizational viewpoint, FDI companies in Vietnam have an adequate setup. It can be assumed that growing companies will eventually switch from a decentralized to a centralized approach. The longer this transition is delayed the more problems can arise as once established procedures and behaviors will be difficult to change.

4.3. Research Question Three

The question regarding to what extent companies have addressed fraud challenges in their specific procurement processes is very complex due to many process-independent influencing factors and thus is being divided into several sub-processes.

Supplier Registration and Due Diligence. In many global organizations a business relationship starts by registering a potential new supplier in the supplier database. In order to qualify as an approved vendor there are certain minimum criteria

which need to be fulfilled. The criteria differ depending on each customer company and they also differ within companies, i.e. depending on the commodity. Some commodities require all relevant suppliers to have certain ISO certifications. Other minimum supplier requirements may include a minimum paid-in capital, passing a specific supplier financial risk management verification, a minimum number of employees due to some local sole proprietary related laws, etc...

Large corporations also perform a check against publicly available lists of persons with a certain public influence and companies with a crime history or members of terrorist organizations, so-called politically exposed persons (PEP), a database listing legal convictions and similar lists. Such a screening is often performed upon initial supplier registration and then on an annual basis again as lists are being updated with new content. Subject to screenings and checks are not purely corporations but especially their leadership and ownership personnel. Such publicly available databases of companies with a questionable track record and/or court convictions are being maintained by service providers, namely Lexis-Nexis and Worldcheck.

Verifying and lastly approving the adequacy of a new vendor is called supplier due diligence.

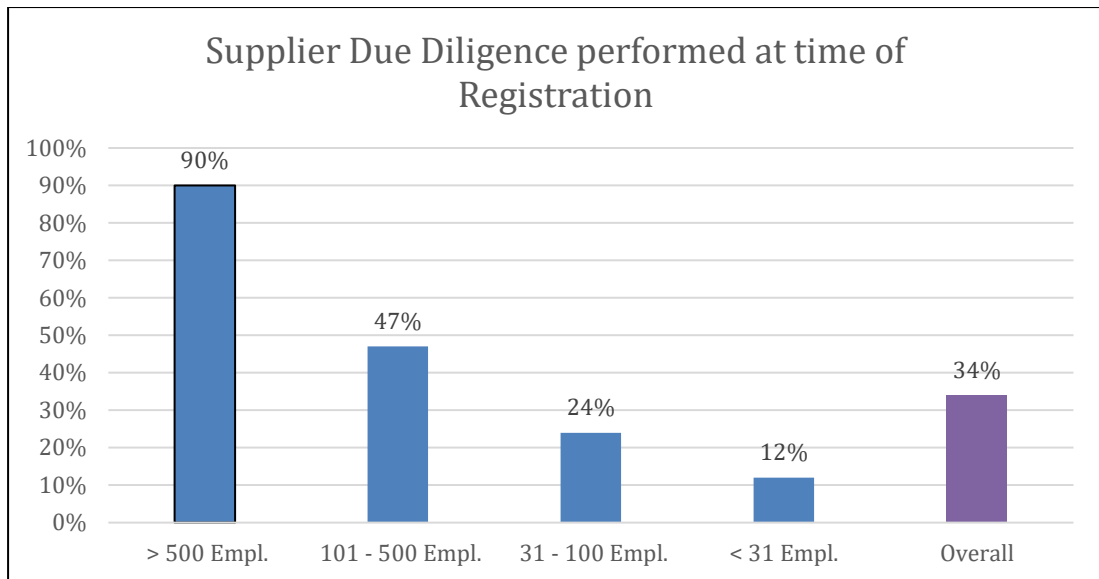


Figure 2: Supplier due diligence at time of registration (Kottmann 2023)

The survey shows that only very large corporations perform a supplier due diligence at the time of registration. The majority of all other respondents do not perform a supplier screening against defined minimum requirements. Particularly the screening against global blacklists of companies having committed and convicted of frauds may be unknown. Then again, it is very much possible that such databases are inadequately maintained yet with Vietnamese data. The workaround in such case is at least to have an appropriate questionnaire filled out where, among other items, the potential supplier can confirm or deny any past wrongdoings. That may not be a fool-proof approach but if performed by many companies it would over time develop similarly to the advanced status of other economies.

Governments are increasingly demanding transparency along the value chain of its companies, the most prominent example is the directive of the EU called “Directive on Corporate Sustainability Due Diligence” (European Commission, 2024) . In order to be able to satisfy the reporting demands across the value chain of distributed products, all trading companies need to globally observe their suppliers’ adherence to

required regulation with the focus on human rights protection and environmental sustainability.

As also smaller companies are potentially part of the value chain of larger companies, it is important to maintain a good dataset regarding its own business partners.

Procurement Process Description. A prerequisite to fulfill any type of meaningful documentation, decision traceability and implementation of a standard, is the existence of a clearly described procurement process. This can be done by various established means, whether by a flow chart, a SoP manual or a set of quality control standards. Important is that the content is easy to understand and that it is detailed enough to cover all standard operations. Any gap in the SoP can be addressed by a combination of separate documentation and additional hierarchical approval.

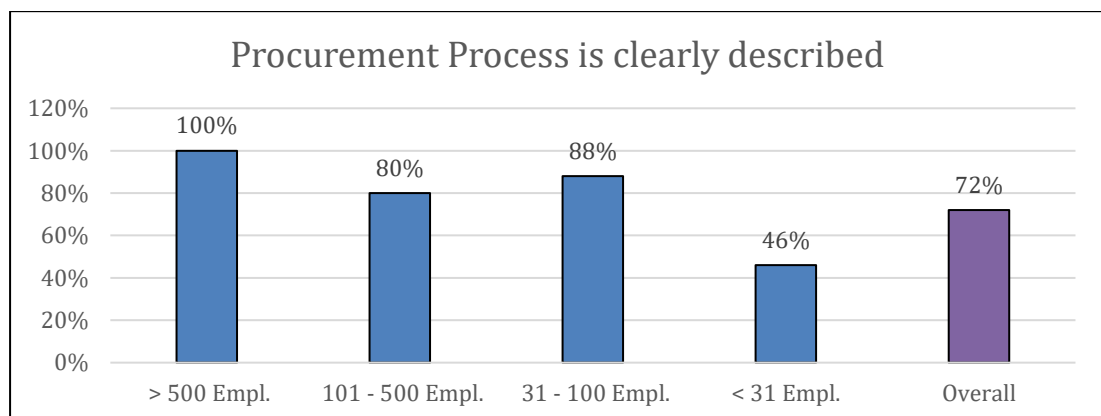


Figure 3: Procurement Process clearly described (Kottmann 2023)

The survey reflects that except for the smallest group of companies with less than 30 employees, all other respondents have declared to a very high degree (>80%) that their procurement process is clearly described.

Circling back to Figure 7 with the application of Segregation of Duty and the 4-eye-principle there remains some doubt as to whether the procurement process is really

clearly described in a detailed and comprehensible manner. Based on the survey it can be assumed that process descriptions for the SMEs (Small Medium sized Enterprise) are rather rudimentary.

Figures 14 and 15 show an example of a high-level state-of-the-Art process description based on a Quality Gate approach which can be used for all types of large investments, be it in equipment, Marketing, IT or Services. For smaller purchase items a much reduced and leaner process description can be used or adapted.

Quality Gate based Procurement Process

(Process for high value investment)

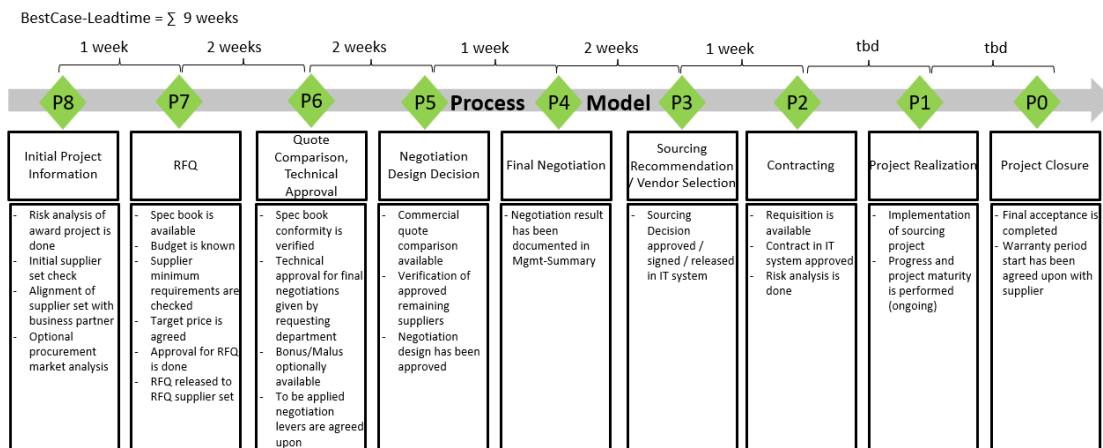


Figure 4: Overall Procurement Process Description Sample (Kottmann 2023)

Quality Gate Description

Example: Production Equipment

P8 Initial project information		
In brief: Procurement receives initial information about award by production department in a form making deductions possible with regards to upcoming procurement obligations (Plan-invest, rough technical spec, timeline)		
Input factors: <ul style="list-style-type: none"> Award description Plan-invest Production supplier set suggestion Award scheduling 	Who? <ul style="list-style-type: none"> Prod. Prod. Prod. Procurem. 	Output factors (responsibility Procurement): <ul style="list-style-type: none"> ❖ Documentation in upcoming sourcing investments list ❖ Preliminary supplier set aligned with Production ❖ Necessity procurement market analysis evaluated ❖ Criticality of project evaluated with respect to "Supplier Quality Assurance"
Must-Criteria Q-Gate: <ul style="list-style-type: none"> ✓ Sourcing Investment List documentation ✓ Supplier Quality Risk Evaluation (Project-Risk) 		Exit documents: <ul style="list-style-type: none"> ➢ Confirmed Risk Evaluation ➢ Evaluation regarding necessity of FMEA

Supplement Procurement-Processes: <ul style="list-style-type: none"> - Observation of supplier minimum requirements (Turnover dependency, FSRM-Status (financial supplier risk management), PastPerformance-Evaluation, Certificate requirements) - Specific certificate requirements: ISO9001:2008 if Invest > 1 Mio USD - Environmental certificate ISO14001

Figure 5: Quality Gate Description and Pass-Criteria (Kottmann 2023).

The high-level process overview needs to be further described so that it is well understood by specialist buyers but also by unrelated internal business partner employees. Quality Gate approach means that in order to move ahead in the task to procure a product or service, specific conditions must be fulfilled. The supplemented Quality Gate Description then dives deeper into the specific requirements, i.e. which document must be created, which decision must be made and by whom. The high-level process description of using the Quality Gate approach can also be utilized in order to explain and convince external business partners of the fair and transparent approach to becoming an approved vendor.

As always when describing the ideal processes, reality might require adaptations. For example, in cases of emergency-buys, buyers and internal business partners may be required to move ahead without waiting for completion of documentation or even approvals. In a case of natural disaster, time is of the essence and people simply need to do what is right to safeguard equipment or even personnel. Enterprises may encounter situations where even the involvement of the procurement department is not

possible. A small example can be the case of a warehouse for sensitive electronic parts requiring a controlled dust-free or dust-limiting atmosphere. A simple crate accident might result in too much dust pollution requiring the immediate purchase of an industrial vacuum cleaner. If said accident happens during the weekend with no procurement personnel available then some employee will simply need to quickly buy the vacuum cleaner without requisition, without competition, without negotiation and even without purchase order. Cash payment out of pocket might be the only quick solution.

All of the steps undertaken are against procurement process SOPs and there may be people blaming the employee for having done the things wrong. Good managers appreciate the initiative of the employee and praise him or her for doing the right thing rather than doing the things right. Documentation and explanation are tasks which will be done afterwards. What needs to be stated is therefore, that following a described procurement process is not dogmatic as in some cases pragmatic common sense should be allowed to overrule a SoP.

Then again, controls need to be in place to let such exceptions not get out of hand. If so-called emergency buys are increasing in numbers and value, then a review of procedures must be performed. Emergency buys can be a source of fraud and corruption as it is a means to circumvent procedures and approvals. Documenting the cases and keeping statistics about them is meaningful to limit fraud opportunities.

Online Bidding and eAuctions. As has been stated in chapter 3, awarding contracts by auctioning tools like Online Bidding has gained popularity in the late 1990s and early 2000s. The tools and auction types have been refined over the years allowing many variations. The skill regarding auctioning tools is to gain the acceptance of participating suppliers and to select the best-fit auction type.

The most commonly used auction types are

- British reverse auction
- Dutch reverse auction
- Japanese reverse auction
- Sealed Bid
- Traffic Light

The dominating auction type used is called British reverse. Potential suppliers typically are located within their own office premises and bid their price or prices in an online auction. In this auction type, suppliers enter progressively their improved prices within limited time intervals in an effort to outbid their competitors. All bidders can see the presently lowest bid which is anonymous though. By this approach the price usually drops gradually, sometimes by a pre-determined minimum amount until only one final bidder remains. The buyer is merely an observer during the bidding process as he or she must not have any direct influence. In the best-case scenario, the winner is then automatically awarded the contract. In order to limit any need for after-auction-corrections it is best to have all preconditions verified prior to the auction. For example, all bidders should have confirmed their acceptance of the Terms & Conditions in the potential purchase order. This should be done in writing to increase chances for legal or at least ethical enforcement. Any potential technical, logistical or after-service question should also have been solved prior to the online auction in order to reduce the auction to a mere price-finding process. There are many variations possible and the ideal setup of the auction is not trivial if a buyer wants to achieve the best overall result. One auction can include one item but also many items where individual winners may be determined, or a total package winner might be determined. The advantage from an integrity point of view is clearly the apparent fairness during the bidding process as the

buying company has no influence on the outcome. Auctioning is not only possible for simple products or services but also for more complex items. Some products greatly differ from supplier to supplier. It is possible to integrate a price component for quality or function differences in order to equalize the starting position. It is also possible to account for other price adjustments by means of a detailed bonus malus calculation. As the English Reverse Auction is the most common and simple application it is generally recommended to start with that type before moving to more complex auction types.

The second most common e-auction type is called Dutch Reverse Auction. In that type of auction, the buyer determines a very low starting price. After a pre-determined period, the price is raised automatically by a pre-determined increment. At any time, the bidders can confirm that they will take the deal at that price. Usually, this type of bidding finishes relatively quickly.

In the Japanese Reverse Auction, the buyer electronically sends out a price to the bidders and when several bidders confirm that price level, another offer (lower) is sent out to the bidders to be confirmed or declined. Also in this case, the last remaining bidder is awarded the contract.

In the simplest form, a Sealed Bid can even be done by email, although the 4-eye-principle must be complied with as there is a risk of manipulation. A sealed bid is usually the last of a multi-step negotiation, practically an attempt to squeeze out the last possible price reduction. Bidders have one last and only chance to improve their previous bid. In order to secure fairness and transparency the bid must reach the buyer before a specific deadline on a specific day. Bid opening starts immediately when the deadline is hit. A useful way to reduce any form of manipulation is for buyers to request the arrival of the sealed bid as password-protected email. In case the deadline is 2 p.m., the bidders can call at that time to convey the password so that the bid opening can be

performed. The lowest bidder naturally will be awarded the contract. The e-auction version is simply the online tool enabling that bidding type.

The Traffic Light Auction is a more complex form of negotiation where the result does not automatically lead to a contract award.

It follows the English Reverse Auction approach with the difference that the bidders receive feedback from the system whether their bid is acceptable.

The feedback is received in form of the colors green, yellow and red.

Green would mean that the bidder is within the target area and the bid is accepted so that the process can go to the next stage. Yellow indicates that the bidder is still in the race, but the target price level has not been achieved. Red light would indicate a disqualification of the bidder as pricing is determined to be too high.

Globally, there are many online bidding platform service providers active without any country restrictions. It is therefore relatively easy to setup and organize an online bidding event. As stated above, bidders will need to pre-commit to the given terms & conditions, their initial offer must be technically approved and there must be no remaining questions apart from finding agreement on pricing. The higher the number of bidders, the more competition there is, thus the better the final price determination for the buying entity. In order to preclude any attempts of rigging, it should also be ensured that the bidders are not aware which other companies participate in the auction. The sealed bid auction is effective in avoiding that type of rigging attempt. It is also possible to combine several successive types of auctioning. For example, the Traffic Light auction can be performed in order to reduce originally large list of bidders to the final three bidders. The subsequent process would be to hold a sealed bid as decisive step. All types of e-auctioning need plenty of preparation time as potential suppliers

need to be onboarded or trained, internal business partners need to be convinced to accept the final outcome without any veto right and procurement management also needs to pre-approve the unknown outcome. The most promising contracts for auctions therefore need to be well selected and ideally criteria are set in order to come to the decision matrix.

First, the contract value must be attractive enough for suppliers to go through the training and bidding process. For SMEs the contract value can be made attractive by not only auctioning the business for one year but for multiple years. Second, the supplier market should be diversified enough to allow different offers, even technically slightly different offers. One way to accommodate all offers, is to give monetary values to technical advantages (bonus) or disadvantages (malus). Such price tags can be embedded in the auction and equalize technically differing quotations. Third, commodities categorized as corruption-prone should be selected for auctions in order to minimize unwanted external influence. The categorization of commodities in risk categories will be elaborated on in a later chapter of this dissertation.

As e-auctioning is relatively simple but effective and has a great role in fraud prevention, it was included in the survey of this thesis as a determinant whether modern negotiation tools are sufficiently in application.

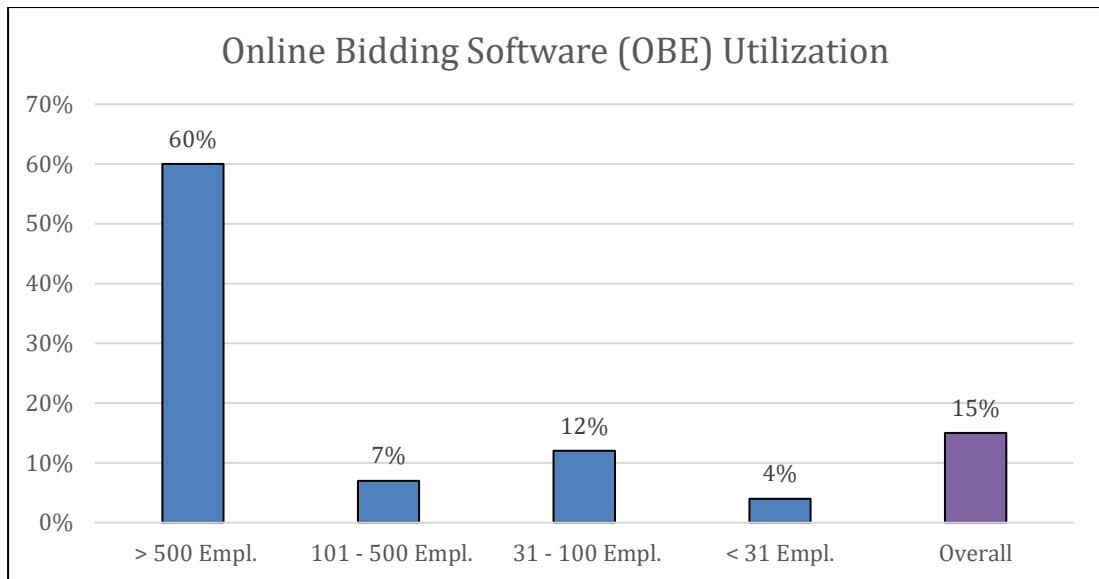


Figure
Application of e-Auctions (Kottmann 2023)

6

Figure 16 shows the most drastic difference between large sized companies and all other companies when it comes to the application of e-Auctions in the procurement process. A majority of 60% of large companies have e-auctions in application whereas in case of all other respondents e-auctions are a rare exception.

As a conclusion, the potential of e-auctions as an effective negotiation tool as well as a preventative tool against corruption seem widely underutilized.

Standard Terms & Conditions. Chapter 2 included a brief analysis about disadvantages of not having own standard terms & conditions as contractual basis. Furthermore, later in chapter 5.2. it was illustrated how important a centralized procurement function is once a specific size of the enterprise has been reached. In order to avoid neglecting the importance of standardized terms & conditions, possible associated risks should be made transparent. In general, if the issuance of purchase contracts is decentralized it is obvious that fundamental legal knowhow regarding potential pitfalls of contract terms is inadequate. People whose main job is not in

procurement have little chance and opportunity to become versatile and knowledgeable about legal matters. Without wanting to be disrespectful, it takes training and experience to become literate about legal formulations. In addition, it takes a sound analytical legal mind to identify loopholes, intended or unintended disadvantageous wordings or straightforward traps. A non-exclusive list of the predominant risks which may remain undiscovered until it is too late, are as follows:

- Automatic price adjustments, i.e. in accordance with exchange rate fluctuations or inflation rate indicators
- Unwanted automatic contract extensions
- Unreasonable cancelation clauses
- Liability exclusion clauses
- High minimum order quantities
- Hidden additional costs (logistics, packaging, response time, spare parts, ...)
- No freedom of choice in case of needed maintenance work
- Reduced warranty periods, exclusion of specific items from warranty
- Unagreed payment terms
- Unrealistic data protection requirements
- Unreasonable reporting demands
- Unauthorized permission to utilize customer name in reference customer list
- Turnover-dependent cash kickback payments

Several of above listed items will result in higher costs for the buying entity and whenever the costs are increasing through a non-transparent contract clause, fraud opportunities arise.

It is therefore of utmost importance to have close control over all contract clauses. The easiest way is to enforce as buying entity a standard terms & conditions

sheet and require acknowledgement long before the contracting stage, ideally already at the stage of accepting the initial quote. Some companies often require an even earlier acknowledgement prior to sending out RfQs (Request for Quotation). This is of importance as employees often only focus on the pricing sheet and do not realize the potential financial impact of differing clauses.

In cases when the buying company does not have the market power to enforce their own T&Cs, the procurement process can demand a legal department employee or an external lawyer to screen the contract for disadvantageous content. Naturally, this would require a weighing up of risks and can only be enforceable for contracts of significant financial value which could pose an existential threat to a company. In some advanced larger corporations, there are multiple criteria which need to be fulfilled in order to have such a cost-intensive screening performed. The first filter is to only look at so-called risk commodities. Typical risk commodities can be construction, advertisement and marketing. Some criteria can be based on industry experience or reputation, others based on own evaluations or on the difficulty to achieve plausibility in price calculations. The second layer then could be based on monetary volume, i.e. any contract surpassing 5% of annual turnover can be basically evaluated as existential. The third category can be based on strategic importance of a commodity. As a result, a three-dimensional picture can be drawn for the categorization of commodities with the axis value, strategic impact and fraud-risk.

Once a problem arises due to contract clauses conflicts after delivery has started, the costs to rectify such problems are very high. With each stage of escalation, costs would rise. Typical stages of escalation are (Baral, 2024) :

- Negotiation
- Mediation

- Conciliation and expert determination
- Arbitration
- Litigation

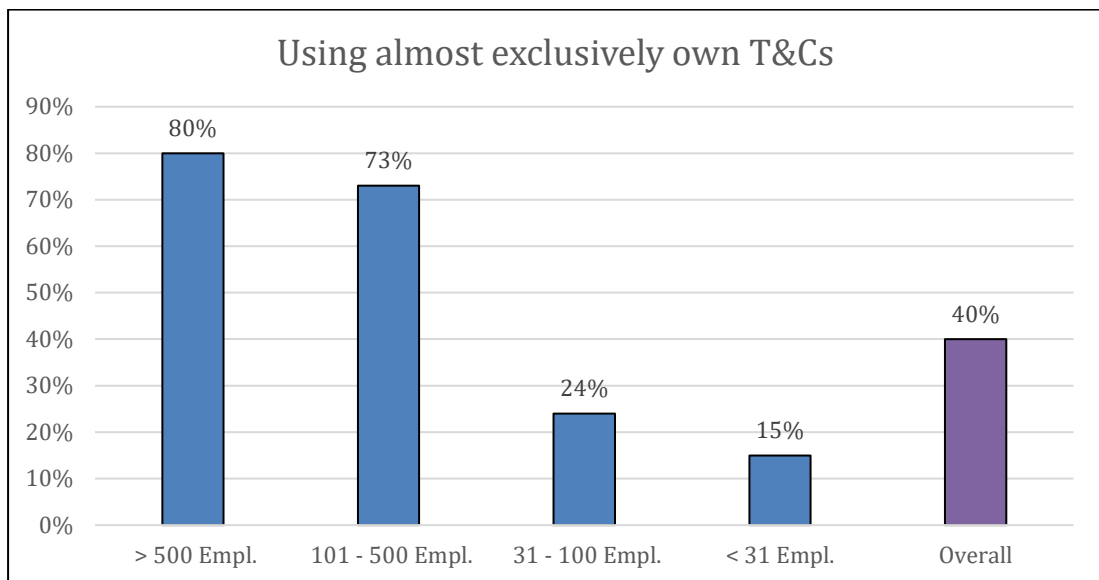


Figure 7: Utilization of own T&Cs (Kottmann 2023)

Figure 17 shows that the majority of FDI companies in Vietnam with more than 100 employees have predominantly own T&Cs in place whereas in companies with a lower number of employees this would be an exception. This is within expectation as smaller sized enterprises may not have the power to enforce their own T&Cs but it also must be assumed that in those cases the awareness is not as pronounced. To complete the subject of T&Cs, it should be noted that typically there are different T&C standards in place as one must differentiate from a legal perspective whether the procured subject is a product or a service. As a simple reason may be used the fact that services are intangible versus products usually being tangible. For that reason alone, terms and conditions are to be formulated differently. Larger corporations further break it down by differentiating general services, IT services and logistics services.

There are further advantages of having own T&Cs secured. The buying party can implement compliance clauses, often called anti-bribery clauses. Those are often based on the U.S. Foreign Corruption Practices Act (FCPA) or/and the UK Bribery Act. Both of these have extra-territorial application. Such anti-bribery clauses do not prevent corruption but in an ever-growing globalization they make companies aware of legal compliance risks in an international context. Even in cases of having to accept the T&Cs of a vendor, the buying party can insist on including anti-bribery clauses. If that is refused, that is a clear red flag.

Another clause which should be tried to include in contracts is a right-to-audit clause. That enables a buying entity to audit a supplier and verify the integrity of the supply chain including labor practices and environmental protection compliance. In cases of outsourcing agreements, the right to audit can secure adherence to contractually agreed service level agreements.

The one-time effort to draft own T&Cs though is very much limited and there are plenty of sources available with commonly accepted templates. In judging the specific T&C wordings one must find the balance of enforceability and legal advantages.

As a conclusion, the role of having approved and enforced standard terms & conditions as basis for all purchase contracts must not be underestimated.

Business associations in Vietnam can play a major role in training their organization members in their awareness and in mitigation tools to reduce risks.

When it comes to buyer training, KPI (Key Performance Indicator) application, management by objectives and commodity strategy development the survey gives a mixed result of applied tools.

In order to properly evaluate the survey responses, it is worth describing the most modern tools presently used in advanced procurement organizations. Subsequently the role of applied tools with regards to corruption and integrity will be illustrated.

Objectives, numeric targets and KPIs of Procurement are usually tracked at least monthly, reviewed quarterly and finally evaluated annually with then deciding upon the upcoming year's new or adapted focus.

Targets can be allocated best into 4 main categories which may overlap:

Costs, Efficiency, Compliance and Strategy. The first three are apparent and well known but strategy is often neglected even though it is the only clearly future oriented target with a horizon of more than one year.

Prior to elaborating on KPIs and numeric targets, some terminologies and data fundamentals should be examined.

Commodity Code. It is rather hard to derive any meaningful conclusions from a vast pool of data unless there is meaningful categorization of data. Many IT systems include codes for vendors and the price behind each purchase order. In a professional procurement environment, many more data points are required.

The most fundamental task when it comes to analyzing spend is to be able to distinguish between what is being bought, at what costs for which internal customer at what time for what period. In order to avoid lengthy and mistake-prone manual data accumulation it is recommended to develop a commodity code which fits to the underlying business.

Sales and export-oriented companies might want to select the internationally recognized HS Code developed and maintained by the World Customs Organization

(WCO) (World Customs Organization, n.d.). The HS Code is a 10-digit code of virtually any product which can be traded internationally. Its complexity makes it rather hard and inappropriate to use it as a commodity code for procurement.

The most commonly used publicly recognized commodity code is the United Nations Standard Products and Services Code (UNSPSC) which also is being used as a standard in the SAP ERP systems. The UNSPSC is an 8-digit code with whereas 2 digits form a sub-category. The sub-categories are called segment, family, class and commodity, thus containing 4 levels of hierarchy, although the UNSPSC allows for an optional 5th level. The UNSPSC is still highly complex as it contains overall 1.5 mio different commodity codes. A typical manufacturer or sales company uses much fewer commodities and does not have the need for complex coding. In the end each company needs to decide what approach to choose but in many cases maintaining a much simpler but business-focused code might be of advantage in terms of efficiency. In most legacy IT systems, the commodity code must be allocated by the requisitioner and not the buyer at the time of creating the requisition. A requisitioner usually neither has the time nor patience to select the correct commodity code. In many companies the commodity code including the word “others” may be the most often selected commodity code rendering it meaningless. So, there are advantages to developing an own code with an easy-to-understand structure.

An example of a simpler hierarchical commodity code structure for a manufacturing company can be seen in Figure 18.

Segment		Family	Class
01 00 00	Construction		
02 00 00	Equipment f. Buildings		
03 00 00	Production Machines & Equipment		
04 00 00	IT & Telecommunication		
05 00 00	Tools		
06 00 00	Electrics, Machinery, Components, Maintenance		
07 00 00	Lubricants, Chemicals, Energy		
08 00 00	Consumables		
09 00 00	Material Handling, Logistics		
10 00 00	Marketing, Events, Exhibitions		
		10 01 00	Conceptual Marketing Services
			10 01 01 Marketing Agency
			10 01 02 Press Agency
			10 01 03 Fotography
			10 01 04 Media Agency and Advertisement
			10 01 05 Market Research
			10 01 06 Social Media Advertisement
			etc
		10 02 00	Events and Fairs
			10 02 01 Event Agencies
			10 02 02 Trade Fair Construction
			10 02 03 Event technology equipment
			10 02 04 Graphic Design for Events
			10 02 05 Event Personnel
			10 02 06 Catering for Events
			etc.....
		10 03 00	Marketing Prints, Digital Media, Sponsoring Goods
		10 04	etc.....
11 00 00	Facility Management		
12 00 00	Services, General		
13 00 00	Production Material		

Figure 8: Example of Commodity Code Structure by Kottmann (2024)

Above example shows a total of 13 commodity groups which then can be broken further down. Usually, two more levels down result in a meaningful data pool.

As can be seen at the example of the commodity for marketing and events, the commodities can be broken down into the desired detail. It can be concluded from the example that for large corporations a 3-level-hierarchy breakdown is usually sufficient. For SMEs a 2-level-hierarchy can be sufficient in order to analyze own procurement data.

One can imagine a situation where the CEO or CFO ask their staff, for what 10 biggest commodities do we spend the budget? What are the 10 most important suppliers and what is being bought from them? That analysis is not supposed to take more than

an hour, but with missing commodity code identifier it becomes an almost endless task of manual data crunching.

Contract Type. The second category of data fundamentals relates to the contract or order type. In general, the different types are called purchase contract (PC) and purchase order (PO). A purchase contract is a contractually agreed price agreement over a defined period, usually measured in years. With a purchase contract in place, authorized company personnel can call-off products or services specified in the purchase contract without the involvement of procurement staff. Purchase contracts simplify the ordering process and are used for the repeated need of products or services. Most easy to understand are office materials, sanitary products, cleaning services, maintenance services, IT system maintenance services or lease and license agreements.

A purchase order on the other hand is a onetime, single business transaction. Such orders are used for onetime needs like for example a specific machine, an event or simple items like a new coffee machine for the pantry. The larger a company the more purchasing volume is covered by purchase contracts, simply because there is more repetitive need. If a company has five pantries, then it may be advisable to have a purchase contract in place for specific coffee machines. A company also would like to avoid having 5 different coffee machine brands in the office as the maintenance service may need to be contracted with different vendors.

A purchase contract can also be useful for a variety of products which may be offered by a supplier. If for example a specific supplier offers a whole catalog of products, then the purchase contract might merely consist of a fixed discount agreement in form of a percentage of all catalog products. As stated in the original definition above, a purchase contract is often merely a price agreement.

Purchase contracts can be of quite different complexity. For example, a purchase contract with a consulting firm may result in fixed daily rates for consultants of various skill levels. As soon as there are two or more different consulting firms involved it becomes difficult to make daily rates comparable. The reason for that is the potentially different categories of consultants. A junior consultant in one company may be fresh out of university whereas a person fresh out of university in another consulting company may have the title of an associate. In other words, the junior consultant in the one company has potentially higher skills and more experience than the other. In order to make those daily rates comparable it would be best to fix daily rates of consultants based on a defined skill matrix which must be applied by all consultancy firms upon handing in their pricing tables. This example shows that the more complex a procurement matter becomes, the more a strategic approach needs to be chosen. The subject of buyer training will be revisited at a later point again.

Figure 19 shows the summary of responses to the survey about the subjects of Spend Analysis, Single Sourcing, Cost Savings Analysis, Price Plausibility Training and Commodity Strategies. In the following section, all of those subjects will be touched upon and the relevance to corruption and fraud evaluated.

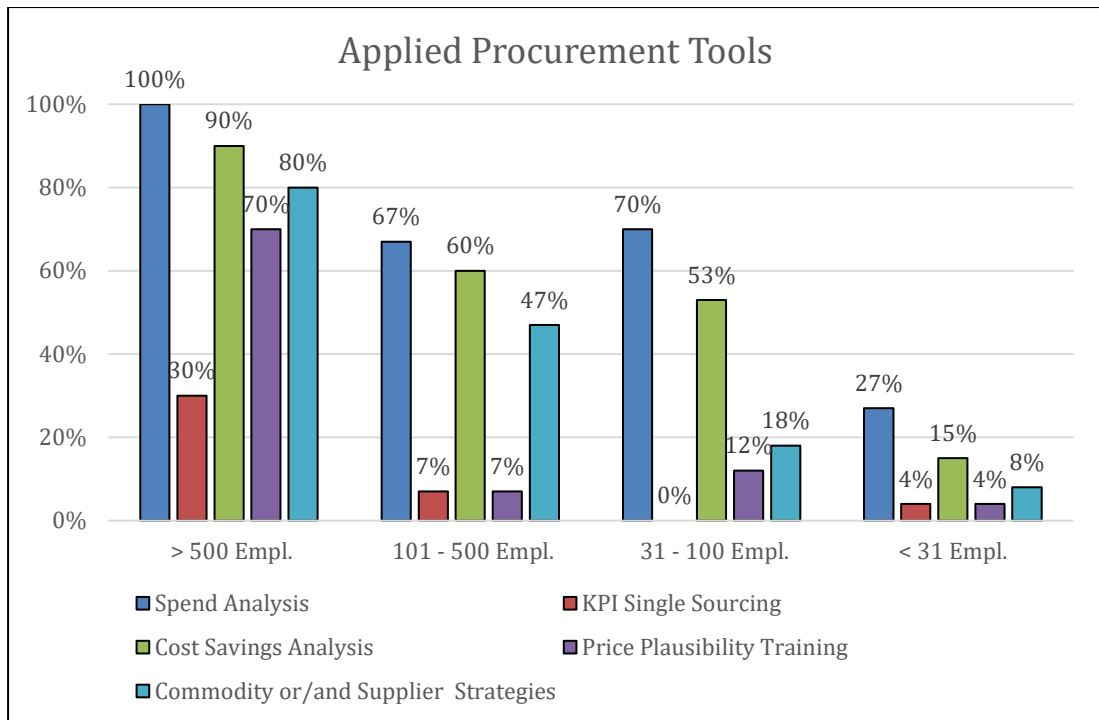


Figure 9: Applied Procurement Tools (Kottmann 2023)

Procurement Data Analysis. Having good data quality with respect to purchase contract type, commodity code and vendor code along with a summary of the annual purchasing spend gives a very good foundation for conducting data analyses. The question remains how this would be relevant with regards to fraud, corruption and integrity.

Proper data analysis discloses hidden risk potentials. Risks associated with costs or prices are always also risks for corruption. In other words, an organization with proven professional procurement and thus purchase prices at or below market cost level usually runs lower risk of corruption. In order to prevent future fraud, it is advisable to identify weak spots and prevent them from becoming fraud hot spots.

In order to illustrate this fact, it is worthwhile to further deep dive into the subject of purchase contract versus purchase order and look at advantages and disadvantages from both, buyer and seller perspective.

The advantage of creating a purchase contract for the buying entity is the potential for cost savings. If there is a known recurring demand over a period of, for example, three years, then it is possible to combine that demand resulting in a more attractive purchasing volume. A larger purchasing volume usually results in lower item prices. The additional advantage is that the buyer, once a purchase contract is in place, does not need to be involved until the contract ends or until a new contract comes up, either by a simple negotiated extension or a new market pitch. So, clearly the buying entity benefits from volume bundling of demand over a longer period into one contract. What are the advantages for the supplier if the sales price is lower than a simple one-off purchase order? If the supplier wins the tender, then the supplier usually has exclusivity with its customer.

The additional advantage is planning safety which makes it easier to plan production, production equipment, personnel, sales initiatives and cash flow, resulting in internal cost savings. Another advantage is that the supplier has an established long-term relationship with the client company which can act as a foundation to further intensify the relationship. It is also of benefit to be able to add the customer company to its published client name list which may have a benefit in its other marketing activities – especially if that client name has a solid market standing as well. Banks are typically also glad to know that their customer (supplier) has a long-term contract which may improve the credit rating and – in fact – the market value of the supplier.

Considering all the advantages of a purchase contract for the buying company as well as for the supplier, why would they not opt for a purchase contract but continue to place individual purchase orders? It might be a harmless missed opportunity but it also might be because the supplier found a way to benefit more from a high, above-

market, price agreement. If the buyer knowingly continues to operate with individual high-priced purchase orders, then there is an apparent risk for foul play.

That risk does not necessarily have to be associated with the buyer, as also other staff may benefit from manipulative corruption. For example, if the demand for a specific product is reaching the procurement staff too late to conduct a proper tender, then there is an apparent risk. In such case, the buyer often has no other choice but select the known supplier, has no time to negotiate to or below market price level and may not even be able to enforce their own Terms & Conditions. So, late information often leads to unavoidable disadvantages and sometimes such a situation is being triggered by internal staff by design. Having a purchase contract in place instead of having to rely on individual purchase orders has more advantages than risks because the purchase contract includes the delivery price, delivery time and payment terms.

Thus, as above examples show, it is worthwhile to regularly conduct procurement data analyses to identify such risks. Looking at vendor codes, purchase orders, existence of purchase contracts and making the time transparent between placing a requisition to procurement and the time of placing the order to the vendor can deliver meaningful results and help identifying risk areas.

Many large companies conduct such data analyses but due to the relatively high effort only focus on risky commodities or contracts above a minimum threshold. That is a valid approach for large companies operating in countries with a documented low risk of fraud and corruption (see chapter 1.1). In higher risk countries like Vietnam, one must not underestimate the impact of petty-corruption. Petty-corruption with relevance to the public sector is often a synonym of the term “lubrication” which means small-scale informal charges (Vietnam Net Global, 2022) . The situation is not very different in the private sector albeit to a lesser degree as shown in the introductory chapter.

According to the Vietnam Provincial Competitive Index (PCI Vietnam, 2023), FDI enterprises responded that about 5% of those FDI enterprises need to spend 5-10% of revenue for unofficial expenses in 2021, representing a large increase compared to the previous year. Needless to state that the term unofficial expenses is a euphemism for bribes.

So, in order to reduce the risk of developing a cancerous corruption atmosphere in a high-risk country like Vietnam, it is probably worthwhile to go through the effort and analyze all procurement data, without filtering out low-value purchase orders. Small sized companies often have no other choice but to closely monitor daily activities, make a big effort to instill a mindset of integrity and critically control all contractual activities. Balancing out the disadvantages of perceived micro-management and exerting adequate control is an unavoidable walk on a tightrope.

Mid-sized to large corporations have more tools available to minimize fraud risks by for example rotating the commodity responsibilities of buyers or by rotating managerial procurement positions. If a buyer spends many years being responsible for some specific commodities, they develop a high degree of knowledge which can greatly benefit a company. On the other hand, spending too many years in a specific field can result in supplier relationships becoming too personal and too cozy. Preferences may also play a role along with an unwillingness to integrate new suppliers in their portfolio. A company needs to find the right balance between professional development of individuals and rotating personnel to minimize corruption risks. Rules and procedures like the 4-Eye-Principle and Delegation of Authority are absolutely meaningful, but a subject like personnel rotation can be of added benefit to risk reduction.

A further tool which can be applied is to eliminate cash transactions. Many companies continue to maintain petty cash in the office or allow staff to use their own

cash in order to quickly facilitate needed small buys. The procedure is then to document any payment slip in the register for reimbursement. Typically, there is no documentation of vendor or commodity code unless somebody goes through an extensive manual effort. Large corporations globally have abolished petty cash in the office, do not allow staff to use their own money and forbid even managers to use corporate credit cards for company purchases. The only purpose to do so is to avoid potential for illicit procurement. As stated further above, there is a permitted procedure for emergency buys but those would be very rare exceptions which then are thoroughly documented. As a rule of thumb, any business transaction should be documented in a way that unrelated staff can rationalize actions and reasons behind those actions even years after.

Commodity Strategy. Data analysis of procurement data or general spend data should regularly be reflected in a report to make spending data transparent. An overview should be able to be filtered by value, vendor or commodity and subsequently allow an ABC analysis. The “A” criteria stand for a commodity with high overall spend and or high single transaction spend. “B” stands for less tightly controlled commodities and “C” for simplest controlled commodities with minimal information. Having transparency over the “A” category gives then input of where potentially the buying company should have a commodity strategy in place. Commodity strategies are typically established newly every 3-5 years and updated annually. Commodity strategies consist of following non-exclusive chapters:

- Commodity market player transparency (local and global)
- Commodity market size (local and global)
- Technological trends
- Mid- to long-term demand preview

- History of own demand and spend
- Competitor behavior (optional)
- Cost structure or cost driver transparency

Commodity strategies give the buying company a detailed overview of its main monetary spend and allows the company to be steered in the desired direction from a procurement and usage department point of view. Commodity strategies are developed by procurement staff and aligned with their internal customers. In complex but important commodities, the development of a strategy may be preceded by a market analysis which usually involves for a small team to go on site to suppliers and perform a capability evaluation (quality audit, survey, presentations, etc...).

At the end of the commodity strategy process, management approves the plan, next steps and a review is scheduled for a later point in time. This approach of internally making a whole spend category transparent reduces possible risk points for corruption or manipulation. Commodity strategies are a powerful tool for larger high-tech companies and production companies for complex products. For SMEs, commodity strategies remain a rather rare exception with even the possibility to outsource that activity to consultancy firms. For example, a company might consider a relocation of its head office. It reflects a large spending plan over a relatively long project phase but it only happens possibly once in 10 or 20 years. There is usually not enough knowhow available to conduct own market research or select a promising strategic approach. It is a well-established habit to outsource office relocation projects to specialists like CBRE, JLL, Colliers, Savills or other real estate firms whose fees may be high but the outcome often justifies the costs. Outsourcing procurement projects should be an option for subjects where own personnel do not have the necessary knowhow to excel and where such knowhow is not fundamental to the company's future performance.

Buyer Training. Not having personnel exceeding at their job or lacking necessary knowhow leads this dissertation to the subject of buyer training and its role in preventing corruption.

In many SMEs, buyers have only rudimentary training, whether it relates to negotiation skills or to cost calculation skills. Many companies allocated buyer personnel to the Admin Department which reflects that mindset. Lack of professional skills leads to vulnerability as buyers will often not be able to identify unrealistic arguments or implausible cost calculations. Additionally, an unskilled buyer may easily be a victim to gullibility. Especially in situations of a longstanding partnership with a supplier, a buyer with inferior knowledge will not criticize or question arguments sufficiently. That opens the door for passive corruption where a vendor can target people of influence, inside or outside procurement, as the risk of detection is reduced. One can deduct from Figure 19 that buyers in large companies have a higher degree of professional knowledge than buyers in SMEs as the training effort in SMEs is inferior to larger companies. It is also well-known that even the role of buyers in large companies vs. small companies differ greatly.

Whereas in large companies, buyers may have a decision-making role which includes the sole power of selecting the supplier set, exclusively negotiating the final price and solely determining the final supplier selection, this may be very different in small companies. In smaller companies with a centralized procurement department, buyers often merely have an administrative role. They are not in charge of pre-selecting the supplier set, they only are negotiating the last remaining small discount of a price and they would not dare object the supplier selection of a powerful budget holding user department. If there is not adequate management support for the role of procurement then it is easy to give in to the internal power struggle for who has which authority.

Even in large corporations that power struggle is a never-ending game and needs persistent attention. That fact is the reason why the question of procurement reporting line was included in the survey. In high conflict situations, it is worthy to have the possibility to quickly escalate a discussion to board member level.

In general, buyer training focuses on the subjects of integrity, price plausibility calculation, negotiation skill and cost reduction tools. The areas with the most obvious deficits and at the same time the hardest ones to train are price plausibility calculation and cost reduction tools. The primary focus of those trainings is on achieving economic success and it will be shown that good data quality is the prerequisite for that. Any company must have the ambition to be at least at but preferably below the market price when purchasing any goods or services from external sources. Any gap between a higher contracted price versus the market price should raise a red flag. Red flag in this case has two expressions – either it is a mere lack of skill with the consequence of eventually become less competitive in the business field or there is a potential hot spot for corruptive behavior. Overpaying for goods and services is always a problem and must surely be addressed.

A training subject which also appears to have reduced attention is basic legal regulations. Every buyer should have regular trainings about contract law, competition law and finance law. For example, is it just unethical or illegal to confront a supplier with showing the quotation of a competitor to achieve price reductions? It is common practice in negotiations to state that there is a better quotation from a different company. How far can one go, mention a better offer or is it ok to show the actual competitor quotation? The supplier can believe that or not but what is the law when it comes to confidentiality? A much simpler example is about the validity of signed letters. Company A has an internal regulation stipulating that all external letters must bear two

signatures. Company B is aware of that regulation but has received a price confirmation letter from company A with only one signature. Is that letter a legal document which can be held up in court? Yes, it is, because any internal regulation does not have external validity. Buyers must be aware whether their behavior, action and verbal statements can have serious legal consequences. Legal training and fraud or corruption as training subjects are by definition closely related. Some large companies educate 100% of their indirect workforce with basic legal training. A secondary, more detailed, function-focused legal training is then offered or mandated to key personnel of specific function, mostly sales, finance and procurement.

As a summary to the training subject for buyers it should be noted that buyers should regularly go through various types of procurement specific training, namely cost calculation, negotiation and legal training.

In the following the subjects of price plausibility and procurement cost reduction toolbox will be illustrated in detail, sometimes those two subjects are overlapping and complementing each other.

Price Plausibility. The subject of price plausibility is probably the hardest part of any skill training. First of all, the vast number of products and services and their innate complexity compared to the small number of buyers in any entity makes it understandable that developing an all-encompassing price calculation skillset across all commodities is an impossible task. Nevertheless, plausibility as a term does not mean cost determination. Price plausibility can be gained mainly through a pitch in the market, through a bottom-up calculation or through looking at historically paid prices. Market, calculation and history are the categories which at several points in this thesis are being mentioned with following underlying tools:

Market: RFQ in the supplier market

Standardized cost breakdown structure (CBS)

Linear Performance Pricing (LPP)

Calculation: Reference calculation

Open Book approach

Cost driver analysis

History: Previously contracted prices

Price indexes

The focus in this chapter is on the ability to calculate the price and make a reached price agreement plausible. In order to further elaborate on the subject of price plausibility it is worthwhile to break down the cost of a service or product into the major cost components. The ability to be able to break down a sales price into the main 5-10 cost components represents already half way to the target. To break down a price into several main price determining factors is called a Cost Breakdown Structure (CBS) (Schönsleben, 2022). In the simplest form, a breakdown will show transparency over fixed cost and variable costs which are broken down further into labor costs, material costs, logistics costs, profit margin.

As an example, in order to produce 100 simple tables, material costs would consist of 1200 USD for wood, 30 USD for nails. Then additional costs of 250 USD in form of wages for carpenters and possibly security personnel would be added. Depending on the production size and time, further added costs of 300 USD are for factory equipment, building rent and logistics. The total costs add up to 1780 USD or 17,80 USD per unit. Then a factor can be added for marketing, sales, profit and taxes. If a buyer can have some know how about the time needed to produce a product and an estimate of associated labor costs (hourly wages for a specific job education) then the plausibility of a sales price can be confirmed or denied. A similar approach can be taken

for services whereas in that case presumably the bigger emphasis would be on personnel costs. Personnel costs differ greatly depending on education and skill level of people involved. Now, the most unknown advantage is, that buyers can self-educate themselves regarding their ability to verify or disband a purchase price. What professional procurement departments do, is to require a pre-determined cost breakdown as mandatory component of the RFQ package (Request for Quotation) where non-compliance would result in disqualification from the tender. Simply requesting a specific cost breakdown can have tremendous positive outcome and if remembered, then price plausibility will pose a much lesser challenge than originally feared.

An extreme form of price plausibility calculation is to require a potential supplier to follow an open-book approach. Open book approach means that a supplier contractually agreed to open all cost items in a transparent way, even to the degree that an audit is allowed which will verify the actual costs on site. This approach is very difficult to enforce as naturally no supplier would like a customer to have total transparency over the company cost structure. An open book approach is often used in projects where the development of an innovation is involved and costs are difficult to plan. The supplier in such a case has the benefit to be part of or even the owner of an innovative product which can be marketed to other clients in the future. The benefit of the buying entity is that costs incurred are in so far under control as only actual costs would be charged.

The standard approach though is to not completely open up the detailed cost structure but rather give a rough but concise overview of the relevant main 5-10 cost categories. The required cost breakdown should include in the case of labor costs the number of hours and the applied hourly rate or days multiplied with daily rates. If the

buyer goes through the long process and decides to design a cost knowledge overview then over time they can accumulate a vast knowledge of costs. It is very worthy to have an overview of daily or hourly rates for all types of professions, whether laborer, accountant, consultant, development engineer, application engineer, cleaning staff, guards etc.

That approach though will not guarantee success as there are many examples of unknown input factors. For example, if a company needs to buy a customized software, it typically is extremely hard and near impossible to verify the needed programming hours or even days. When focusing more on the cost reduction toolbox this subject will be revisited with possible mitigation tools. As a summary of price plausibility, it can be stated that this subject is extremely important in order to keep a cost competitive position in the market. The more plausible a purchase price is, the more difficult it is to build in a higher than verified cost position. It would be very difficult to pay bribes if there is no room in the pricing structure to hide it. The subject of corruption avoidance by verification of price plausibility is therefore a second advantage although of much lower importance compared to the cost savings subject. As stated in the introductory chapter, there are no simple, singular, foolproof corruption mitigation strategies, it is rather a concert of tools, processes, skills, knowledge and smart data management resulting in overall lowered fraud risk.

The survey shows in Figure 19 that price plausibility training is a rare happening at all companies up until 500 employees. Only large companies confirm that their staff is being trained in price plausibility.

Single Sourcing. Prior to focusing on the subject of cost reduction toolbox one often underestimated subject needs to be deeply analyzed. The term single sourcing means that a buying entity chooses a supplier without going through a bidding process

even though other suppliers would also be available (CIPS, n.d.). Single Sourcing in the area of non-production procurement or procurement of indirect material is a must-track KPI in any company. It potentially has the biggest impact on cost positions and is at the same time the largest unwanted motivator for non-compliant fraudulent activities.

It is understandable that single sourcing cannot be completely avoided. There are products in the market where there is simply no competition. For example, if a company operates its computers with Microsoft, it is rather impossible to switch to another software provider. So, products with involved intellectual property rights often result in a predetermined supplier selection. In case of some complex production machinery, one might be obligated to contract maintenance services with the original manufacturer, otherwise the warranty or safety certificates might get invalidated. In the area of IT services, single sourcing is often covering more than 50% of the total IT procurement volume. In case of customized software, it is very difficult to switch any upgrade work to another service provider who first would need to familiarize themselves with the programming code. Other cases of single sourcing can be spare parts for original manufacturing equipment, mandatory governmental services or harbor fees. The latter two examples are also called sole sourcing (CIPS, n.d.).

In reality though it is not necessary to distinguish between single and sole procurement in data management as it would represent a loophole to determine a commodity as sole sourcing and thus avoid any alternative idea development. There is a multitude of cases where procurement will not have any flexibility in selecting from a set of potential suppliers. Nevertheless, the main task of procurement is to identify those contracts which have been allocated to always the same supplier, covering an inexplicably long period without going through a fair and rigorous tender process. The question should be asked: What should I do in case the incumbent supplier goes

bankrupt? What would I do in case the single source supplier must not be contracted for political reasons, like i.e. after international sanctions have been implemented? Business must continue in case a supplier goes bankrupt, and people often are surprised that there are alternative solutions after all. One should therefore be highly critical of any reasons given to solely rely on one source. Yes, sometimes the effort to switch to a new supplier can be expensive or really hard, but in the end, it is possible in most cases.

Procurement has the innate desire to eliminate single sourcing as buyers are of the natural conviction that single sourcing results in unnecessary higher costs. In many cases though the internal budget holding unit, which is the requisitioning unit, demands, that procurement only negotiates with their preferred supplier. The requisitioner often has developed a comfortable relationship with the existing supplier and is unwilling to switch to a new supplier, often even opposing any competitive bidding as the incumbent supplier might lose the contract. The requisitioning unit would have the demanding task to onboard a new supplier. Onboarding a new supplier, potentially even an additional supplier binds personnel capacity and is cumbersome. This power struggle between requisitioner and buyer is often escalated up to the highest management level. For that reason, it is very important to keep track of the single sourcing KPI.

If there is no competition for a contract – no matter how small or big – suppliers having such an advantage for sure try to maximize their monetary benefit by requiring exorbitant prices. At the same time, such a supplier in a privileged position tries to make sure to maintain very close relationships with the people in charge at their client company. Such sales professionals will foster good relationship with the requisitioner and the buyer because it is simply so profitable. How can relationships be fostered? By wining & dining, by Christmas gifts, invitations to sports events etc. This is where the subject of indirect bribery and fraud becomes apparent. Corruption risk is extremely

high in cases of single sourcing, and it is a company's obvious target to reduce dependencies.

Apart from the fraud risk, single sourcing situations do not allow a buyer to investigate and determine the real market price. Buyers usually only become active when there is a requisition in their work basket. So, tracking all single source contracts and disallowing any automatic contract extension is a very important tool to keep costs under control. It is rather obvious that negotiating with a monopolist, even in a self-inflicted monopolistic situation, is seldom fruitful.

It is worthwhile for a procurement department to maintain a list of expiring contracts. As in many cases the requisitioner has no interest in involving a new supplier, they will not voluntarily inform procurement to commence a bidding process. Requisitioners would rather wait until a new bidding process is too late so that continuing with the incumbent supplier becomes unavoidable. A list of expiring contracts enables the procurement staff to start procurement activities early.

Some large companies with a highly professional procurement unit are monitoring existing contracts perpetually. This cannot be expected from SME companies. SME companies very often have a more reactive than active procurement unit. To steer the procurement function into a more forward-looking unit is gaining importance in any industry.

An earlier chapter briefly focused on the subject of commodity strategies. A listed content title is called "mid- to long-term demand preview". That preview along with the analysis of the existing supplier portfolio and currently running contracts would lead to a desired future view of the supplier portfolio. One must make sure to keep contract allocations balanced. It is understandable that if a new supplier tries over

many years to be awarded a contract but always loses out to an incumbent supplier, it will lose interest in that client. As a consequence, the future pricing effort and engagement effort of the new supplier would be reduced and as a further consequence the cost position of the buying entity would deteriorate. For such reasons, conducting a comprehensive commodity strategy is extremely beneficial. Now it also becomes clearer why a commodity strategy needs to be approved by top management as the implications are sometimes severe.

The subject of single sourcing is anything but trivial. Many requisitioners have valid reasons to stick to an incumbent supplier. In the example of a machining line, adding a machining line from a different supplier for pure procurement cost reasons can be a mistake. Procurement only looks at the investment costs of the new machining line as procurement's success is purely evaluated based on calculated purchase price savings. The requisitioner has often good reasons to deny a new supplier to get a foothold. In a production area, maintaining the production line involves own personnel, be it maintenance engineers or the actual line workers who need to be trained. Training personnel to be able to work on two lines of different suppliers needs an extra effort, sometimes even new personnel must be hired to accommodate the needs of the production. Also, the maintenance department needs to keep extra stock of spare parts which increases inventory costs.

The concept of total cost of ownership cannot be explained in detail here but this case serves as an example of how complex investment decisions and the conflict between buyer and requisitioner can become. Maintaining good internal relationships between procurement and its internal customer is very important. Suppliers are well aware of the internal and external power struggle between buyers, requisitioners and competitors. Suppliers try to benefit from these power struggles with any tools at their

hand and sometimes, if they cannot achieve their objective, try to resort to illicit methods of corruption. Therefore, it is important to maintain good relationships where differences are being settled in a cooperative spirit. Additionally, transparency among all internal parties reduces the risk of active corruption.

As a conclusion and summary of this complex subject of single sourcing it can be stated that maintaining a permanent overview of single source situations and expiring contracts is extremely important to the cost and integrity position of any company. Close cooperation and mutual technical understanding between procurement and internal customer is fundamental to the company's success. A strategic approach towards a commodity by periodically agreeing on a future path forms a good foundation for upcoming investments.

Cost Reduction Toolbox. Prior to listing an overview of tools supporting cost reduction activities it is worthwhile to touch upon the subject of negotiation. Negotiation implies that two or more people exchange arguments to achieve their goal. That is the case in a business or price negotiation, police hostage situation or even marital disagreement discussion. Typically, the one with the better arguments can gain some advantage. But if there is no agreement in the end, then there is no tangible outcome and what remains may be a disappointment rather than an agreement sealed by a contract or a handshake. Harvard Business School (HBS) is highly respected for its courses on negotiation techniques. It basically promotes the idea of a win-win as the preferred outcome and trains students especially in active listening techniques (Weger et al., 2014). Three active listening skills are being promoted by HBS (Harvard Law School, n.d.).

Paraphrasing is the first named skill and basically describes the skill of repeating in own words what the negotiation partner has just expressed. Paraphrasing gives the

opposing negotiation partner the feeling of having been understood. A bond is being created by this type of active listening.

The second skill is called inquire where the listener is asking for further details in order to fully grasp the argument of the negotiation partner. Again, the negotiation partner is given the feeling that the listener is interested in the argument.

The third skill is called acknowledge where the negotiation partner receives a confirming statement that the listener has again merely understood the position and emotions of the negotiation partner.

All three skills have the purpose to create an atmosphere of cooperation. These skills have validity in any type of negotiation but all the more in serious high-stake negotiations like for example in a police hostage situation. There, psychology plays an extremely important role.

When it comes to business transactions, the above listed active listening skills are still important and it is great to be trained in them, but beyond that there are other, more effective tools to achieve cost or price negotiation objectives. In below table Cost Reduction Toolbox, the part of negotiation tactics or techniques only comprises a small portion of the overall portfolio of negotiation techniques. The thesis puts more emphasis on the actual cost reduction tools.

Nevertheless, any type of cost reduction activity inevitably involves a bilateral, mostly face-to-face interaction between two people with opposing objectives. Such situations are generally risky from a fraud perspective as at some point - if the target cannot be achieved, illegal or unethical offers may be put on the table. In order to reduce the risk, the more a price or cost target has valid footing, the more any deviation becomes apparent and the more some inexplicable cost situation is apparent, the higher

the chance of detecting any illicit behavior. So, in fact, cost reduction tools are a double-edged sword. On the one hand, the pressure exerted by effective tools can trigger a non-compliant corruptive offer, on the other hand, using a highly effective tool supports transparency and the displayed knowhow is professionally motivating and can therefore also be helpful in fending off illicit offers. The approach to negotiation taught by the Harvard Business School targets an atmosphere of cooperation to achieve a win-win outcome. Cooperative atmosphere has a balancing effect in situations where a strong negotiator meets a weak sales person. Power imbalance may lead to frustration on the weaker person's side and trigger them to choose an unfair approach to still achieve their objective.

The role of management must also not be underestimated. Leadership plays a major role in motivating staff to achieve the almost impossible. In order to have high performing buyers, it is needed to give them the best tools at hand and train them in applying them on a daily basis. The above chapter on buyer training has its absolute validity. A highly skilled and trained buyer with integrity has the inert desire to achieve the impossible and the manager has to unlock that potential. The higher a buyer is skilled and ambitious, the lower the vulnerability to fall prey to fraud and corruption attempts by business partners. The higher the skill level of a buyer the more critically they can observe activity in their surrounding office area. It gradually would become more difficult for colleagues to act without integrity as the risk of detection increases. Above reasoning is the background for listing cost reduction tools and some negotiation techniques as they do have a positive impact on the integrity of own personnel. At this point there might be the criticism that the job of a buyer is not really attractive. Why then should somebody have motivation for being good at negotiation or fighting for better prices? For example, if a buyer pushes to get a new supplier on board, what

benefit can the buyer personally expect? The internal business partner usually is reluctant to onboard a new supplier, so no praise will come from that side. If the involved product or service is quality related, then even in case the purchase was a success there will be little praise. People probably would rather react with “You were in luck” than clapping them on the shoulder. There is one aspect which some companies are not aware of. The job of a good buyer enables immediate and absolutely accurate feedback in the form of how much money was saved for the company due to a good negotiation effort or due to having designed an effective negotiation strategy. The savings one can achieve by negotiation can often be calculated down to the penny. There are few jobs in any company having that success transparency. Even an excellent salesperson does not really know the exact bottom-line profit and loss impact they have.

Table 2 list the main but non-exhaustive cost reduction tools available to procurement. As can be seen, the list is relatively long which surprises even many professionals, reflecting the tendency in underestimating the impact of procurement on the company cost position.

Table 2: Procurement Cost Reduction Toolbox (Kottmann 2024)

Cost Reduction Toolbox Procurement

No.	Tool Name	Brief Description	Cost Reduction Potential	Risk Correlation to Fraud Prevention
1	Volume Bundling	Consolidate several orders to increase monetary value and increase negotiation lever	++	+
2	Multi Year Contracting	Make a contract more attractive by allocating volume over several years and give exclusivity	++	+
3	Optional one-sided contract extension	A limited contract includes an option by buyer to extend for a defined period without renegotiating prices	++	+
4	Option Buy	In case a demand for a second investment is unclear, arrange for an option to buy the same product again at a negotiated price. Basically increasing the negotiation value without commitment.	++	+
5	Debundling	Breaking apart a specific demand into several independent packages to avoid trading margins typically added by systems supplier	+	0
6	Decontenting	Evaluate whether a specification can be made more easy by eliminating unneeded demands	++	+
7	Outsourcing	Previously self-produced demand to be bought externally, reduce fixed costs, increase flexibility, overall cost benefit	++	++
8	Payment Terms Renegotiation	Renegotiate payment terms to i.e. pay 30 days later and benefit from a one-time cash flow optimization or negotiate a discount for earlier payment	++	+
9	Price Basis Change	Change from i.e. headcount based remuneration to task fulfillment remuneration	+	+
10	Linear Performance Pricing	Make prices for similar products comparable by creating a graph with prices and price determining criterion	++	0
11	Costwalk	During negotiations agree on a temporary price but make an agreement to commonly work on further cost reduction opportunities: fix a target price as aspirational goal	++	0
12	Retrofit / Reuse	Avoid buying new equipment but find a way to upgrade existing equipment at lower costs; life cycle extension	+	0
13	Reference Calculation / Target Costing	Rather than trusting a received quotation, additionally perform a bottom-up calculation to reach a calculated target price (outsourcing as option) or use historic contracts to derive target costs.	+	0
14	Cost Break Down Scheme at RFQ Stage	Demand a cost break down structure to verify cost positions but also - in case of receiving several quotes - make cost positions comparable between suppliers and negotiate to the calculated minimum.	++	+
15	Negotiation Techniques			
15.1	Online Bidding	Conduct auction to achieve lowest price	++	-
15.2	Sealed Bid	Require a final written quote at a specific time / day. After opening of sealed bids supplier is selected based on price only.	+	-
15.3	Game Theory Negotiation	Determine unchangeable rules for negotiation and let suppliers compete against each other with buyer being only the observer	++	-
15.4	Psychological Tools	i.e. Anchoring	+	0
15.5	BATNA (Best Alternative to Negotiated Agreement)	Enter a negotiation well prepared having a "Plan B" at hand. Increases confidence in achieving original goal by being ok to stop negotiation without conclusion.	++	0

Legend:		
Cost Reduction Potential	++	Great potential to reduce costs
	+	Good potential to reduce costs
	0	Fair potential to reduce costs
Risk Correlation	++	High risk area
	+	Elevated risk
	0	Limited risk
	-	Active risk reduction

The advantage of volume bundling for the buying entity is that an increased value of the RFQ package increases its attractiveness for suppliers as more turnover can be expected from the customer. More turnover secures personnel and production equipment utilization rate. A better planning basis for the supplier is an additional advantage. Due to the attractiveness of the contract, suppliers are potentially willing to give bigger discounts. In rare cases of new suppliers, it is possible that they even waive any profit in order to have better chances for a long-term relationship and securing future even bigger contracts.

Volume bundling is therefore a very effective but simple way to optimize pricing. A desired side effect is also to limit the number of suppliers if more volume is in fewer hands, thus reducing administrative costs. The more attractive a contract and the fiercer the competition in the market the more salespeople are motivated to go beyond their means to get the contract. The risk of being offered bribes and therefore decide to corrupt a business relationship is real. Avoiding illegal behavior requires tight documentation requirements, 4-Eye-Principle and securing the involvement of several supplier candidates to ensure to reach at minimum market price level. All of the listed cost reduction tools have the effect of putting pressure on the negotiation partner of the supplier. Pressure to reduce costs impacts a company's position to compete, impacts the perceived job performance of people involved and may determine the personal future of people involved. As has been stated by Cressey (Cressey, 1953), fraud often happens when pressure and opportunity meet rationalization.

Multi-year-contracting has a similar impact. The contract is made more attractive by increasing the volume over a longer contractual period. The specific added advantage for a supplier is that for the planned turnover volume no additional sales and marketing activities would be needed. Also, the production equipment utilization planning, possibly multi-shift-work scheduling is also made easier in case of already secured turnover. This is also applicable to services which may be headcount based in the sense of utilization ratio for personnel.

An agreed one-sided contract extension option is meaningful in a situation of a longer running contract where supplier change barriers would require a tremendous effort. If the supplier staff performing services for the buying unit needs to specifically be trained then a quick supplier change is difficult. Many companies have a contract duration limit of 5 years before a new tender is formally required. In some situation of that contract ending year, it might be difficult for whatever reason to go through the supplier change effort. If in such a situation an extension needs to be negotiated, the position of the buying entity is rather difficult as they hardly can switch. To reduce that specific risk, it may be beneficial to enter a one-sided contract extension clause for an already determined price. That price can be adjusted by i.e. a contractually agreed adjustment by linking it to a specific inflation index. An additional possibility to reduce change-over costs is to include a clause in the contract requiring the supplier to cover the change-over period by i.e. 2 more months including training the new supplier's personnel. In the case of a i.e. 5 year contract many bidding companies consider such a free period at contract ending an acceptable disadvantage. As the benefits of a multi-year-contract are obvious and much detail on special terms and conditions needs to be ensured, the risk of passive corruption is again real.

Option Buy has a similar expression. Option buy is advisable in cases for example of procuring an assembly line for a specific product. If there is a prospect that the line capacity might need to be doubled but cannot be committed yet, then to negotiate a potential follow-up order of an identical assembly line for the same or even lower price is a smart solution. Usually, such options are limited to a specific period after which they become invalid. Again, one can see how important the legal knowhow is and how to exactly formulate such clauses in contracts. This is the more apparent in SMEs where there is no lawyer employed to validate contracts. The same corruption countermeasures as stated above regarding volume bundling need to be applied for option buys.

Item No.5 in the cost reduction toolbox is called debundling. It is quite the opposite to volume bundling. Debundling makes sense in a situation where a buying entity might have the chance to engage a new innovative supplier and would like to give part of an existing package to the new supplier. Other scenarios could be in situations where the buying entity is dissatisfied with the quality of the original supplier and reduces complexity for the existing supplier by breaking up the contract into several smaller ones. Typically, this also has a cost reducing effect which is why this item is listed in the toolbox. The associated corruption risk for that task is evaluated as rather low.

Discontenting means practically the reduction of specification requirements. A simple example is in the area of cleaning services. So far, the sales room and staff offices with meeting rooms etc. have all been cleaned daily. Decontenting could mean that areas with customer traffic still need to be cleaned daily but non-critical areas like the offices for own employees would from now on be cleaned only twice a week. Reducing the specification is a very effective cost reduction measure. Decontenting also

only has limited correlated fraud risk as negotiations focus on finding a price tag for the reduced specification.

Outsourcing projects can have very high fraud implications, internally and externally. If realized, inhouse production might need to be eliminated for cost reasons and an external service provider takes over the task. An outsourcing project is usually done by the internal customer of said service or product with the help of controlling and procurement. Procurement often has a dominant position in such a make or buy decision process as it usually has the most independent viewpoint. As there are many stakeholders internally as well as external suppliers, the exposure for fraud attempts can be big. The typical countermeasures are again good, verifiable calculations / documentation, 4-Eye-Principle, permanent communication and intensive teamwork. An outsourcing decision is usually a top management decision with additional involvement of the worker's union as jobs might be affected.

Renegotiation of payment terms is a straight forward activity where usually the buying party either proposes delayed payments at no cost increase or earlier payments for a discount. The impact of a payment term change is usually limited to a low single digit percentage. In crisis situations with looming insolvency, a short-term extension of payment deadlines can have a positive cashflow impact. Long-term suppliers often agree to such an extraordinary request.

Price basis change is an activity targeting cost reduction which puts pressure on suppliers to become more efficient. For example, a presently running contract for cleaning services includes a very rough specification and a supplier might have gained the contract by writing a quotation consisting of an X number of cleaning staff at minimum wage.

It might be worthwhile to measure all cleaning areas and receive a quotation based on prices per cleaned square meters. Differentiation between hard floor, carpet floor or even sqm of window space may be included. So, in the end the price table provides an unusually clear transparency. This may be of benefit for companies which have several locations in a country which makes cost comparisons very easy, thus the opportunity to find cost reduction opportunities. It also makes the cost impact of specification reductions much easier.

Another example of price basis change is that for example an outsourced IT programming effort where the quotation lists the number of estimated programming hours by skill level resulting in a total amount. The supplier insists on payment by time and material but the buyer prefers to agree on fixed prices based on achieved milestones. Any efficiency success by the supplier gives an extra profit while in case of any bigger bugs the risk would be having to invest more manhours than originally estimated. Correlation to fraud risk is there, albeit limited due to the fact that in the first example there is a simple comparison possible between the costs before and after the price basis change.

Linear Performance Pricing (LPP) is rarely used for the procurement of indirect material but more used for production material or parts. It is a well-known approach to identifying high price items. What LPP does, is allocating all part numbers of a specific product in a graph with the Y axis showing the price and the X axis showing the primary cost-impacting factor. An easy-to-understand example is automotive glass. The price-impacting factor in that example would be sqm of glass.

Below illustration (not real data) shows the various products (here: side and rear glass) in the graph. The thicker line indicates the price distribution line based on actual price inputs. The lower thinner line indicates best practice prices, means comparatively

low prices. The one price above the thicker line is clearly an outlier and it would need to be investigated why that specific part number is so expensive.

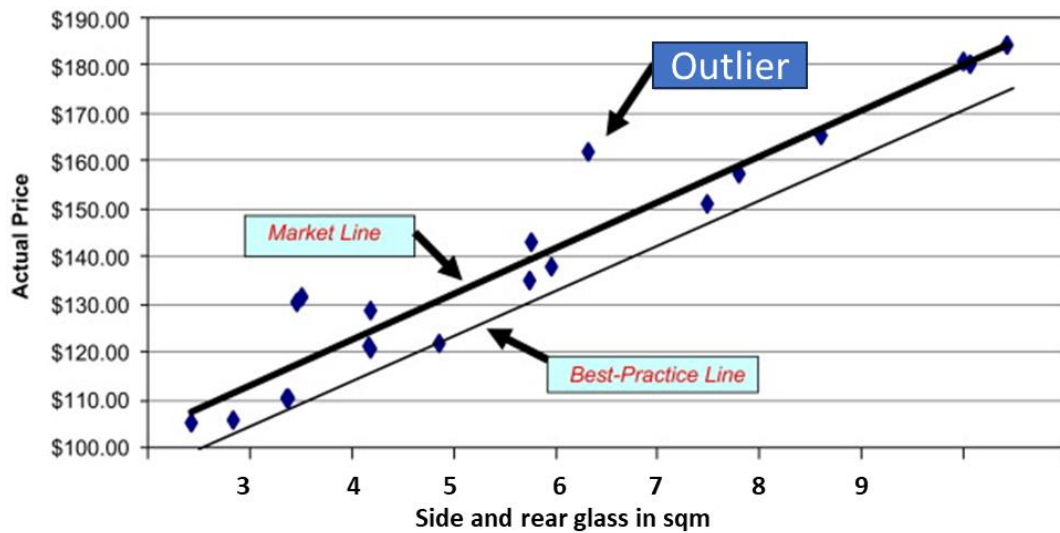


Figure 20: Linear Performance Pricing (LPP) Illustration, Kottmann, 2024

When in application, LPP is a very powerful tool as it puts the pressure on the supplier to explain high priced items.

In the area of indirect procurement, LPPs are applicable for only a limited number of commodities, i.e. daily rates of different consultant levels of different companies or maintenance hourly rates by any technical supplier.

Costwalk is an effective tool but only used in rare cases. For example, a supplier is contracted for a new product with an innovative new production equipment process. In such an example, it may be extremely hard to calculate the investment as sometimes a long lead-time requires contracting at an early stage where the end product may not even be finally designed. In order to limit costs, the supplier and buyer agree on a price which covers the needed investment. Typically, the supplier has built in some monetary safety zones as the specification might still change and result in more engineering work.

Costwalk means that the cost drivers of the investment have been identified and that in a cooperative discussion, the supplier and buying company agree to target cost reductions in specific areas. Such planned efficiency ideas would be documented, evaluated and their positive price impact realized when implemented.

Costwalk and cost driver analysis are tools with similar approaches. Cost drivers can be identified and then a mutual working group tries to achieve savings through efficiency measures which would benefit the buying company. This kind of cost reduction activity is very much used only in high-tech and complex production companies. As the approach is very transparent and usually involves several personnel from both companies, the risk impact for fraud and corruption is very limited. The more transparent a process is and the more people are involved, the lower the fraud risk.

Retrofit or reuse are often unpopular cost reduction measures by production engineers as they prefer to use the best, most modern and high-tech equipment. That may be one of the reasons why technical specifications are frequently exaggerated. Retrofit or reuse means that existing equipment which often is discarded or sold on a secondary market, gets repaired in a way that a new product can be manufactured on old, potentially already discounted equipment. There is little profit to be made by suppliers because repair costs are dominated by involved headcount and most often such repair work is performed at the customer site, thus there is transparency over how many people are working on the retrofit or reuse task. Avoiding high investments is not really a procurement task as procurement often does not have a saying in questioning a need. Reuse or retrofit limit a creative approach as the needed supplier is in almost all cases the original supplier. Nevertheless, it is a good tool to limit new investments and procurement can at least raise the idea to do so. Fraud risk is perceived low regarding this tool.

Reference calculation is a price limiting tool which is performed by specialized engineers and only used as complementing tool in negotiations. A reference calculation is a complex way for engineers and controllers to calculate the costs of a specific equipment. It basically is a very detailed and complex bottom-up calculation along the part production process, starting with needed raw materials, evaluating the needed machine park, calculating the machine costs per part for the production process, include logistics costs, etc.. The tool is commonly not used in a market with many players as a simple competitive bidding process delivers already good results. A reference calculation is of benefit if there is no competition and it then serves as a price plausibility tool.

A reference calculation requires deep knowhow on a very detailed level. It is possible to outsource such a calculation. Simpler forms may be based on technical drawings but complexity increases with product complexity and the highest form would be calculating the costs of a whole machining or assembly line. Subsequent negotiations are very technical where supplier and customer personnel argue about the production process and each cost item. The tool is effective but usually a buyer is relegated to an observer as they cannot have the knowledge depth.

A cost breakdown structure (CBS) is a highly effective tool used by procurement at the negotiation stage where ideally more than 2 suppliers compete over a specific service or product. A CBS begins with a price breakdown form that procurement sends out to the RFQ suppliers and it includes the clear requirement that filling in that form is mandatory in order to have a quotation approved. The degree of required price breakdown detail may vary. As a general rule of thumb breaking down the price into 5-10 or more cost categories would serve the buyer well in preparation of negotiations. After having received quotations from several suppliers, the buyer enters

all data in one survey sheet. The buyer compares the price levels for each criterion and compares from supplier to supplier. If the data are roughly similar, then one can assume that no major mistakes have been done. The next step is then to highlight the cheapest price per criterion and calculate the total sum of all cheapest items. That result can be used as aspirational goal or as theoretically the best possible achievable price if the final winner of the contract can match the best sub-item bidder. This can also be called cherry picking – picking the lowest prices for each line item and calculate the total.

In a subsequent negotiation, the supplier will have a hard time to proof and verify that their quotation is correct or realistic. The buyer holds a powerful tool in their hands by being able to confront a supplier with the best market price for each line item. One can question the fairness of this approach as the pressure is very high but it represents a good and transparent approach to price plausibility. As this tool requires bilateral face-to-face negotiations, there is again potential to fraudulent behavior due to the exerted pressure. There is a real advantage in making a cost breakdown the standard. Buyers will be able to document recurring cost items, whether it is personnel costs per hour or day, whether it is logistics costs per cubic meter per kilometer or many other cost items. Over time they will get a very good gut feeling of whether a price is a valid good one or whether some supplier has a tendency to overcharge.

Proven negotiation techniques can also be categorized as cost reduction tools as some of them involve technology like platforms offering online bidding events. The cost reduction toolbox lists already explained tools like online bidding, sealed bid and game theory. Game theory is still a rather novel concept and its definition was explained in chapter 2.

To completely understand the effect of applied game theory it is worthwhile to go into the detail of an example:

- 1) Initial situation: Companies A, B, C and D have handed in their initial quotation for an attractive multimillion USD contract; after clarification of open questions, the bidding companies' offers have been technically approved. They then receive a letter of invitation for round 2 of the negotiations.
- 2) The letter in simple words includes following content: In order to reduce the remaining candidates pool further we request you to improve your existing bid. After round 2 only 3 vendors will remain in the race. Round 3 details will be announced thereafter.

Interpretation of Round 2: The bidding companies are not aware how many competitors remain in the picture, so they feel pressure to reduce their price level in order to maintain a chance at the contract.

- 3) The remaining 3 bidders have been congratulated that they are still in the race. The letter for the upcoming Round 3 includes following simplified wording: We request you to further review your quotation for further savings potential. You now have the chance to receive useful information to strengthen your chances. Following conditions apply: If you reduce the existing quotation by a further 2% you will receive feedback about your competitive position (rank). If you decrease your existing quotation by 3% or more you will not only be informed of your ranking but will also receive information in what range your distance to the price leader is. This range will be indicated in steps of 0-5%, 5-10%, 10-15%, etc.. The leader after Round 3 will be the first to be offered a contract offer in Round 4 which you can accept or decline.

Interpretation of Round 3: The suppliers can decide to keep their offer unchanged. They can also reduce the price further and hope to receive good information about their ranking or distance to the leader. Pressure is high to find

out the ranking information. Advantage for the buyer is that most likely in every round, some price reduction will be achieved.

- 4) The letter to the 3 remaining vendors for Round 4 includes following simplified content: You are invited to come to our offices on xx day at xx o'clock for the final decision-making round 4. You will be seated alone in a room whereas your competitors are also present in another room on another floor of our building. Starting at xx o'clock we will enter the room of the company ranked No.1 and make a counter-offer. You will have 10min time to decide whether to accept that offer. If you accept, then the negotiation is finished and you will be selected as our supplier for this contract. If you decline our offer, we will go to company ranked No.2 with the identical offer. Should none of the remaining companies accept our first offer, we will go back to company ranked No. 1 with an increased 2nd offer. The procedure will repeat until a company has accepted an offer.

Interpretation Round 4: The pressure on company ranked No. 1 is incredibly high as there is an offer on the table which they can accept and be assured the contract. If it is financially not viable, they must hope that all other competitors also have to decline due to non-existent or insufficient profitability. The buyer can start the counter-offer with any value which they want. I.e. a 10% reduction versus the best existing offer can be a starting point and if declined by all candidates, they can increase from that base in maybe 5 steps up until the best offer from Round 3.

In order to develop such a negotiation strategy, the buyer needs detailed knowledge about the market dynamics and the actual negotiation rounds need to be

prepared very diligently. Some of the main conditions which will need to be fulfilled prior to Round 2 are:

- All stakeholders must agree that whatever the outcome, it must be accepted without any objection or veto right.
- The invitation letters must ideally be approved by the legal department in order to ensure legality. Remark: The information-buy about the rank and distance to best bidder in ranges of 5% must be in accordance with local competition law. It is understood that the exact price gap may be illegal or at minimum unethical but it is fine to give indications in certain minimum ranges.
- The rules must be crystal clear without any room for interpretation
- The suppliers must be convinced to participate in this type of awarding process by explaining the advantages like transparency, fairness and equality.

Industry insiders report from supplier feedback that many suppliers strongly dislike the pressure but embrace the fairness. In the meanwhile, there are specialized consulting companies (i.e. TWS Partners Munich) offering the development of game theory-based negotiation designs for customers. The consultants by education are often mathematicians who actually calculate the probability of a specific desired outcome and often succeed in dramatically increasing the savings. What the example demonstrates is that there are tools in the market which by design exclude any manipulation as the overall process is fully transparent. With a well-prepared design and identical information been sent out to all participating suppliers, there can no benefit be expected even if some sales person may have a close relationship with a buyer.

When it comes to applying verbal negotiation tools with a psychological element, buyers can resort to an approach which is called anchoring (Lipp, n.d.). It is

based on the consensus that the first offer at a negotiation table has a significant impact on the negotiation outcome as it remains subconsciously present throughout the negotiation until the conclusion. The first offer on the table is called anchoring. During the negotiation process the one placing the anchor repeatedly revisits the initial offer and thus creates a reference point for both negotiating parties in their subconsciousness.

As an example, the anchoring buyer may say at the very first interaction: “I don’t know how we can do it but let’s find a way to achieve a reduction of 10% versus the old contract”. Circling back to the stated 10% again and again can have the effect that the sales person of the supplier, after lengthy negotiations, ends up with a whopping price reduction of 6% but considers this a success even though possibly their internal target was to continue with the old price, means 0%. The buyer again may have strategically placed the 10% while really only needing to achieve 5%. Anchoring is effective in many types of negotiation whereas some negotiation partners are not even aware of the fact that a technique was employed with intention. Another simple psychological trick is to negotiate contract extensions towards the end of a business reporting quarter. Predominantly American led companies are keen to report their success in contracting new business as early as possible. Waiting with a large contract volume until shortly before the end of a quarter may result in unexpected last-minute discounts in order to seal a deal. That is a very simple tool but it has been proven effective.

Item No. 15.5 in the cost reduction toolbox table is called BATNA which stands for Best Alternative to Negotiated Agreement. Having a BATNA upon entering a negotiation in effect means that even if there is no agreement happening, the negotiator can walk away from the negotiation table and revert to the “Plan B”, their BATNA. For example, if somebody is looking into taking up a housing loan at their primary bank,

they may go there without any preparation and feel obligated to accept any interest rate the banker proposes. If though, prior to that negotiation, the loan seeker approaches other banks and receives good offers, then they can mentally prepare to walk away if the deal at the original bank is not attractive enough. The BATNA would be in consequence to move one's banking business to another bank. During negotiations, having a valid and good BATNA in the backhand gives a confidence booster and increases the chances to achieve the hoped-for tough objective. The correlation to the subject of fraud and corruption is that a buyer who has options cannot easily be pressured into accepting any illicit fraudulent proposal or bribe.

A buyer being able to use the majority of the listed tools can be considered a seasoned and matured professional. As a skilled buyer is aware of their competency, pride will play a very positive part in also being strict regarding following SOPs and rules, thus reducing the vulnerability to fall prey to corruption attempts by third parties.

Cost Savings Calculation Methods. How is it possible that a purely internal method of how to calculate savings in procurement can have an impact or even trigger fraudulent activity? As in any job, pressure can get very high regarding the expectation to achieve the annual targets. If an annual target is given and a supplier is aware of said target, then some cunning people can find a way to exploit that knowledge.

For example, some buyers sometimes have a too close personal relationship with a supplier and in some cases even intentionally tell their supplier counterpart of their numeric target for the running year. In case the savings calculation method is defined as

$$\text{Savings} = \frac{\text{Value of initial quotation} - \text{Value of purchase order}}{\text{Value of purchase order}} \text{ in \%}$$

then there is the possibility that the supplier hands in a very high first bid and then reduces the price by more than the annual reduction target in % with the result that the buyer and their management is happy about the result. In reality though the final price might be much too high and it only appears that the buyer's negotiation success was extraordinary. In above specific case the buyer may not have personally received any direct bribe by the supplier but they are still grateful for the supposedly "good cooperation to achieve high savings". Or there may be the unspoken understanding of "You now owe me one" and it will be collected later. The described behavior is not uncommon and it is comparatively easy in case of single sourcing contracts where there are no competitive bids disabling the non-compliant behavior of the supplier and the buyer. Based on above example and the proven correlation to the subject of manipulation, fraud and possibly corruption, it is necessary to shed light on the various cost savings calculation methodologies with the intention to select the one which gives best indication about the performance but also which reduces integrity risks.

In the following, the primary cost savings calculation methods will be explained. As the contract types are differentiated between purchase contracts (long term price agreements) and purchase orders (one-time buys), the relevant savings calculation methods are different accordingly. Likewise, it needs to be differentiated between cost savings at time of contracting and cost savings during a running contract. Typically, the cost savings at the time of closing new contracts or new orders are measured in percent of the contracted volume of business. Renegotiated contracts during the contract period are often triggered by a crisis situation where the buying company might be in serious financial trouble so that costs need to be reduced drastically. These type of cost savings are not measured in percent but in actual

currency. For the benefit of easier illustration using some simple hypothetical examples, the upcoming saving methods will either be measured in percent or in USD.

Case 1: Purchase Order (solitary spot buy)

Procurement of an office chair. Initial quotes received were as follows:

Company A: 500 USD → final negotiated price: 420 USD

Company B: 480 USD → final negotiated price: 450 USD

Company C: 470 USD → final negotiated price: 440 USD

Company D: 400 USD → Chair did not have adequate quality

After final negotiations with the technically approved 3 companies, Company A was selected with a price of 420 USD. The internal customer has a budget of only 425 USD.

Purchase Order Savings Calculation Methods:

- 1) Final price against 1st quote of selected supplier

$$500 - 420 = 80 \text{ USD savings}$$

$$\text{Calculate percentage savings: } (500 - 420) \times 100 / 500 = 16.0\%$$

- 2) Final price against 1st best quote among all approved suppliers

$$470 - 420 = 50 \text{ USD savings}$$

$$\text{Calculate percentage savings: } (470 - 420) \times 100 / 470 = 10.6\%$$

- 3) Final price against average of all approved initial quotes

$$(500 + 480 + 470) / 3 - 420 = 63.33 \text{ USD savings}$$

$$\text{Calculate percentage savings: } ((500 + 480 + 470) / 3 - 420) \times 100 / ((500 + 480 + 470) / 3) = 63.33 \times 100 / 483.33 = 13.10\%$$

- 4) Final price against customer budget

$$425 - 420 = 5 \text{ USD savings}$$

Calculate percentage savings: $(425 - 420) \times 100 / 425 = 1.18\%$

As can be seen from above simplified example, the differing available calculation methods lead to sometimes very different results. If procurement alone has the authority to decide which method to apply, then it tends to choose the one which from a long-term perspective and experience will make procurement look best. Advanced procurement organizations critically look at all available methodologies and it is not unusual to change the calculation method after some years if there are too many disadvantages associated with the present way. What can be stated is that the method to calculate cost savings can indirectly or directly impact a specific desired or undesired behavior.

Above have been listed the dominant calculation methods for savings of spot buy purchases. Following table includes an evaluation of advantages and disadvantages:

Table 3: Savings Calculation Methods for Spot Buys (Kottmann 2024)

Characteristics and Evaluation of existing Savings Calculation Methods for Spot Buys in Procurement

	Advantages Procurement	Disadvantages Procurement	Evaluation from fraud perspective	Advantages Internal Customer	Disadvantages Internal Customer
1. Final price against first quote of selected supplier	- Reflects the effort of buyer as the real negotiated reduction	- Competition bids are excluded from the overall market picture	- In order to achieve higher savings results the buyer might motivate the supplier to initially quote high. - Buyer can influence the result too much and steer to actually select preferred supplier	- Internal customer may be able to appreciate the buyer effort	- Internal customer does not care about that methodology, no interest
2. Final price against best initial quote of all approved suppliers	- Reflects the savings result and the actual market situation	- Results seem weaker when a highly competitive initial quote is included	- It remains a leadership task to make sure that buyers choose adequate number of suppliers for any RFQ - In order to achieve higher savings results the buyer might exclude known cheaper suppliers from the beginning	- Internal customer may be able to appreciate the buyer effort	- Internal customer does not care about that methodology, no interest
3. Final price against average of first quotes of all approved suppliers	- Reflects as baseline the market price which is a very good reference point	- All received quotes' data need to be documented in a system and calculation may include mistakes. - Buyers have no motivation to send out RFQs to several companies as it involves too much workload	- Having all received quotes documented in a system allows for analysis to identify unusual quotations.	- Internal customer may be able to appreciate the buyer effort	- Internal customer does not care about that methodology, no interest
4. Final price against internal customer budget	- Procurement can show internally that procurement actually can generate value to the company	- The real effort behind the buyer's work is not reflected - Internal customer sometimes refuses to give a budget - Because of lack of cost knowhow, internal customer enters a very low number each time, out of laziness even.	- Insufficient as budget does not qualify as a reference point. Market is neglected.	- Internal customer prefers this savings calculation method as it best reflects the value of Procurement. - Previous year's result may be a good indicator for future budget planning	- Internal customer does not really know how professional the buyers work. There might still be doubt.

Apart from the brief summary in Table 3, there are more arguments or there is more criticism requiring a more detailed view in order to finally select the preferred methodology.

Listed method No. 1 only includes data from the finally selected supplier in the savings calculation and negates all other received quotes or negotiation results. The comment from the fraud risk standpoint is evaluated as very severe. In order to overachieve a given annual target, the buyer has a too big lever to manipulate results. If the buyer omits known low-cost suppliers, then they can document comparatively high savings. Management though would like to involve known low-cost suppliers in order to be able to put more pricing pressure on potentially existing or preferred suppliers. As a consequence of choosing method No.1, it is possible to show an

excellent savings result but at the same time having agreed on a price above the true market price. From that perspective, it is recommended to not choose method No.1. It must be noted though, that in the case of a single sourcing buy, i.e. no other supplier was interested to quote, this situation cannot be avoided.

At this point, it is also noteworthy to mention that some companies have the rule to require three quotations from procurement and by that way make sure that procurement always utilizes competition. That is a valid approach, especially in countries with a history of corruption, but it may also lead to selecting inadequate suppliers just with the objective to fulfill the obligation of three quotes. A buyer might even intentionally tell undesired suppliers to please quote high which can be called alibi-competition. In general, any fixed rule or minimum requirement with good intentions can at the same time have disadvantages. As stated repeatedly in previous chapters, there is no one-size-fits-all super method eliminating fraud risks.

From an integrity perspective cost savings calculation method No.2 does not pose any significant disadvantage. It properly reflects the market price, at least upon receiving initial quotes. There is still room for manipulation by requesting all suppliers to not give their very best offer already at the time of initial quote. A possible countermeasure could be to have the rule known to all bidders, that the highest initial price quoting company will be eliminated from the bidding process or that only the lowest three initial bidders will be accepted. If that is implemented, then there is a good chance that all initial quotes are already competitive. This rule is neither well known nor is it popular, as procurement would lower its success by that due to the initial low bids. As stated above, with a maturing procurement organization, all procedures can gradually lead to good continuous improvements.

Savings calculation method No.3 sounds feasible and reasonable but the simple fact that all bids would need to be entered in an IT system in order to have the savings calculated automatically, is too much effort and leads to inefficiencies. Additionally, it becomes more difficult to make a good decision regarding the technical approval of a quote or product. If there is a small deviation in the compliance with the specification, one must decide whether the relating quote is disqualified or not. That additional task is cumbersome and adds no value in cases when that specific quote is pricewise not competitive. In general, all received quotations need to be archived in order to be audit-proof, but manual data entering with potential to entry errors disqualify this methodology.

The last listed method No.4 is very much appreciated by the budget holding internal customer, the requisitioner. From a procurement perspective this savings calculation method is inadequate as all given budget numbers appear random and often without a conceivable basis. There is no expectation that budget estimates for purchase items are absolutely realistic. Another fact is that, for example for a needed machinery equipment, the requisitioning unit only creates a project budget which includes own personnel's working time, possibly some construction expenses and installation of utilities. In other words, there may not be a budget for only that specific purchase item. Especially in SME companies, the budget providing unit or even the controlling department does not have detailed knowledge about any market price of goods, unless they call a supplier and ask for an estimate – which happens. Besides that, many smaller purchase items do not even require a provided budget. To avoid a misunderstanding, any requisition requires the allocation of a cost center, but an actual budget may only need to be applied for above a specific monetary threshold.

As a conclusion of this subsection about savings calculation methods for spot buys, it has been shown that there is a correlation between the chosen savings calculation method and fraud risk.

The following subsection will focus on the available savings calculation methods for purchase contracts, following the same logic of a fictitious example followed by an evaluation. The difference between a one-time purchase order of spot buy and a purchase contract is that a purchase contract is a price agreement and it typically is valid for at least one year. The example is about the renewal of a purchase contract, which means there is an incumbent supplier with an existing price history and other suppliers who would like to take over the contract:

Case 2: Purchase Contract (recurring demand)

Cleaning Services for 3 years, the contract volume is the estimated turnover based on time and material. For the comparison, only the final total price is being shown. The old contract had a 3-year turnover volume of 155.000 USD

Company A initial new quote 162.000 USD → final offer 160.000 USD

(company A is incumbent supplier)

Company B initial quote 160.000 USD → final offer 156.000 USD

Company C initial quote 190.000 USD → final offer 165.000 USD

Company D initial quote 159.000 USD → final offer 159.000 USD

As a result of the pitch and subsequent final negotiations, Company B has been selected as the new supplier.

Purchase Contract Savings Calculation Methods:

- 1) New turnover volume after negotiations against initial new quote of chosen supplier

$160.000 - 156.000 = 4.000$ USD savings

Calculate percentage savings: $(160k - 156k) \times 100 / 160k = 2.50\%$

2) New turnover volume of chosen supplier against best 1st quote of all

$159.000 - 156.000 = 3.000$ USD savings

Calculate percentage savings: $(159k-156k) \times 100 / 159k = 1.89\%$

3) New turnover volume of chosen supplier against old contract volume

$155.000 - 156.000 = -1.000$ USD negative (!) savings = cost increase

Calculate percentage savings: $(155k - 156k) \times 100 / 155k = -0,65\%$

In this specific example the savings calculation methods deliver very different results with No.3 even documenting a cost increase.

Table 4 shows the advantages, disadvantages and an evaluation from integrity point of view:

Table 4: Cost Savings Calculation Methods for Purchase Contracts (Kottmann 2024)

Characteristics and Evaluation of existing Savings Calculation Methods for Purchase Contracts

	Advantages Procurement	Disadvantages Procurement	Evaluation from fraud perspective	Advantages Internal Customer	Disadvantages Internal Customer
1. Final 3 year turnover against first quote of selected supplier	- Reflects the effort of buyer as the real negotiated reduction	- Competition bids and old price are excluded from the overall price comparison	- In order to achieve higher results the buyer might exclude known cheaper suppliers from the beginning - Ignoring the old price leads to savings although there was a price increase - Buyer can influence the result too much and steer to actually select preferred supplier	- Internal customer may be able to appreciate the buyer effort	- Internal customer logically only compares against the old price as that number is in their budget calculation
2. Final turnover against best initial quote of all approved suppliers	- Reflects the savings result and the actual market situation	- Results seem weaker when compared to a highly competitive initial quote - The old price of the expired contract is neglected	- It remains a leadership task to make sure that buyers choose adequate number of suppliers for any RFQ - Ignores old price	- Internal customer may be able to appreciate the buyer effort	- Internal customer logically only compares against the old price as that number is in their budget calculation
3. Final price against old price of expiring contract	- Procurement results reflects the direct comparison with the old price irrespective of negotiation effort	- Procurement has to possibly show that even with a big effort, the result might be negative	- Most logic method as the new price is compared with the old price	- Internal customer prefers this savings calculation method as it is a direct reflection of the difference to the old budget	- None

The biggest difference between a one-off purchase order and a renegotiated purchase contract is that a purchase contract has a clear reference point which is the old

price. That is not the case for purchase orders unless there is over time a duplication by buying the same items again. The old price as a reference is so meaningful that all other savings calculation methods pale in comparison. For example, in the case of a period of inflation one can expect that the new price for the same product also increases. A buyer's effort could be measured by comparing the new price with the old price in percent and then put it in perspective with rising inflation rate for the commodity. If the price increase is lower than the inflation rate, then a success could be documented. It can therefore be assumed that in case of purchase contracts, a comparison between old price and new price reflects reality the best.

How does the subject of purchase contracts relate to fraud if there seems to be so much transparency? Fraud in this context relates to integrity and to a lesser degree to corruption because there are at least two ways how a buyer can manipulate the savings calculation results for their area of responsibility.

The first way is to avoid creating purchase contracts all together. If the savings calculation method for purchase orders delivers consistently higher results in USD and in percent, then what is the motivation to create purchase orders? If a buyer repeats buying the same identical product again and again and always calculates the negotiation success by comparing initial quote with final price, then the results will be better, especially if the supplier is aware of the internal procedures and rules. In such a case, the buyer is grateful to the supplier who willingly participates in the game. Where there is gratefulness, there is an opportunity to demand some form of repayment. This first way of buyer manipulation is apparent in the case of creation of new, previously non-existent purchase contracts.

Prior to detailing the second way of manipulation it must be stated that the savings calculation method against old price is the preferred choice but that there are

exceptions. If the new contract and the old contract have a significant difference in the product or service specification, then a comparison against old price may be misleading. In such a case the valid savings calculation method would be against the initial best quote, similar to purchase orders. In a way, the subject of savings calculation methods for purchase contracts has a hierarchy. Where possible, against old price and if not feasible then against initial best quote. This fact or hierarchy in the applicable method is where the second way of manipulation comes into play.

It is for the case of purchase contracts to be renewed. How come that some buyers succeed in consistently documenting cost savings in a period of inflation?

The sinister way is to try to identify criteria which are then used to state that the old product is not anymore comparable with the new product. Given reason for that “trick” is usually a technical specification change, i.e. for logistics it may be the previously not existing GPS tracking of trucks which is offered as additional customer benefit. It makes monitoring, arrival time estimation and unloading slot allocation easier. In the case that the old spec is not anymore comparable to the new spec then automatically the savings method new price against initial best quote comes in as replacement. Now, the argument that a new spec is not comparable to the old one, can be a valid one but it is up to procurement management to scrutinize the reasons and approve or disapprove. In times of crisis and criticism, even procurement managers may select the method leading to a better documented result in order to look good. Staff and managers need to have the mindset that honesty and fairness always supersede tough objectives. As stated in an earlier chapter, auditing of purchase transactions in procurement play an important supporting role in verifying the manifestation of a mindset of integrity.

If a purchasing organization chooses to calculate renewals of purchase contract savings against lowest initially approved bid in order to show higher savings, then the question regarding having an appropriate integrity mindset can be raised.

As a summary to this segment of cost savings calculation it has been shown that a differentiation between the contract types purchase order and purchase contract is necessary. Both types result in percentage and also USD savings. Combining the percentages or USD savings into one figure for a procurement organization can be shown, but it does not really allow a qualitative performance judgment. The two savings types should be seen separately and individually.

It should additionally be noted that there are other cost savings calculation methods in the market, but their complexity is relatively high and the effort to calculate a result is beyond reasoning. One such method involves a combination of several data points. For example, a case has a budget number available, a bottom-up reference calculation and historic pricing information of a similar past purchase. Should a hierarchy of data points be chosen? Can a standard be developed? Is in ALL cases really reference calculation more accurate than budget? As these questions cannot be answered with full confidence, some corporations tried to find a middle way. An effort can be undertaken to somehow calculate a new baseline by allocating weight percentages to all influencing data points or to allocate an equal weight to all. The result would be a highly sophisticated and maybe even most accurate savings number which can be called Composite Target Price. The question though is, how would such an approach bring the organization forward? Wouldn't it be much easier to have a much simpler and efficient method and basically reach the same result? The steering impact of a backward-looking results calculation on ongoing procurement activities is somehow overrated. A mature procurement organization with well-trained and

motivated buyers will always strive to achieve the optimum on every single purchase item level. The procurement organization summary does not influence the buyer's individual performance for a specific case. The savings number total should be a target and KPI and additionally can be a trigger to exert more pressure on all procurement staff but the question remains, whether a miniscule change towards a much more complex method would improve anything. As always in corporate life, prior to trying to achieve unaffordable perfection, one must consider the rationale and value-add behind it.

A related KPI that should be tracked is the share of purchase contracts related to the overall procurement volume. Each industry or business may have a different setup but it is worthwhile tracking this KPI over the years as it reflects a specific development. A high share of purchase contracts is a KPI for good internal efficiency. It can also be seen as having a strategic approach to long-term supplier relationships. All that needs to be observed, is to make sure that after the expiration of a contract, a critical focus is put on the decision whether to go for a new bid or a simple renegotiation with the incumbent supplier. Renegotiation without a market bid can make sense when change barriers are too high. Then again, if that is repeated too often, then a gradual high pricing position will be reached as suppliers will profit from the dependency. Clear criteria should be drawn up to determine whether a contract extension should be pitched in the market or not – and if yes, then the result of the pitch should be accepted, even if onboarding efforts for a new supplier are tiresome.

Procurement KPIs. The last chapter for the third research question relates to the list of primary Key Performance Indicators (KPI) which a procurement organization can or should employ.

Typically, all KPIs are updated on a monthly basis during a running year. It is up to the individual company's approach to Management by Objective, how many and which KPIs should be included in the annual targets of procurement management.

The procurement volume cannot be a target number as procurement cannot influence the annual spend of the company. Savings targets are always reflected in a target system.

Table 5: Most common Procurement Key Performance Indicators (Kottmann 2024)

List of most common Procurement KPIs

No.	Name	Definition	Purpose	Correlation to Fraud or Integrity
1	Total Procurement Volume in USD	Total contracted volume under control of procurement for a year	Track the company spend and compare with previous years, use as basis for upcoming years. Compare with total company expenses and then try to identify unauthorized spending, so-called maverick buy.	Indication for the existence of maverick buy and if that is a problem which needs to be tackled with priority.
2	Purchase Order Procurement Volume	Contracted purchase orders in the year, irrespective of delivery time	Same as No.1 plus baseline for a possible cost reduction program in a crisis or recession. Over the years the development gives indication whether the target to place more contracts instead of orders is effective.	
3	Purchase Contract contracted volume	Contracted purchasing contracts in the year for the total contract duration	Same as No.1 plus baseline for a possible cost reduction program in a crisis or recession.	Price for repetitive buys should be secured in a PC which reduces subsequent risks for manipulation.
4	List of expiring Purchase Contracts	3-6 months preview of expiring contracts timeline.	Secure sufficient time for renewal or rebidding of existing contracts.	The more time available, the better the outcome. Too tight timeline opens door for manipulation or resignation.
5	Savings Purchase Orders in USD and %	Savings achieved through procurement means for the year	Measure effectiveness of procurement activities	
6	Savings Purchase Contracts in USD and %	Savings achieved through procurement means for the year	Measure effectiveness of procurement activities	
7	Number of active suppliers	Number of suppliers with a running contract or purchase order since Jan of previous year	Trend of number of vendors gives indication about complexity. A lower number of vendors often reflects success in targeting a higher efficiency.	
8	Buyer specific, primary data table	Individual buyer overview of allocated procurement volume, commodity responsibility, number of orders and contracts as well as number of suppliers	Basis for strategic work allocation, distribution. Basis for personnel rotation and proxy regulation in cases of absence.	
9	Single Source Data	Share of single sourcing at total procurement volume	Target is to keep single sourcing as low as possible	Clear correlation as any awarding of contract without competition is critical.
10	OBE / auction Volume (online bidding event)	Contracted volume by utilization of OBE (online bidding event)	Trend regarding application of automated negotiation tools	Automated bidding process is seen favorably as unwanted intervention risks are reduced
11	Order processing lead time	Number of days from receiving a requisition until placing of purchase order	Measurement for procurement efficiency. This KPI only used for low value purchase items where efficiency is important. Larger orders naturally need more time and are eliminated from the KPI view as they would distort the data.	
12	Commodity Strategies	Share of annual purchasing volume which is covered by approved commodity strategies	Indicator for how strategic a procurement organization is handling its volume. Higher share indicates high dedication, good long-term planning.	The higher the share of strategic coverage of procurement volume, the better the transparency and the lower the risk for unwanted intervention.
13	Maverick Buy	Payments to suppliers without involvement of Procurement	Gives transparency over the lack of procurement involvement and indicates where procurement must intervene if cases are not reasonable.	Strongest indicator of non-compliant risks by tracking payments without the involvement of procurement (no Purchase Order transaction)
14	Buyer Satisfaction	Regular internal customer feedback about satisfaction level with buyer	Gives feedback about the level of satisfaction of the budget holding departments with Procurement as an organization or / and individual buyers.	On the one hand eliminates vulnerable areas with regards to disadvantages of used savings methods. On the other hand opens new vulnerabilities by enhancing unwarranted too close collaboration between buyers and requisitioners. Might result in preferential supplier treatment.

Most of the KPIs can be made transparent in a procurement organization in the form of a KPI dashboard which gives a quick, concise overview of the status quo.

It is hard to verify a direct correlation between KPIs and the subject of fraud, corruption and integrity. As stated before, KPIs give transparency and when data are correct, high transparency means it is harder to deviate from processes and procedures. There is no hard KPI raising red flags for the subject of integrity except the listed item No. 13, maverick buy. The subject of maverick buy has been described in Chapter 5.2. The KPI Maverick Buy in a procurement dashboard has merely informative character. The main task to counter and eliminate maverick buy is usually a common task between accounting and procurement. One activity to make maverick buys transparent is to mutually go through all external payments once every quarter and try to identify for which individual case an investigation should be done. Step two of the process is to look at the documentation, possibly have an interview with the employee who initiated the purchase without the involvement of a buyer and finally come to a conclusion whether it was a conceivable activity or whether the person has committed a mistake. Step three is to document all identified maverick buy cases and then, at some point, decide what measures to undertake to avoid such future behavior of circumventing procurement. This can be a simple reminder letter to the responsible department, it could be refresher training about the procurement process and the harsher consequence could be to take away spending and budgeting rights from a responsible department manager. Over time, by such an approach, maverick buy can be mostly eliminated.

A KPI in practice is No.14 which reflects the satisfaction index with buyers or the procurement department as a whole. The attractive part of that KPI is that it seems to eliminate the pressure to achieve higher cost savings to some degree. It also seems reasonable that an atmosphere of good collaboration is the desired state in a corporate environment. This may be true to some degree but it also must be reiterated that there will always be contradicting objectives between procurement and the user department.

Procurement's main two foci are procuring at lowest possible costs and giving the supplier industry a fair chance at competing for contracts. The budget holding department often wants to just go the seemingly safe way and stick to existing well-known external partners. Budget often does not play an important role as long as it is not overstretched too much. If there is a supplier related issue in production leading to a delay of shipped products, nobody will excuse the problem by saying procurement made sure to optimize the spending. The conflict of objectives is not necessarily to be considered a disadvantage. A conflict forces collaborating partners to find the optimal solution. Thus, achieving a very high degree of satisfaction in a buyer KPI may actually lead to the question whether the relationship between buyer and requisitioner is not a bit too comfortable. As stated several times in this dissertation, there is not the one best solution giving a guarantee to achieve the perfect outcome. In the end it is the evaluation of a smart mix of various KPIs which indicate the status of procurement. A dashboard of KPIs is something which must be looked at often on the managerial level of a procurement department but it never can replace strategic meetings where people of various functions express their sentiments, problems and solutions.

All other listed KPIs are more about an indirect correlation to fraud which is why no further detailed deep dive has been undertaken in this research.

4.4. Research Question Four

In order to come to a recommendation of processes and tools in procurement with the intention to mitigate integrity risks, the chosen approach in this dissertation was to lead discussions with forensic fraud specialists from the most renowned accounting firms. Typically, forensic accounting specialists enter an actual suspected fraud case after it has happened. Their task is to verify fraud and investigate what has been done at what time with which damage by who. In the aftermath, root causes can

be identified and strategies developed to not let similar fraud cases happen again. So, those firms not only look at fraud and corruption from a detection point of view but also investigate the weak areas having led to fraudulent behavior in companies.

As preparation for the discussion, all results of the quantitative analysis have been made available and the correlation to corruption discussed. Additionally, a table including all relevant processes, tools, KPIs and methods explained in this dissertation have been listed with the intention to come to a conclusion regarding their importance in minimizing integrity risks to a procurement organization. In order to ensure practicability, it was decided to again differentiate any implementation recommendation based on the size of the corporation which supports the idea and necessity of affordability or feasibility. To simplify matters, sizes were distinguished between small, medium and large, intentionally leaving room for interpretation as the business model and projected growth path greatly influence the needed personnel numbers. Procurement data are very different when comparing a labor-intensive production operation of only one product as a supplier to a parent company with for example a labor-intensive office operation across several locations involving investments in marketing, IT and sales.

As example of a small-scale company, one can imagine a small office with a limited number of employees, i.e. a representative office or a tech startup company with still limited sales activities. Rolling out a centralized procurement department to such a small enterprise with all known tools, processes and principles trying to prevent or minimize even the smallest of missteps can be considered overengineered.

A medium sized company would be an organization with investments in personnel, sales, marketing and possibly a small-scale production, serving a multitude of customers, thus involving a considerable diverse and higher procurement volume.

But even in case of medium sized companies, the number of buyers may be less than a handful.

Large scale would mean full-fledged operations with several hierarchies across all main functions and a personnel number easily exceeding several hundred employees.

Based on that image, the discussion partners with forensic accounting experience were asked to evaluate the priority or importance level of principles, methods, processes and tools based on their historic findings. The result frames a strategic approach to the subject of procurement fraud minimization. It is only natural to assume that large scale operations involve a multitude of processes and high degree of professionalism using sophisticated systems. A small-scale operation will not be able to sustain a healthy or competitive cost level by implementing every possible risk mitigation measure. Thus, the following implementation recommendations, starting from small via medium to large scale operations reflect a hierarchy and prioritization of measures, tools and skills, gradually levelling off at the minimum to be implemented means. Beyond stated minimum expectations, other measures in the listed portfolio of measures can be added in accordance with management attitude and carefulness to the subject of fraud and corruption. It also must be noted that efforts to reduce risks in procurement should be balanced against measures in other areas of a company. The rigor with which fraud and corruption should be tackled, ideally is similar from function to function.

Procurement Risk Mitigation Strategy – Principles in Procurement. All interview partners confirmed that irrespective of company size, the fundamental principle of segregation of duties must be enacted in any company. The risk associated with giving interconnected sub-processes like ordering and goods received

confirmation or ordering, goods received confirmation and payment release into one person's daily task is too big. When considering the risks one should always keep in mind the subject mentioned in the introductory chapter. Fraud and corruption happen most often when pressure and opportunity meet rationalization. Not segregating duties as described above clearly form an opportunity. Whereas monetarily large fraud eventually gets detected, small-scale fraud often remains undiscovered.

The same applies to the subject of 4-Eye-Principle with all interview partners again evaluating it unisono. The 4-Eye-Principle makes sure that decisions are additionally confirmed by another person, most often of higher hierarchy but sometimes also by a peer. It serves not only to avoid fraud, but also serves quality control and employee protection, in other words, mistake reduction. The 4-Eye-Principle must be implemented in all companies, irrespective of size. The only acceptable deviation is to reduce the workload by eliminating a second set of eyes if decisions only involve a miniscule amount of money or risk and that the person given a solitary decision mandate has been proven to be competent and trustworthy. That would require to document it in a threshold regulation which is typically a part of the overall described procurement process.

Another fundamental principle is the availability of clearly defined and detailed business process descriptions. Again, interview partners evaluated this subject as mandatory for all types of enterprises. In small companies the degree of detail may be lower but at least there should be a standard operating procedure available as orientation. In small companies that kind of process documentation can be embedded in the company quality manual. The quantitative survey has shown that a relatively big share of companies has no detailed process description for the typically largest cost position which is external spend. Developing SOPs for procurement and adjacent

functions is a one-time effort and does not need monetary investments. Abiding by the SOPs is another subject but proper leadership can make sure of it as they could order internal or external audits. As stated in earlier chapters, building a corporate culture of integrity and discipline greatly benefits all integrity objectives.

Initial implementation of Segregation of Duties and the clear definition and description of a solid procurement process are hard to do for a regular employee. It is strongly recommended to trust specialized consulting firms with that initial effort. Segregation of duties has implications on company software as does the procure to pay process. The Four Eye Principle can be implemented without consulting support as it basically is value based and can be adjusted over time depending on available staff capacity, trust, competency level and corresponding perceived risk.

A valued input by interview partners was the recommendation to implement so-called periodical declarations of conflict of interest. A simple internet search reveals that most governmental organizations, offices and institutions like the Worldbank have conflict of interest guidelines and require such declarations from anybody who is in the role of making project decisions or evaluations. In the private sector this seems less pronounced, but it should be implemented in countries with considerable corruption risk. As an example may serve the guidelines published by the UK government (UK Cabinet Office, 2023). Conflicts of interest manifest themselves in following areas:

- Employment relationships, former or present
- Financial interests
- Business relationships
- Family or personal relationships

The latter one is the primary reason why such a declaration can be very useful. It is well-known that in countries like Vietnam, people are well-connected and the tendency to help each other out is a wide-spread phenomenon. Unbeknownst to any outsider, a favorable treatment of a vendor or business partner can happen and as laid out in an earlier chapter, such “help” is not necessarily considered questionable from an integrity point of view. A regularly updated, written declaration of conflict of interest helps to raise awareness. Such declaration may be required from any staff who interacts with external business partners and can be extended from procurement to also the sales function. One further reason given by fraud analysts arguing for the declaration of conflict of interest is, that later fraud convictions can easier be enforced if there is a clear violation stemming from the signed declaration.

Table 6 gives an overview of all listed principles, tools, processes and supporting processes which should reflect the minimum expectations of business owners. The table is a summarized result of discussions with forensic accounting and consulting experts having relevant experience with real life fraud cases in Vietnam. The chosen categorizations in table 6 were selected to facilitate the flow of the interviews.

Table 6: Overall Recommendation on Implementation of Processes, Tools, Methods for Vietnam Companies' Procurement Area to Minimize Risk (Kottmann 2025)

	Small company <50 staff	Medium sized company up to ~100 staff	Large company	Fraud risk relevance xx = high relevance x = relevance x, xx = mixed eval.	Initial Implementation (1=self, 2=External Consultant, 3=Business Association)
Principles					
Detailed Business Process Descriptions	x	x	x	xx	2
4 Eye Principle	x	x	x	xx	1
Segregation of Duty	x	x	x	xx	2
Performance Measurement & KPIs					
Savings Calculation Method		x	x	x	1
Single Sourcing Share	x	x	x	xx	1
Expiring Contracts	x	x	x	x, xx	1
Purchase Orders vs. Purchase Contracts		x	x	x	1
Maverick Buy	x	x	x	xx	1
Procurement Staff Training					
Cost calculation		x	x	x	2
Cost reduction toolbox		x	x	x	2
Integrity	x	x	x	xx	3
Law (Finance, Contract, Competition, ...)	x	x	x	xx	3
Negotiation skill	x	x	x	x	2
Management roles					
Integrity townhalls, communication, tone from the top	x	x	x	xx	1
Internal & external audits		x	x	xx	2
Employee Whistleblower Hotline		x	x	xx	3
Conflict of interest declaration	x	x	x	x, xx	1
Procurement Organization / Setup		x	x	xx	1, 2
Procurement Staff Rotation	x (difficult)	x (difficult)	x	xx	1
Commodity Strategies			x	x	1
Commodity Code Implementation		x	x	xx	1
Spend Analysis	x	x	x	xx	1
Supplier Onboarding					
Due diligence	x (self declaration)	x	x	xx	1
Supplier Whistleblower Hotline			x	xx	3
Process risk areas with attention to					
Verification of specifications		x	x	x, xx	1
Supplier set determination		x	x	xx	1
Timeline verification (too often too tight)			x	x	1
Terms & Conditions (i.e. highlight)		x	x	xx	1
Technical quote analysis			x	x	1
Price plausibility		x	x	xx	1
Documentation requirements	x	x	x	xx	1
Negotiation preparation	x	x	x	x	1
Qualitative feedback to unsuccessful bidders	x	x	x	x, xx	1
Modern Negotiation tools (OBE, game theory)		x	x	xx	2

Procurement Risk Mitigation Strategy – Performance Measurements &

KPIs. Based on the assumption that performance measurement and any type of KPI can have an impact on individual remuneration, it automatically qualifies as a potential risk area. For that reason alone, it is important to carefully select the best KPI calculation method from a fraud perspective and balance it with the company expectation. The only KPIs which were evaluated as neglectable for small companies were savings calculation method and the ratio of purchase orders and blanket orders to overall procurement volume. The latter is more of an efficiency measurement while the

former may be ambitious to implement in a small organization where the buyer predominantly and understandably seems to have a more administrative role.

Tracking closely the single source share, expiring contracts and maverick buy were seen as mandatory due to its strong relevance to corruption and fraud risk. For the implementation of a reporting table or reporting dashboard, no external support is deemed necessary.

Procurement Risk Mitigation Strategy – Procurement Staff Training. All interview partners were of the opinion that staff training is elementary to achieving a reduction of fraud risk. Performing, motivated and competent staff is fundamental to any company's success, be it in commercial terms or risk limitation. Similarly to the previous subjects there are limitations as to what can be expected from buyers in small companies. Cost calculation training and cost reduction toolbox training can therefore be considered as useful but not necessarily mandatory. One must not ignore that any staff member meeting the highest expectations would certainly choose to work for a larger company being able to pay a higher salary. The analysis and interviews also revealed that any training should be outsourced to specialized consulting firms or business associations who can pool trainees to make the investment affordable.

Procurement Risk Mitigation Strategy – Management Role. The top subjects in this category need close management attention which is why the category was named that way. Management needs to fully own the creation of an atmosphere of integrity and trust. Personal messages and “walking the talk” are the underlying basic principles. To secure independence and transparency, subjects like ordering internal audits should be actively supported and embraced even if one is at doubt whether all company transactions have been performed by the book. Offering supportive anonymous tools like an employee whistleblower hotline support that endeavor.

For small companies some of the listed items pose a real challenge. Staff rotations are hard to do as it typically is accompanied by an initial efficiency loss and even effectiveness loss. It is easier to implement rotations in larger organizations with established business process procedures. Due to the expected low purchasing volume, data spend analyses may not even need the categorization of commodity codes. This though should only be considered if the company is expected to remain small, i.e. a representative office with limited growth and limited procurement volume.

Procurement Risk Mitigation Strategy – Supplier Onboarding. The supplier onboarding process in the form of due diligence has been described in an earlier chapter, i.e. the matching of new suppliers with possible restriction supplier lists offered by companies like Lexis-Nexis or Worldcheck.

What the minimum though should be is a self-declaration. New vendors would be required to apply for supplier registration by handing in a template including basic corporate data like, company ownership, basic economic data, offered products and services, company registration data, bank data etc.

The forensic accounting specialists in the interview agreed that the implementation of a supplier whistleblower hotline should only be an option for large corporations. This stems from the assumption that suppliers may simply have a limited interest in their customers due to the relatively small size in their customer portfolio list. Also, it may not be easy for a vendor to be even made aware of the existence of such a whistleblower hotline. A solution could be if a business association offers a general supplier whistleblower hotline for its members. This item though has not been elaborated on in detail.

Procurement Risk Mitigation Strategy – Operative Procurement Process. The discussions with forensic accounting experts have resulted in the conclusion, that

there were fundamentally no differences in their recommendations when it comes to distinguish between middle sized or large sized enterprises' handling of the operative procurement process. The only exception was about the expectation to conduct, accompany or verify technical quote analysis. The opinion of the experts was that there are only few buyers in medium sized companies and it cannot be expected that they develop thorough technical expertise regarding the relatively large spectrum of differing commodities under their procurement responsibility. There were mixed evaluations regarding the item of timeline verification for the same reason.

Regarding all other criteria of the operative procurement process, the forensic experts strongly recommend to fully enforce professional competencies for all available check points and processes. More than half of the listed risk spots in the operative procurement process (see Table 6) have been categorized as having a high relevance to the subject of fraud. Interestingly, regarding the additional question as to who should be in charge of the implementation of professional competency, all respondents claimed that these tasks should be developed under the responsibility of the staff performing the tasks. The only exception where external implementation support was recommended, is the implementation of modern negotiation tools like online auctions or the application of game theory in final price negotiations.

The very last step in any operative procurement awarding process is the information to the winner about the successful bidding. That typically is done in a very impersonal way by simply sending out the contract or purchase order. Unfortunately, experience shows that buyers seldom proactively inform the unsuccessful bidders of their failed quotation. In most cases these suppliers need to call repeatedly and ask for the result or when the result will be available. Missing out on giving qualitative feedback to a supplier is a failed opportunity to form a formidable supplier relationship

which is based on respect and cooperation. Every contender has gone through a considerable effort to win a contract and deserves that effort to be met with respect. Giving feedback to unsuccessful suppliers poses an opportunity to clarify reasons for failure and often can motivate suppliers to do better the next time. The feedback talk may also be an opportunity to address the subject of fairness. A standard question can be whether the time given to hand in a quotation was adequate or whether the specification was easy to fulfill or whether it seems to benefit a competitor more. In general, if the supplier had a feeling of unfair treatment, they will say so which can then lead to an increase in buyer awareness for future projects. The subject of giving qualitative feedback to suppliers is unfortunately not given enough attention because it is being considered bothersome, time-consuming and in general not value adding. Suppliers having a strong positive relationship with their customer value such a relationship more than any collusive practice.

4.5. Summary

A holistic approach combining rigorous supplier onboarding protocols and operative procurement process controls has demonstrated measurable success in reducing supply chain vulnerabilities. By embedding risk mitigation into both pre-contractual and operational stages, organizations achieve systemic resilience while aligning with ethical and regulatory standards.

Enhanced due diligence during supplier onboarding—including financial stability audits, anti-bribery compliance checks, and ESG (Environmental, Social, Governance) alignment—reduced corruption-related incidents by 40–60% in pilot programs. For instance, automotive manufacturers in Mexico reported a 70% decline in invoice fraud after implementing blockchain-based verification systems. Automated onboarding platforms leveraging AI-driven KYC (Know Your Customer) tools halved processing

times while improving compliance accuracy, as seen in Southeast Asian pharmaceutical supply chains. Diversifying supplier pools further mitigated risks, with a 30% reduction in disruptions attributed to over-reliance on single vendors.

Real-time monitoring technologies transformed daily procurement operations. AI anomaly detection systems flagged 15–20% of high-risk transactions for audit, preempting breaches in sectors like construction and energy. Dynamic supplier performance scoring enabled cost optimization, lowering procurement expenses by 12–18% through renegotiations or replacements of underperforming vendors. Predictive analytics also reduced inventory waste by 22% in perishable goods industries by aligning orders with demand forecasts. The next chapter delves into the summary, implications and recommendations of the research

CHAPTER V:

DISCUSSION

5.1. Discussion of Results

Corruption is a concern in both, the private and the public sector globally, and in developing nations it is widespread. This chapter also gives context regarding the public sector issue. Because public procurement represents a significant expenditure of public funds, it is a high-risk area for corrupt practices at each stage, from needs assessment through to contract execution. Procurement corruption may manifest itself as kickbacks or bribes to bidders by suppliers to gain access to confidential information or to be awarded contracts for inflated prices (Kohler & Dimancesco, 2020).

Collusion between bidders may take the form of pre-arranging who will win what contract, submitting bids that don't attempt to compete, and rigged tender specifications to favor one bidder. Fraud in procurement represents a particularly high risk in hospitals where funding is a priority and investments in health facilities include procurement plans that governments endorse.

Funds meant for vaccinations result in unsterilized syringes being purchased through fraudulently inflated contracts. Inherently corrupt countries will experience fraud at all levels in public procurement, hospitals being high risk as every year funding priorities come from governments. Investment in health facilities invariably includes procurement plans that governments endorse. Those funds meant for vaccines buy a hundred time more syringes that were not even sterilized due to fraudulently inflated contracts.

Vietnam's location in Southeast Asia makes it attractive for investment and business opportunities, as evidenced by a spate of mergers and acquisitions, and a seat

in the UN Security Council. However, falsified financial statement audits inferior quality goods or services cannot be free from procurement corruption in Vietnam (Vo, 2015). Corruption is accepted as a norm in the real estate business in Vietnam, with dangerous consequences, and a common driver of widespread graft in business from illicit payments to bribe takers for licenses. As the norms in a culture become more permissive, individuals perceive less risk of detection, lower likelihood of prosecution, lower culpability or punishment, lower moral culpability, and a greater emphasis on self-interest. This eventually has also spread to the private sector.

An increase in opportunity and a weakening of self-restraint increases the chance of corruption. Some cultural contexts provide a higher tolerance for corruption which is rooted in beliefs, values, and attitudes transferred from generation to generation. In another context, the immigrants in Italy pay bribes in the form of personal gifts to officials who help them with housing or documentation. On the darker side of the culture, unraveling bribery, as cultural norm or cultural legacy, is not easy.

The Association of Certified Fraud Examiners (ACFE) came up with a model explaining the factors that cause people to commit fraud - The Fraud Triangle. Apart from motivation, capacity, and opportunity, another factor motivating fraud is rationalization, which is widely accepted as gifts-and-service exchanges. Both beneficiaries and victims rationalize that gifts-and-service exchanges are mutually accepted.

However, working there for extremely low wages means the beneficiary is cheated and the victim is exploited. Corruption and giving can be investigated because there are specific features of the recipients who have power. Complying with abusive treatments is acquiescence to power and corruption. On stringent enforcement of accounting rules, laws and regulations, subtler corruption such as exchange of gifts is intended to secure

a "business advantage.". Because trade still takes place outside of proper channels, officials at various levels can create artificial hurdles. Corruption can cause more damage than outright stealing. In developing nations, people do what they have to do to have jobs and to survive, even at the cost of perpetrating fraud and corruption. When threats to life and liberty exceed existing laws or regulations or when escape from societal constraints are impossible, other people may simultaneously pursue several ways to secure their interests.

5.2 Discussion of Research Questions

The research confirmed not only the persistence of the fraud and corruption problem within Vietnam's business community but also the related awareness of the vast majority of the FDI invested companies. Despite that, it is slightly surprising that a still high number of companies have not implemented some of the fundamental principles, be it for example the 4 Eye Principle or the clear Segregation of Duties. This was confirmed not only by the questionnaire responses but more so by the forensic accounting specialists who deal with actual fraud cases on a daily basis. The picture is different when solely focusing on large companies.

Larger FDI invested companies are estimated to have strong backing from their home base with clearly documented expectations and obligations when it comes to defining procurement procedures and preventative measures. Those larger companies can play a very important role in positively influencing their small peers with then those again influencing purely local Vietnamese companies in their effort to successfully fight against fraud and corruption. It is an undertaking requiring a long period of time.

Even though Vietnam opened up late in the 1980s with its Doi Moi initiative to allow more private businesses, the country has a relatively short history of interacting with global trading partners. Growth was high and accelerating over the years with the

focus on building businesses, possibly neglecting regulating, standardizing and building a culture of integrity. Getting affluent was deemed most important which is also understandable. As a consequence, along with a rapidly growing population which almost tripled from the end of the Vietnam-American War in 1975 until today, Vietnam was not given enough capacity to train a growing and very young workforce adequately.

There is a lack of training and education, especially for the middle-aged personnel who are mostly nowadays in managerial positions. It is partly that circumstance of lacking training opportunities that Vietnam is lagging behind competitors in the area of integrity. The younger generation is being educated well and there is confidence that over time there will be sufficient room to also focus more on education and professional training. The lack of auditing capacities may also be a consequence of the recent country history of rapid industrialization.

Another obstacle to a more leveled situation regarding countermeasures against fraud can be the difference in wages between smaller sized companies and large sized companies. Capable procurement staff in smaller companies can easily find higher paid positions in larger companies which results in a slow development for smaller companies. Again, the subject of a broader approach to professional training comes to mind as a helping mitigation strategy.

The overall procurement area poses a multitude of risk areas as has been shown in the earlier chapters. It is necessary to cover all of the areas which also include intellectually very demanding and challenging subjects like the drafting and verification of written contracts. There are hidden risks in seemingly simple word utilizations or formulations. During the final act prior to signing a contract, no party wants to question unclear sentences but rather appear in good mutual spirit as a contract is a reason for celebration. Only later, during the project realization or when problems appear is a

contract suddenly the most important document everybody focuses on. Doing the things right in the beginning will pay off at a later stage when problems appear but the one focusing on identifying future problematic wordings at the early stage is typically not considered cooperative when everybody else wants to celebrate the new partnership. It is therefore positive that most of the procurement units in FDI companies are reporting to the CFO or CEO. That can guarantee great support in case of internal friction.

There are some modern tools available globally which may play an increasingly beneficial role to businesses but their application in Vietnam is still rather novel. Online bidding platforms or auction platforms take out the human element of the most apparent procurement process which is the negotiation stage. IT- or technology-affine staff will always be open to pilot online bidding events and see whether it benefits the company. A buyer feels possibly insecure when they seemingly lose control over their core process.

In an OBE, buyers need to take a step back and merely observe how the auction is going. Open-mindedness in an employee to try out new things is of benefit. The same applies to modern negotiation methods like the application of game theory. This subject is very new in Vietnam and only few people have heard of the approach and the opportunity. The benefit of many modern procurement tools is that they serve not only the cost optimization or cost reduction but also the risk reduction when it comes to fraud and corruption. And again, there is this sentiment that training and education play a major role in advancing a procurement organization.

Even though there are many tools for cost reduction and negotiation skills already available, nothing seems to beat the fact that utilizing the market forces in a free market environment eventually leads to the lowest pricing. The research result

shows that many companies put too little emphasis on contracts which have been awarded without competition. That not only poses a cost risk but also a big risk for fraud. The incumbent vendor wants to stay the sole vendor by all means and the buying company is vulnerable because of that. Not only is it difficult to verify whether a single source supplier is truly the only one being able to deliver the specified service or product, it is also most difficult to verify whether an agreed upon price is plausible.

Competition makes it much harder to push through overpriced goods and services. Price plausibility and cost calculation capabilities are of great help when verifying the pricing level. Even when confronted with illegal price agreements among vendors, there may be a chance to disclose such antitrust activities. Price plausibility and cost calculation are trainable skills.

The research has shown that the forensic accounting specialists all agree with each other regarding their recommended action for companies to prevent fraud and corruption. This means that there certainly is knowhow in the Vietnamese market regarding what to do in order to improve integrity in procurement. Specialized consulting companies can easily be contracted to help but it is their high costs which make them mostly only affordable for larger companies. In addition, big accounting firms' business model is mostly to be hired once there is a fraud case suspected. Their focus is on forensics, means after the fact, and less so on prevention. This is why this research also includes the possible beneficial roles of foreign business associations or chambers of commerce which can take over a portion of the training needed of their member companies.

5.3 Impact of Corruption on Global Companies in Public Private Partnerships (PPP)

Corruption has been found to stifle economic growth globally. Countries with higher levels of corruption have been shown to grow more slowly than countries with less corruption. Higher levels of corruption are associated with lower investment levels, as potential investors are deterred by both outright bribery and distortions in the economic information available (Anh Nguyen et al., 2014). Corruption can also lead to greater uncertainty about the overall regulatory environment which officials will tolerate. This can be particularly troublesome for large FDI projects that require investment of many hundreds of millions of dollars, in countries which often have weaker governance systems. As a result, corruption not only has an effect on growth, but clearly has indirect effects on investment as well.

The experience of Vietnam shows quite dramatically that it is possible to have soaring FDI levels while simultaneously high and worsening corruption. However, Vietnam's case may not be particularly typical, and in any case this perspective is too static. Countries in its situation may be able to continue to achieve high levels of gross investment, but the downside of this can be that it comes with a social and economic cost which is otherwise considered painful. In particular, the choice can have a significant effect on growth.

A country seeking growth advantages from its economists must decide how high corruption is tolerable, and what compromises its citizens are willing to accept regarding the quality of social services, equality in the distribution of wealth, level of investment in human capital, and so on. Such questions are complicated and messy to answer. Nevertheless, at present such questions must take precedence over previous more elegant and theoretical inquiries.

The variables used in the growth regressions have implications for the policy agenda in dealing with corruption. Both measures of inflation turn out to be

insignificant. High inflation does not necessarily stimulate collusion among rent-seeking activities. Policymakers should not be concerned with controlling inflation when dealing with corruption. The variables involving the legal and political environment should be taken very seriously by policymakers, particularly in countries such as Vietnam where corruption is very high in organizations. In developing legal measures, it is not sufficient for laws to be passed in parliament. Law takes time to make an impact, and legislation is only half the issue. Consistent enforcement over time must be more carefully examined.

Risk Assessment in Procurement

Procurement risk assessments can provide public agencies with a systematic plan for analyzing their real procurement situation. By combining an understanding of the public procurement environment/governance structure with data and subject matter expertise, best practices, and lessons learned, agencies can be empowered to assess and monitor corruption-prone scenarios and potential vulnerabilities within their procurement methods. This practical tool will provide public agencies with a mapping methodology to help identify historic and contemporary procurement issues and risks, different types of risks, assessment methodologies and tools, and risk mitigation options.

The city of Hanoi has opted to focus on four procurement risk areas on the project's basis of this research interest and stakeholder consultation. First, qualifications for contractors, suppliers, and consultants. Public service procurement functions at various levels of governmental assemblies are vested in agencies of the central governing authorities. The authorities appoint technical boards to inspect the contractor qualification dossiers submitted by bidders. The legal framework ensures the participation of independent consultants in this process. Nevertheless, it is rare for a

preparation stage to be available other than as one of the biddings “technical discussions.” Second, evaluation and reply to contractor qualification dossiers. The UPL activities concerning the bidding announcements and the evaluation of contractor qualification dossiers are examined. Laws and regulations on these actions are satisfactory and comparable to the best standards as currently applied in developed countries. Third, contractor selections. Some legal provisions allow for unfair competition in the reporting, responding, and post-qualification stages. Fourth, contract management and management of contractor performance. A lack of comprehension of the public service procurement laws occurs among the agencies and staff. There is a low willingness to adopt controls over agency staff to be carried out by internal controlling units or external supervisory units.

Transparency and Accountability

Corruption involving public sector procurement, particularly in the context of pharmaceuticals and health care, is a major concern for many governments and public health and procurement organizations around the world. Governments are under enormous pressure to minimize the risk of corruption in procuring public goods and services, especially globally provided goods and services such as pharmaceuticals and health care. Health care can be particularly prone to corruption as it often involves large public sector budgets and procurement and is difficult to monitor and regulate effectively.

Public procurement is considered one of the most corrupt sectors in many countries globally. Corruption in procurement exposes the public sector to a wealth of risks (including reputational, financial, operational, environmental, and regulatory risks). Along with mismanagement, procurement corruption could lead to a loss of public funds, inflated or non-existent contracts, unfair supply chain or service delivery

associated expenditures, and limited confidence in the government (Kohler & Dimancesco, 2020).

Corruption in public procurement often led to poor situation of goods and services supplied, diminishing respect for the authorities and enhancing disaffection towards state institutions. The increasing recognition of corruption as a threat to sustainable development has prompted the leadership of many donor countries and international organizations to explore ways to address corruption in procurement.

As a result, various measures and methods have been developed and advocated to introduce accountability and transparency in public procurement as a means of preventing, detecting, deterring and reducing the risk of corruption. This paper outlines corruption risks in two procurement functions (planning, and tendering, accepting, opening and evaluating bids), models types of integrity risk in public pharmaceutical procurement that may affect medications disclosed and ordered in the need assessment and procurement plans for countries to pursue, provides examples and implementation strategies of anti-corruption measures (transparency, health recovery measures, and accountability measures), and explores potential challenges.

Technology and Procurement Integrity

The procurement process includes all the activities from choosing the product or service, to the supplier, and lastly to the payment. Procurement is a crucial element in any firm's operations, the success of which has a profound impact on both operational performance and long-term competitive advantage.

The results indicate that corruption usually occurs at the strategic level, involves high-ranking officials, and is perpetuated by a lack of information transparency, accountability, and regulatory policies. It may manifest itself as kickbacks or bribes to bidders by suppliers to gain access to confidential information (Kohler & Dimancesco,

2020). The contractor signing and supervision process has a higher declared degree of corruption. Fraud in procurement is a particular risk in hospitals, because almost all capital expenses involve procurement, and often technical expertise is limited. For example, doctors may request specific products and equipment because of payoffs. Technical and communication fraud between the bidder and the contractor.

Corruption in procurement is facilitated by a lack of technical oversight from the contractor and regulatory agencies, lax law enforcement, and poorly made plans. A report illuminates how in one country a coalition of civil society organizations discovered that shell companies were being used to manipulate market prices. Government works were badly executed and manufactured complaints were lodged that led to the blacklisting of the firms that attempted to expose corruption.

Monitoring and Evaluation Mechanisms

Eight monitoring and evaluation mechanism strategies are discussed to mitigate procurement corruption risks for global companies investing in developing economies, particularly for Vietnam. These may include: (a) Review of procurement systems and policies; (b) Setting up corrective actions to rectify deficiencies; (c) Expansion of e-procurement and e-invoicing; (d) Awarding and amendment of procurement process notifications; (e) Expanding and organizing management training programs; (f) Reviewing the allocation and expenditure of development investment capital of budget; (g) Assignment of responsibilities for disclosure and publication of bid-related information; and (h) Review of bid invitations and contract award notices published on the free bidding-for-tender-management information systems. The proposed monitoring and evaluation mechanism strategies are evaluated based on established standards including three key items, namely objectives, parameters, and requirements (Zou X.W., 2006).

The above-below strategies were identified, proposed, and evaluated to mitigate procurement corruption risks of global companies investing in developing economies, particularly for Vietnam. The proposed strategies provide a general framework of effective procurement corruption risk mitigation strategies with a thorough understanding of their applicability within a given situation. The recommended framework enables the provision of deep awareness of different mitigation measures, which paves the way for further scrutiny of each selected measure through parameter browsing and requirements appraisal efforts for practical implementations.

5.3 Conclusion

Recent news of a high-profile court case involving procurement corruption within the state-owned company, Vietnam Railways, has filled the front pages of Vietnam's major newspapers (Anh Nguyen et al., 2017). This case echoes past scandals involving billions of dollars in government contracts for schools, roads, government office buildings, and environmental protection measures.

For global companies wanting to enter a developing nation such as Vietnam, the fear of procurement corruption is perhaps paramount and should be considered first ahead of broader concerns such as bribery, facilitation payments, and the quality of government enforcement.

Because corruption, in any form, is an opportunistic behavior that strains corporate values, trust, and reputation but also does not help the collective society, this research does not focus on how to conduct corruption in procuring government contracts. This will be an ethical rather than a legal question. Instead, the focus is on how to design a company's procurement process to refuse and mitigate corrupt practices. This question could be informed by a basic principle from scientific philosophy. Specifically, when considering risk assessment and risk mitigation of any activities and processes, one

should start with the end state, which can be viewed as the logic or “mathematics” of procuring government contracts. Global companies wanting to adhere to strict anticorruption rules could perform a thought experiment of how the procurement process would look if there was no corruption at all. Any deviation from this end state could then point to potential risk points of corruption which would need to be addressed in procurement procedures.

This thought experiment could involve asking an executive decision-maker such as a company officer to imagine that she is in charge of a government ministry responsible for procurement projects. This person is assumed to be considering offering a billion-dollar job to an award-winning American construction company to put high-speed rails in Vietnam, and that congratulating and encouraging media reports on this big project have already been published. If there could be no corruption considerations at all, the following statements may be assumed to be approximately true in this government process.

There would be no secrecy and no loss of thousands of time-consuming purchasing rounds as the government has bureaucratic hurdles. The procurement process would go through the steps of determining even quantifying the selection criteria to ensure consistency.

In addition, enforced ground rules on transparency, publicity, quantitative benchmarks, and due diligence would provide a security net against bid-rigging, bribery, or favoritism.

There would be no unsolicited proposals and clarifications of contracts as the project would be thoroughly negotiated beforehand, etc. These muted end-state procurement processes respectively point towards a series of risk points that could give rise to personal benefits along the procurement chain such as collusion, conflicts of

interest, bribery, and favoritism, and flagged procurement tools that could potentially mitigate these risks. The next chapter draws conclusions to the study.

CHAPTER VI:

SUMMARY, IMPLICATIONS AND RECOMMENDATIONS

6.1 Summary

The research, survey and subsequent interviews show that corruption in Vietnam remains a persistent subject of discussions, whether it happens in politics, the public sector or the private sector. The government's actions including publicized punishments of people in power help to deter but the stream of scandals seems to be not letting up. Surveyed FDI invested companies have expressed that the fight against corruption continues unabated. Even companies showing confidence in their actions and status are of the opinion that still much needs to be done to curb the problem.

The research also illustrates the partly huge differences in companies' application of modern proven procurement related tools and procedures. Highly advanced companies are using a multitude of tools and processes, confirming the assumption that only a broad utilization of mitigating measures minimizes the fraud risk. Smaller companies still have a long way to go. It must be noted that implementing modern processes and tools is not a simple task for a function like procurement which in many companies is still not considered a core function, seemingly neglecting the fact that external spend is in most cases the largest cost position. This dissertation serves the purpose to further raise awareness and point out solutions for effective risk mitigation. At the same time the research result shows that corruption prevention activities go hand in hand with cost optimization efforts. The benefit of recommending specific measures depending on the size of any entity operating in Vietnam makes it easier to distinguish between nice-to-have measures and must-do measures. The

discussions with industry experts who have daily exposure and experience in detecting and investigating fraud cases played a fundamental role in balancing out the approaches which best serve the company in its struggle to maintain a company associated with integrity and also a company which is an economically successful one.

Another key finding upon investigating meaningful mitigation tools is that transparency and thorough documentation requirements successfully support the fight against fraud. Modern legacy systems include many features to serve maximum transparency in data and also enable the implementation of approval roles. Many newly formed companies in a developing country shy at investing in complex IT systems unless they have the financial backing of a large parent company. To implement a workflow-based IT system is a considerable investment which can only be pursued if the entity has a clear growth path ahead. For all other entities, management and staff must rely on trusting process descriptions, documentation and leadership culture.

A particular important result therefore is the realization that staff education and staff training represent a much-underestimated role in the context of integrity. Motivated, highly capable staff have the inert desire to perform well. If their morals are right, then corruption will have no or only little chance. An unanswered question is, how can it be made sure that chosen employees have the right morals or the required level of integrity? The staff selection process is not something that has been touched upon in this dissertation as that is a very different subject. At this point, a quote from Warren Buffet can close this chapter: “Somebody once said that in looking for people to hire, you look for three qualities: integrity, intelligence, and energy. And if you don’t have the first, the other two will kill you. You think about it, it’s true. If you hire somebody without integrity, you really want them to be dumb and lazy.” (Schwantes, 2024)

6.2 Implications

The in-depth analysis of risk indicators in procurement revealed that even seemingly irrelevant subjects like which KPIs to use or which annual objectives to choose, have a role in the context of integrity. Only few people would realize that seemingly trivial subjects like own Terms & Conditions or even cost saving calculation methods have relevance to fraud risk. Since the data collected during this research focus around FDI invested and internationally oriented companies and show the clear need for action, it can be assumed that the level of awareness and existence of fraud resisting measures in purely locally operating companies under domestic ownership are far less pronounced. This poses the major obstacle to quickly improve the situation for Vietnam as a country. A large focus therefore needs to be put on educating and training of competent specialists in their respected fields throughout all industries and businesses in Vietnam.

The analysis and subsequent recommendations make a strong convincing case to help aspiring business managers to correctly evaluate the role of procurement within their integrity framework. Numerous steps in the procure-to-pay process contain loopholes or traps making fraudulent activities possible. They cannot be completely closed but it can be made harder to exploit them. This dissertation thus advises to closely monitor every relevant decision, make sure that all decisions are properly documented in accordance with described standards of procedures and encourages to have relevant staff trained well. Integrity in business is not only a subject for procurement but also sales and marketing which must be obvious as at the other end of any sales is a procuring entity. It is just a fact that a company usually is sales-driven during the initial years of setting up an entity in a developing country and therefore often less cost-driven.

The result of the dissertation can be seen as a guide for interested companies of how to approach the subject of procurement from an integrity point of view and delivers indications of what to look for upon selecting the staff and managers in that function.

As stated in the previous chapter, particular emphasis must be put on educating, permanently training staff to perform and outperform.

Richard Branson famously stated: “Train people well enough so that they can leave. Treat them well enough so they don’t have to.” (Whitcroft, 2021)

6.3 Recommendations

The dissertation focuses on the subject of prevention and does not elaborate on detection. Having good detection capabilities for fraud automatically results in people being more careful in the future which then again can be seen as having indirect preventative effect. It is expected that detection methods of fraud will greatly improve through the use of artificial intelligence (AI). Artificial intelligence can vastly reduce complexity of large datasets and will enable quick detection patterns and anomalies, flagging potentially corrupt activities more swiftly and accurately (Soo Jin So, 2025).

It is recommended to research the possibilities of AI in the field of procurement and conduct analyses of available IT tools and their effectiveness.

As the dissertation comes to the conclusion that training and educating key personnel plays the major role in limiting integrity risks, it is recommended that in still developing countries like Vietnam, business associations take over a leading role in offering particular integrity trainings and business process specific trainings. That role can often be enriched by a parallel utilization of specialized consulting firms. The interviewed forensic accounting specialists confirmed the availability of fraud-risk-assessment as part of their paid services portfolio.

APPENDIX A

COVER LETTER

Procurement Corruption Risk Mitigation Strategies for Global Companies Investing in Developing Nations: A Vietnam Perspective

Dear Participants,

Thank you for participating in this research study. The purpose of this interview/survey is to collect insights on evaluating Procurement Corruption Risk Mitigation Strategies for Global Companies Investing in Developing Nations. Your viewpoints are extremely valuable for understanding the challenges, successes, and opportunities in different Procurement Corruption Risk Mitigation Strategies for Global Companies Investing in Developing Nations such as Vietnam Perspective. Your contributions are essential for informing future feasibility initiatives in this area. Your feedback will help us understand the current procurement environment, identify areas for improvement, and develop strategies to better mitigate the risks. By sharing your insights and experiences, you are playing a vital role in enhancing business education and positively impacting many lives.

We kindly ask you to take a few moments to complete the survey. Rest assured that your responses will be kept confidential and used only for research purposes. We greatly appreciate your honest feedback, as it will assist us in enhancing our initiatives in higher education. If you experience any difficulties or have questions about the survey, please contact my supervisor, Professor David Annan, at david.annan@ssbm.ch.

Your feedback and suggestions are important to us, and we are committed to supporting you in any way possible. Thank you again for your participation and valuable insights.

Warm Regards Hans-Joerg Kottmann

APPENDIX B



INFORMED CONSENT

Procurement Corruption Risk Mitigation Strategies for Global Companies Investing in Developing Nations: A Vietnam Perspective

I, agree to be interviewed for
the research which will be conducted by.....a
doctorate student at the Swiss School of Business and Management, Geneva,
Switzerland.

I certify that I have been told of the confidentiality of information collected for this
research and the anonymity of my participation; that I have been given satisfactory
answers to my inquiries concerning research procedures and other matters; and that I
have been advised that I am free to withdraw my consent and to discontinue
participation in the research or activity at any time without prejudice.

I agree to participate in one or more **electronically recorded** interviews for this
research. I understand that such interviews and related materials will be kept completely
anonymous, and that the results of this study may be published in any form that may
serve its best.

I agree that any information obtained from this research may be used in any way thought
best for this study.

.....
Signature of Interviewee

.....
Date

APPENDIX C

QUESTIONNAIRE

Procurement Corruption Risk Mitigation Strategies for Global Companies Investing in Developing Nations: A Vietnam Perspective

Question 1: Please indicate your company's number of personnel in Vietnam

- 1-30
- 31-100
- 101-500
- >500

Question 2: Do you have a centralized procurement department? (send RFQs, negotiate price, select vendor, conclude purchase order) (yes / no)

Question 3a: Which function does your Procurement Department report to?

- CEO
- CFO
- HR / Admin
- Production
- Other

Question 3b: What are your reasons for having selected a decentralized procurement approach for your company? (multiple answers ok)

- Company is too small to afford a separate procurement unit
- Our procurement \$\$\$ volume is too small
- Decentralized procurement is quicker than a centralized approach
- We have outsourced our procurement function to a specialized service provider
- If we detect fraudulent behavior, we will change to a centralized unit

- If we grow significantly then we will centralize procurement
- Other:

Question 4: Which of the following general integrity related tools do you apply?

- Regular “tone from the top” integrity messages
- Regular mandatory integrity trainings
- Employee whistleblower hotline for anonymous tips
- Whistleblower hotline for suppliers and customers
- None of the above

Question 5: Which of the following tools are in place at your Finance and/or Procurement unit?

- 4 Eye Principle
- Segregation of Duties
- Regular internal or external audits in finance and procurement functions

Question 6: Are your employees with procurement responsibilities conducting following activities / reports?

- Spend analysis by commodity groups and vendors
- KPI: \$\$\$ contracts awarded with and without competition
- Overview about achieved cost savings for procurement volume
- Buyers receive training in price plausibility and cost calculation expertise
- Buyers develop commodity or supplier strategies

Question 7: Check if applicable

- Above 80% of all purchase contracts are based on our own T&Cs

- All vendors with larger contracts need to pass an integrity due diligence check
- Only our procurement dept. has the mandate to give vendor commitments
- Standard procurement process is clearly described
- Aware that vendors are sometimes offering unethical benefits to our staff

Question 8: Are you using online bidding tools to negotiate or auction contracts?

(yes/no)

Question 9: Pls evaluate following statements (agree - neutral - disagree)

- Vietnam has significantly improved in the area of corruption in recent years
- FDI companies contribute positively to forming a culture of integrity in VN
- Corruption in the public sector is perceived worse than in the private sector

Question 10: We should do more to prevent, deter and detect vulnerable corruption areas in our organization (fully agree, somewhat agree, no need for action)

Question 11: Pls optionally share new or innovative ideas for fraud/bribery prevention in the procurement area (free text)

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