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Assessing the areas of vulnerability for Swiss firms in international business activities:

The Swiss International Corruption Survey (SICS)

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EXECUTIVE SUMMARY

What is the study about?

The purpose of this research is to assess the areas of vulnerability to corruption for Swiss firms in the international business activities. The project seeks to understand how the Swiss firms perceive the problem on the foreign markets when doing business in countries with high prevalence of corruption. The project aims at evaluating the difficulties or obstacles confronted by the law-abiding Swiss companies by answering some of the following research questions: (1) what are the choices open to them? (2) how often do they lose business opportunities if they comply with Swiss standards? (3) how often do they react by bribing public officials or private third parties, either directly or indirectly? (4) do they ever report experiences of corruption to the police or any other agencies? (5) what suggestions are being made by the companies on how to improve the situation?

Methodology: Survey – Sample – Response rate

The **online survey** was conducted on a **total of 3'359 Swiss active companies of all sectors, with at least one subsidiary abroad.**

The response rate was **16% with 530 companies** participating in the survey.

Characteristics of the respondent firms

The questionnaire was compiled by 38% of the owner/major shareholder of the company, 38% by the CEO. More than 51% of the respondents have worked for the company for more than ten years.

- ✓ 26% of the respondent companies belong to the manufacturing sector, following by the wholesale trade and retail trade (13%), financial and insurance activities (6%).
- ✓ 27% of the respondent firms have between 10 and 49 employees, 21% have more than 250 employees, 18% have between 50 and 250 employees.
- ✓ 26% of the firms have an annual turnover of more than 50 million CHF, 21% between 10 and 50 million CHF.
- ✓ 32% of the respondent firms have between 2 and 5 subsidiaries abroad.
- ✓ Zürich and Ticino are the two cantons with the highest response rate.
- ✓ Asia is the most important region where the respondent firms have the most frequent and regular business activities (51%), following by Africa (15%), Americas (14%), Europe (11%) and Oceania (9%).
- ✓ Swiss firms are 34% to engage in local sale of imported products, 23% in providing services to locals and foreigners, 18% in local manufacturing, 16% in selling products locally manufactured to other countries, 15% in local sale of local manufactured products, 7% in capital investments in local companies, 5% in construction.
- ✓ 29% of the Swiss firms have invested from 10 to 25% of their annual revenues in the country where they have the most frequent and regular business activity.

Perception of corruption

- ✓ 44% of the firms perceive the level of obstacles in doing business abroad as low, 40% think that it is moderately difficult and 17% of the firms perceive it as high degree of difficulties.
- ✓ The most frequent obstacles in doing business abroad is considered as the burdensome and inefficient administrative regulations (61%), following by the complicated labour regulations (42%), health and safety regulations (26%), political instability (24%), corruption (22%), cultural factors (22%), property and violent crime (14%).

Anti-corruption measures

- ✓ Only 39% of the Swiss companies have invested in anti-corruption measures and in fighting against bribery in the past three years.
- ✓ 94% of these companies estimate these investments sufficient.
- ✓ 85% of them qualify the practical results of these investments as satisfactory.
- ✓ 83% of the firms with no such investments claim that corruption is no issue for their business.
- ✓ 61% of the Swiss companies using intermediaries abroad run a full investigation and due diligence on their respectability.
- ✓ The types of anti-corruption measures implemented are codes of conduct (83%), legal measures (70%), systems of control, auditing systems (66%), specific monitoring bodies, compliance officers (57%), system of risk analysis and due diligence (50%), specific training to employees (37%), anonymous reporting phone line (22%), external specialists (12%).
- ✓ Legal measures are considered the most costly anti-corruption measures (34%) as well as specific monitoring bodies (31%).
- ✓ 39% of the firms declare to have invested up to 5% of their annual revenue in anti-corruption measures.
- ✓ Before starting a business in a foreign country 46% of the firms assert that they never run a corruption risk assessment on the country, 38% did run a corruption risk assessment but only when the country need to be risk-analysed and 16% did it systematically.
- ✓ Africa was the region where the firms completed the last corruption risk assessment the most frequently (32%), following by Europe (31%), Asia (18%) and Americas (12%).

Corruption in the public and private sectors

- ✓ 31% of the Swiss responding firms declare having contacts with public officials abroad and 40% of them with a private third-party.
- ✓ **Among firms having contacts with public authorities, 69% have been requested to pay bribes or to give a gift/favour and 34% have provided what was requested.**
- ✓ **Among firms having contacts with private intermediaries, 28% have been requested to pay bribes and 46% have provided what was requested.**
- ✓ **The corrupt practices (bribe request) was mostly found in the issuance of building permits,** following by arbitrary or random controls of public officials, getting contracts with public institutions without bidding process, clearing goods through customs, getting utility connections, bidding processes in public procurement procedures, obtaining authorizations from public institutions, tax inspections, processing tax declarations, dealing with labour regulations, dealing with legal proceedings.
- ✓ **The request for payments happens more than once. 13% of Swiss firms have been asked for bribes more than 20 times by public officials and 14% by private third-parties.**
- ✓ **Customs officers are the type of public official most involved in the corrupt practices,** following by municipal officers, inspection officials, members of Parliament or government and police officers.

The most serious incident of corruption in the public sector

- ✓ The most serious incident of corruption in the public sector was most frequently mentioned in China.
- ✓ The most serious incident took place during the bidding process in public procurement procedures. The most frequent reason is to speed up the procedure.

- ✓ In the most serious incidents, customs officers are the most quoted to be involved.
- ✓ In the majority of the most serious cases, money was requested.
- ✓ An intermediary was involved in one-third of the most serious cases.
- ✓ Almost half of the respondent firm victims did not reveal the amount of cost related to the most serious incident. Costs could reach CHF 100'000 in some cases.
- ✓ Consequences of the refusal to pay are losing the contract or even losing all the contracts in the country.

The most serious incident of corruption in the private sector

- ✓ Cape Verde and China are the countries the most quoted for the most serious incident of corruption in the private sector
- ✓ The business operations related to the most serious incident were the participation in a bid for a private sector contract.
- ✓ The reasons the most quoted were to receive access to clients and markets, or to win a bid for a contract.
- ✓ Money was most frequently asked.
- ✓ More than one third of the requests for payment were from the counterpart which made the firm understand that a payment was expected.
- ✓ Losing a specific contract or deal would be the consequence of refusal to pay.

INTRODUCTION

This report presents the findings of the national survey on the situation of corruption experienced by Swiss firms in business activities abroad. The study took place from October 2013 to September 2016 and collected data on bribery incidents experienced by Swiss firms from 2010 to 2013.

In particular, the project aims at answering the following questions:
(1) How do Swiss firms, when doing business in countries with high prevalence of corruption, perceive the problem on the foreign markets?
(2) What are the choices open to them?
(3) In particular, how often do they lose business opportunities if they comply with Swiss standards?
(4) How often do they react by bribing, either directly or indirectly, public officials or private company managers abroad?
(5) Do they ever report experiences of corruption to the police or any other agencies?
(6) How successful are law-abiding Swiss companies in rejecting invitations to bribe in the short and in the longer run?
(7) Are there differences between different sectors of the export economy, or according to the company's size?
(8) What suggestions are being made by the companies on how to improve the situation?

Studying these issues has allowed evaluating some of the anti-corruption policies implemented across Western countries including Switzerland over the last 10 years as well as the effects of criminalizing foreign corruption in domestic legislation.

PRESENTATION OF THE RESEARCH

Context

Over the last two or three decades, many legislative changes have been implemented in most Western countries (including Switzerland) with the intent to curb corruption in general and in Third-World and Easter-European countries in particular. Multinational organizations have put tremendous efforts in preventing corruption, most notably the initiative of the OECD (Organization for Economic Co-operation and Development) to criminalize foreign bribery (Convention on Combating Bribery of Foreign Public Officials in International Business Transactions). The OECD Anti-Bribery Convention was signed in December 1997 and has been ratified by 38 countries (including the United States). Another international initiative was the UN Convention against Corruption (UNCAC) which has been ratified by 154 countries and includes requirements for member states that cover both preventive measures and the criminalisation of a wide range of corrupt acts, including the bribery of foreign officials. The Council of Europe's Criminal Law Convention on Corruption is also of particular importance to multinational businesses. Two other important regulatory acts against overseas bribery and corruption in the international landscape are the US Foreign Corrupt Practices Act 1977 (US FCPA) and the UK Bribery Act 2011. The US FCPA was enacted in 1977, amended in 1988 and in 1998 and has extra-territorial reach.

Switzerland has one of the most export-oriented economies. In Switzerland, 29.5 percent of the GDP is produced by exportations to other countries. The three main economic sectors for exportations are: chemical and pharmaceutical industry, jewelleries and clocks; machineries, technical tools and electronic systems[1]. Switzerland, operating in these economic sectors and with different foreign countries as export partners, is likely to be exposed to corrupt practices within these countries. Across the European Union, Germany and Italy are the main partners of Switzerland for exportation[2] and as far as it is known, Italy ranks quit high in the TI Briber Payers Index.[3] Outside the EU, the major export partners are the US, China, Hong Kong, Japan, Singapore, Russia and India. Russia and India are among the countries showing the higher levels of "bribery paid abroad" .[4] Therefore, Switzerland has always played an active part in all the international developments concerning the fight against corruption and has always supported the international efforts and collaborates actively in these developments.

Many descriptive studies have been prepared over this period and have largely discussed about the definition of all forms of corruption and corrupt practices. Even though efforts have been made other than the official data collection in the last years such as surveys of households, surveys of business

[1] Statistics of the Swiss Confederation, Federal Department of Finance, http://www.ezv.admin.ch/themen/00504/index.html?lang=de.

[2] *Ibidem*

[3] Transparency International, 2011, Bribery Paid Index, p. 5.

[4] *Ibidem.*

sector, surveys of civil servants (police, judiciary, etc.), yet, little is known about the causes and predictors of corruption at the micro/firm level.

Moreover, studies about the effects of laws and policies that criminalize in Western countries corruption of foreign officials are scarce. In order to study the outcomes of these policies, Switzerland with its highly intertwined economy offers an interesting starting point. Indeed, many Swiss firms have been and still are doing business in countries that rank high on corruption according to all indicators. It can, therefore, be presumed that Swiss export firms that are present on such markets have developed strategies to deal with the contradiction between strict anti-corruption statues in Switzerland, and wide-spread corruption in many of these countries. The SECO[5] has issued a brochure giving some advice on how to behave that, however, may be of limited use in concrete situations.

This present research seeks to fill this gap of knowledge and offers practical solutions preventing bribe requests in international business activities.

1 Research questions

In line with the formulated objective, some of the research questions have been elaborated as follows:

General information

- ✓ How is corruption understood and defined in general? How is corruption perceived while doing business abroad? What is the level of awareness of corruption in business activities overseas?

The "demand side" (countries with which the Swiss firms are doing business)

- ✓ Which are the countries dealing with Swiss firms? Which level is their corruption index?
- ✓ Which level is their economic development? Which level is their legal development against corruption? What type of political system is in place?
- ✓ Which are the cultural determinants of these countries? How correlated these variables are with corrupt practices?

The "supply side" (the Swiss firms)

- ✓ Which are the practices in business which could be considered as corrupt behaviors? Which types of corrupt practices are the most common or frequent? How often do these corrupt practices take place?
- ✓ How do Swiss firms, when doing business in countries with high prevalence of corruption, perceive the problem on the foreign markets? What are the choices open to them? In particular, how often do they lose business opportunities if they comply with Swiss standards? How often do they react by bribing, either directly or indirectly, public officials or private company managers abroad?

[5] Staatssekretariat für Wirtschaft (SECO), Korruption vermeiden – Hinweise für im Ausland tätige Schweizer Unternehmen, 2008

- ✓ Which type of business is more vulnerable? Which are the characteristics of the firm more susceptible to facilitate corrupt behaviors? Are there differences between different sectors of the export economy, or according to the company's size?
- ✓ Which measures have been applied within firms so far to prevent corruption? How effective are these measures?

The legal aspect

- ✓ How do the existing regulations, either international or domestic, influence the business activities?
- ✓ Did the implementation of anti-corruption policies in foreign trading reduce the prevalence of corrupt practices in international business transactions?
- ✓ Did officials and business people in Third-World countries with traditionally high prevalence of corruption become more reluctant to insist on being offered bribes?
- ✓ What can be added to the existing regulations to better prevent corruption? What should be done to fill the gaps?
- ✓ How successful are law-abiding Swiss companies in rejecting invitations to bribe in the short and in the longer run?
- ✓ Which are the effects of criminalizing foreign corruption in domestic legislation?
- ✓ What could be done once the assessment of the existing policies completed?

Detected incidents of corruption

- ✓ Which types of corruption had taken place? Which was the scenario of the incident?
- ✓ Which are the protagonists (foreign public official, employees, etc.) involved in the incident? Which amount of money was involved?
- ✓ Which were the consequences of such incident (loss of contract, decrease of annual turnover, loss of trust, loss of reputation, etc.)?

Prevention

- ✓ What suggestions are being made by the companies on how to improve the situation?

2 Advantages and disadvantages of sample surveys to measure bribery and corruption

Over the last 45 years, victimization surveys have gradually become accepted as a major innovation in the measurement and assessment of crime-related issues. As a matter of fact, victimization surveys deal with issues related to crime, rather than "crime" itself, as they address experiences of incidents among the population, using operational definitions of crime which try not using legal terms.[6] The advantages of victimization surveys are numerous:

- ✓ To obtain alternative sources of information on crime, besides police records and administrative statistics.
- ✓ To learn about unreported and unrecorded crime.

[6] AROMAA K., *Victimization survey – what are they good for?,* TEMIDA, page 85-94, June 2012

- ✓ To understand the characteristics of the victims, of the offenders, and of the specific situations where the crime happened.
- ✓ To measure repeated and multiple victimization
- ✓ To measure the fear of crime.
- ✓ To measure the satisfaction with police performance
- ✓ To obtain data collected through standard methodologies and therefore comparable across different regions and countries

Moreover, victimization surveys have the advantage of being flexible. They can be used standard or in modules at need. They can be easily combined with the victimization experiences and personal characteristics such as life style and risk-taking behaviors. The list of the victimization surveys' advantages is long as victimization surveys provide relevant and additional answers to crime data traditionally based on police-recorded crimes' statistics, and are also able to enhance the comparability of crime data across countries. Indeed, their development has dramatically changed the definition of crime and the availability of information about it. [7]

However, in spite of those numerous advantages, victimization surveys still have some disadvantages and limitations, mainly related to methodological problems and to the fact that they are carried out on a sample of individuals and, thus, reflect crime problems as perceived and remembered by them. Furthermore, most countries have failed to make systematic use of this instrument. Such a useful instrument still has a hard time to gain recognition as one of the central and necessary criminal policy information sources due to some reasons. One of them is the fact that victimization surveys require an extra budget and a specialized production body which needs to be created in a routine basis and which is not the case so far. Furthermore, in order to make the best out of victimization surveys, special skills and training are needed and the latter is usually not yet available. Another disadvantage of victimization surveys is that a bad design of surveys could affect the results. The imperfections in the design of questionnaires are considered one major source of bias.

[7] YANG S.M. & HINKLE J.C., Issues in Survey Design: Using Surveys of Victimization and Fear of Crime as Examples, *Handbook of Survey Methodology for the Social Sciences,* L. Gideon (eds.), 2012

METHODOLOGY

1 Field preparation of the project

In order to obtain advices and support before launching the survey, several key associations were contacted. In particular, meetings with the representatives of Economie Suisse Zurich, Switzerland Global Enterprise, Swiss Export Risks Insurance, Transparency International Switzerland were arranged. Several bi-national Chambers of Commerce (Swiss-Arab, Swiss American, Swiss-Russian, Swiss-China) and cantonal Chambers of Commerce were also contacted. The aim of these meetings was to inform different associations about our project and to get advices on how to reach out to Swiss companies and how to motivate them to participate in the survey. The first state of knowledge on the situation and on corruption abroad was acquired through these meetings. Furthermore, upon the meetings, letters of support have also been delivered for the project (Economie Suisse, Swiss Arab Chambers of Commerce, Geneva Chamber of Commerce, Winterthur Chamber of Commerce).

An Advisory Working Group has been formed including representatives of the following firms:

- Deloitte Zurich
- KPMG Zurich
- KPMG Geneva
- Schindler AG
- Panalpina Basel
- Baker & McKenzie Zurich
- Stroz Friedberg Zurich

The project has benefitted from advices and insights from members of the Advisory Working Group, mainly for the design of the questionnaire. Throughout the project, four meetings of the Advisory Group were organized for pertinent developments.

2 Design of the questionnaires

The questionnaire has been developed after a thorough review of questionnaires used in existing international surveys on corruption. In particular, the United Nations Crime and Corruption Business Surveys (CCBS) - 2004, the United Nations Crime and Corruption Business Surveys in the Western Balkans (2012); the Transparency International Bribe Payers Index (2011); the KPMG Overseas Bribery and Corruption Survey (2007) have been reviewed. The Swiss questionnaire was designed avoiding direct words such as “bribery” or “corruption” as used in the mentioned surveys.

Prior to the finalization of the questionnaire, different representatives of several Swiss Chambers of Commerce as well as members of the Advisory Working Group were consulted for suggestions and advices on the structure, content and formulation of the questionnaire. This useful step allowed us to cover all themes and issues related to corruption and briberies experienced by Swiss firms in business activities abroad.

As a result, a 21-pages questionnaire was designed including four main sections as follows:

1. **SECTION 1: Characteristics of the company.** This section includes questions aiming at collecting general information on the characteristics of (1) *the interviewed company* (size, turnover, economic sector, number of subsidiaries, type of activities/operations abroad, etc.) and of (2) *the person responsible for the questionnaire completion* (hierarchical position in the company; length of service in the company; knowledge of foreign countries in which the company develops its business, etc.)
2. **SECTION 2: Compliance and risk control tools.** This section investigates thoroughly on the anti-corruption program implemented in the company in the past three years. Furthermore, the section asks detailed questions on the types of preventive measures used, their efficiency and the costs related.
3. **SECTION 3: Perception of obstacles while doing business abroad.** This section includes questions on the perceived level of obstacles of Swiss firms while operating in a foreign country as well as their perception over some specific corrupt behaviors linked to business operations.
4. **SECTION 4.1: Experiences of obstacles while doing business abroad with a public authority.** This section seeks to understand the relationship between Swiss firms and public authorities abroad, in particular when specific business activities are involved, and this, during a specific reference period (the three years prior to the survey). Questions are designed to figure out whether or not contacts with public officials might have occasioned bribe requests and if yes, to which extent, Swiss firms have accepted to pay bribes. This section includes therefore questions on the frequency and characteristics of bribe requests.
   SECTION 4.2: The most serious incident of bribe request by a public authority. In this section, questions on specific characteristics of the most serious incident of bribery by public officials experienced by Swiss firms in a specific reference period were included.
   SECTION 4.3: Experiences of obstacles while doing business abroad with private local third-parties. Similar to section 4.1., this section considers contacts between Swiss firms and private local third-parties in business activities abroad during the past three years and the bribe requests which might have engendered by these contacts. The frequency and characteristics of such bribe requests are examined under this section.
   SECTION 4.4: The most serious incident of bribe request from private third-parties. This section includes questions on specific characteristics of the most serious incident of bribery by private third-parties experienced by Swiss firms in the past three years.

The questionnaire was translated into four national languages (French, German, Italian and English) for the survey.

3 Implementation of the online questionnaire

The on-line questionnaire was developed through FluidSurvey. FluidSurvey is an online survey software allowing creating surveys and automatically storing collected data in different format (e.g. excel, SPSS, etc.). A two-year license was bought for the data collection.
Once finalized, the questionnaire was pre-tested in the four languages (French, German, Italian and English).

4 Data collection

Data collection was performed through three main methodologies:

1. **Computer Assisted Web Interviewing** (CAWI), covering all sampled companies.
2. A **postal survey,** as first reminder, covering part of the companies which did not answer the first round of the survey.
3. **Face-to-face interviews,** addressing key Swiss companies to gain more insights on their issues while doing business abroad.

The different phases of data collection (first round of the survey and reminders) lasted six months in total, from July 2014 until December 2014, and were planned as follows:

- ✓ **First round**. At the beginning of July 2014, a non-priority letter was sent to the Management of all sampled companies (owner, Managing Partner, Director, Chief Executive Officer, Head of Risk Control, Head of Legal and Compliance Office). This letter of introduction explained the project and its core objectives. The link to the online questionnaire and a personal password accessing the survey were also provided in this letter.
- ✓ **First reminder**. Three weeks after the first wave (August 2014), a first reminder by mail was sent to all sampled businesses.
- ✓ **Second reminder**. One month after the first reminder (September/October 2014), a second reminder was addressed only to companies with more than two employees and more than one subsidiary. In addition, a postal questionnaire was sent to those with 10-250 employees, with more than one subsidiary and belonging to the biggest cantons or to those with the lowest response rates (Aargau, Basel City, Basel Country, Bern, Geneva, Lucern, Neuchâtel, Schwyz, St. Gallen, Thurgau, Vaud, Zurich).
- ✓ **Third reminder.** In December 2014, a third reminder was sent only to companies with more than nine employees.

5 Sampling strategy

The project "*Assessing areas of vulnerabilities for Swiss firms in international business transaction*" would ideally cover all Swiss companies having business activities abroad. Business activities could include either import/export activities or investments in a foreign country.

A list of Swiss companies with import/export activities is not publicly available, neither is the one with Foreign Direct Investments. The Swiss National Bank only publishes aggregated statistics on the Swiss direct investment, coming from a sample survey[8].

Sampling all Swiss firms would have been out of focus and not sustainable for the project's budget.

After consultation with the Advisory Board and representatives of Chambers of Commerce, the presence of subsidiaries in a foreign country was taken into consideration for the selection and identification of Swiss firms used for the sample[9]. Moreover, the Advisory Board and experts from

[8] Some information on these statistics are analysed here: \\192.168.1.5\krc\Projekte\Corruption\FNS Corruption Proposal\DOCUMENTS\FDI\Direct Investement.docx

[9] With this way of selection some companies having business activities abroad but no subsidiaries overseas (e.g. export) might have been wrongly excluded from the sample. However, we noticed that many of these companies are proven to also be subsidiaries of the "mother companies" included in the sample. Therefore, this bias should be a minimal one.

the Chambers of Commerce also suggested focusing the survey on the **"mother" or "parent" companies**, instead of their subsidiaries. As anti-corruption programs are most of the time centralized at the mother company's level, surveying the latter would be the best way to get hold of all incidents of corruption even those occurred in subsidiaries abroad.

5.1 Sampling frame - ORBIS

The project benefited of free access, through the Library of University of St. Gallen, to *ORBIS Bureau van Dijk (BvD)*, a comprehensive database of 14 million companies across Europe and more than 500,000 across Switzerland, combining data from over 35 different official sources.

The ORBIS database does not include a specific variable referring to import/export activities of the Swiss companies or to Foreign Direct Investments.

However, as already mentioned above, after consultation with the project's stakeholders and with the ORBIS' account manager for Switzerland, the variable "Presence of Subsidiaries abroad" turned out to be a good proxy to identify Swiss companies with activities abroad.

5.2 Selection of the Initial Sample

Following are the criteria identified to select the project's Initial Sample (IS):

- ✓ All Swiss active companies with at least one subsidiary located in a foreign country.
- ✓ The companies must have at least one subsidiary located in a foreign country, including shareholders with an unknown country, not ultimate owned but owned at 51%[10]. They may have other shareholder/s in the foreign country[11].
- ✓ The companies might have Swiss subsidiaries, besides the foreign ones, but they must be owned at least at 51%.
- ✓ The companies with a "NF" as consolidation code (2015 entries) were deleted from the selection[12].

As a result of this selection's criteria a total of 7,464 companies with at least one subsidiary abroad, were selected as the Initial Sample (IS) for the project.

[10] This criterion was suggested by the ORBIS Account Manager in order to make sure that the Swiss company holding a foreign subsidiary will have at least some interaction with the latter. Selecting businesses owned at 100% we obtained 6,139 instead of 7,832 companies.

[11] The BvD publishes this remark on the term "Subsidiary": *In the Ownership Database, the concept of subsidiary makes no reference to the percentage of ownership between the parent and the daughter. In this sense, if company A is recorded as having a stake in company B with a very small, or even an unknown percentage of ownership, company B is said to be a subsidiary of company A.*

Others would call such a company an "affiliated company" or more simply an "affiliate". However, "affiliations" may concern links with shareholders too. For this reason, we prefer to call subsidiary rather than affiliate any company in which a parent owns a stake, whatever its percentage of ownership.

[12] This aspect was explained by the ORBIS Account Manager as follows: *"ORBIS is fed from roughly 120 information providers worldwide. When these providers report ownership information, they sometimes state something like "A company in my country says it is owned by a Swiss company XY"" - As the information provider only covers a specific country, e.g. Russia, he cannot confirm the existence or even the correct spelling of the Swiss company. Hence, the Swiss company registered may be completely misspelled and thus not automatically identifiable for us. As you can imagine, we receive hundreds of thousands of such entries. Our team of ca. 50 people constantly strives to correctly match internationally linked companies. In fact, this circumstance nicely displays what the extra value is that BvD provides: We establish international ownership links. For your task, you may safely ignore these direct entries. Why? Because these companies are likely to occur in your sample, but under their correct name."*

5.3 Selection of the Final Sample

5.3.1 Identification of the size for the final sample

The quantitative phase of the project aims at collecting information on at least 500 firms. The size of the final sample was chosen according to the expected response rate estimated on the basis of the SBCS response rate (26%). However, given that the response rate to corruption surveys is usually lower than to general crime surveys, we decide to double the size of the final sample.

Table 1 - ***Population, final sample and number of expected respondents***

Population	Final Sample	Expected response rate (SBCS)	Number of expected respondents
7464	3500	26%	910

Source: authors' elaboration

5.3.2 Criteria for selection of the final sample

From the initial population of 7,464 mother companies, we excluded companies belonging to the following economic sectors (considered to be beyond the scope of the project):

- ✓ 2657 firms belonging to "Financial service activities, except insurance and pension funding", NOGA's subtitle 64 of sector K - FINANCIAL AND INSURANCE ACTIVITIES (e.g. Central banking, Activities of holding companies, Trusts, funds and similar financial entities, etc.),
- ✓ 77 firms in "Other activities auxiliary to financial services, except insurance and pension funding" (6619 – K),
- ✓ 84 firms in "Fund management activities" (6630 – K),
- ✓ 170 companies in "Accounting, bookkeeping and auditing activities; tax consultancy" (6920 – M),
- ✓ 171 cases belonging to Activities of head offices, NOGA's subtitle 701 of sector M - PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES.
- ✓ the Education sector (P), 16 companies,
- ✓ 3 in "R - Arts, entertainment and recreation"(9313 – R)
- ✓ 3 in "Publishing of newspapers" (5813 – J),

In addition, 699 cases were also excluded from the initial sample because they have an invalid address.

After the exclusion, **the final sample for the survey amounts to 3'584 Swiss mother companies with at least one subsidiary abroad.**

5.4 Sampling weights

5.4.1 Why calculating sampling weights?

Sampling weights are needed to correct for imperfections in the sample that might produce bias and other departures between the sample and the reference population. Such imperfections include the

selection of units with unequal probabilities, non-coverage of the population, and non-response. In other words, the purposes of weighting are:

- ✓ to compensate for unequal probabilities of selection.
- ✓ to compensate for (unit) non-response.
- ✓ to adjust the weighted sample distribution for key variables of interest (in this case for **economic sector and size**) so that it conforms to a known population distribution (Swiss businesses with at least one subsidiary abroad).

5.4.2 How the sampling weights are calculated

The sampling weights have been calculated as follows:

- ✓ **Economic sectors.** Mathematical product of the proportion of businesses in each sector according to the reference population, and the proportion of businesses in each sector according to the final sample of the survey.
- ✓ **Size.** Mathematical product of the proportion of businesses in each range of size according to the reference population, and the proportion of businesses in each range of size according to the final sample of the survey.

5.5 Final sample profile

The Final Sample for the quantitative survey includes 3,584 Swiss mother companies with at least one subsidiary abroad (all the subsidiaries, foreign and Swiss, owned at least at 51%).

The following tables describe the distribution of the final sample by some key variables, in comparison to the distribution of the population.

Table 2 - ***Swiss companies by location of the subsidiary***

	Final sample		Population	
Location of the subsidiaries	**N**	**%**	**N**	**%**
In at least one country with high level of corruption	1142	31.9%	2575	34.5%
Countries with low level of corruption	2442	68.1%	4889	65.5%
Total	**3584**		**7464**	

Source: authors' elaboration of ORBIS (Bureau Van Dijk) data

Table 3 - ***Swiss companies by economic sector of activity***

	Final sample		Population	
Economic sector	**N**	**%**	**N**	**%**
G - Wholesale and retail trade; repair of motor vehicles and motorcycles	986	27.4%	1172	15.7%
C - Manufacturing	**897**	**25%**	**961**	**12.9%**
M - Professional, scientific and technical activities	678	18.9%	1208	16.2%
J - Information and communication	361	9.1%	402	5.4%
L - Real estate activities	**182**	**5.1%**	**288**	**3.9%**
N - Administrative and support service activities	**124**	**3.5%**	**144**	**1.9%**
H - Transportation and storage	**99**	**2.8%**	**108**	**1.4%**
F - Construction	**73**	**2%**	**83**	**1.1%**
K - Financial and insurance activities	47	1.3%	2906	38.9%
D - Electricity, gas, steam and air conditioning supply	**33**	**0.9%**	**39**	**0.5%**
S - Other service activities	28	0.8%	36	0.5%
I - Accommodation and food service activities	**26**	**0.7%**	**28**	**0.4%**
R - Arts, entertainment and recreation	18	0.5%	26	0.3%
Q - Human health and social work activities	17	0.5%	18	0.2%
E - Water supply; sewerage, waste management and remediation activities	**9**	**0.3%**	**11**	**0.1%**
B - Mining and quarrying	**7**	**0.2%**	**8**	**0.1%**
A - Agriculture, forestry and fishing	5	0.1%	6	0.1%
Total	**3584**		**7464**	

Source: author's elaboration of ORBIS (Bureau Van Dijk) data

Table 4 - ***Swiss companies by number of employees***

	Final sample		Population	
Size	**N**	**%**	**N**	**%**
0-2 employees	553	15.4%	1752	23.5%
3-9 employees	1189	33.2%	2708	36.3%
10-49 employees	**891**	**24.9%**	**1691**	**22.7%**
50-250 employees	**759**	**21.2%**	**1044**	**14.0%**
More than 250 employees	**158**	**4.4%**	**196**	**2.6%**
Missing data	34	0.9%		
Total	**3584**		**7464**	

Source: elaboration of ORBIS (Bureau Van Dijk) data

Table 5 - ***Swiss companies by number of subsidiaries***

	Final sample		Population	
Number of subsidiaries	**N**	**%**	**N**	**%**
Only 1 subsidiary	2181	60.9%	4167	55.8%
2-5 subsidiaries	1061	29.6%	2515	33.7%
6-10 subsidiaries	170	4.7%	465	6.2%
More than 10 subsidiaries	172	4.8%	317	4.2%
Total	**3584**		**7464**	

Source: elaboration of ORBIS (Bureau Van Dijk) data

Table 6 - ***Swiss companies by canton of location***

	Final sample		Population	
Canton of location	**N**	**%**	**N**	**%**
Zurich	678	18.9%	1189	15.9%
Zug	484	13.5%	1331	17.8%
Ticino	314	8.8%	**870**	**11.7%**
St. Gallen	261	7.3%	451	6.0%
Aargau	175	4.9%	266	3.6%
Bern	173	4.8%	**289**	**3.9%**
Geneva	167	4.7%	**416**	**5.6%**
Thurgau	150	4.2%	255	3.4%
Basel-Country	138	3.9%	**203**	**2.7%**
Vaud	137	3.8%	255	3.4%
Basel-City	134	3.7%	**240**	**3.2%**
Lucerne	128	3.6%	219	2.9%
Schwyz	126	3.5%	297	4.0%
Solothurn	79	2.2%	115	1.5%
Schaffhausen	73	2.0%	117	1.6%
Fribourg	58	1.6%	176	2.4%
Graubunden	56	1.6%	165	2.2%
Appenzell Ausserrhoden	47	1.3%	81	1.1%
Obwalden	47	1.3%	99	1.3%
Nidwalden	45	1.3%	104	1.4%
Neuchatel	39	1.1%	80	1.1%
Appenzell Innerrhoden	34	0.9%	62	0.8%
Valais	14	0.4%	42	0.6%
Glarus	12	0.3%	43	0.6%
Uri	10	0.3%	24	0.3%
Jura	5	0.1%	10	0.1%
Total	**3584**		**7464**	

Source: elaboration of ORBIS (Bureau Van Dijk) data

RESPONSE RATES

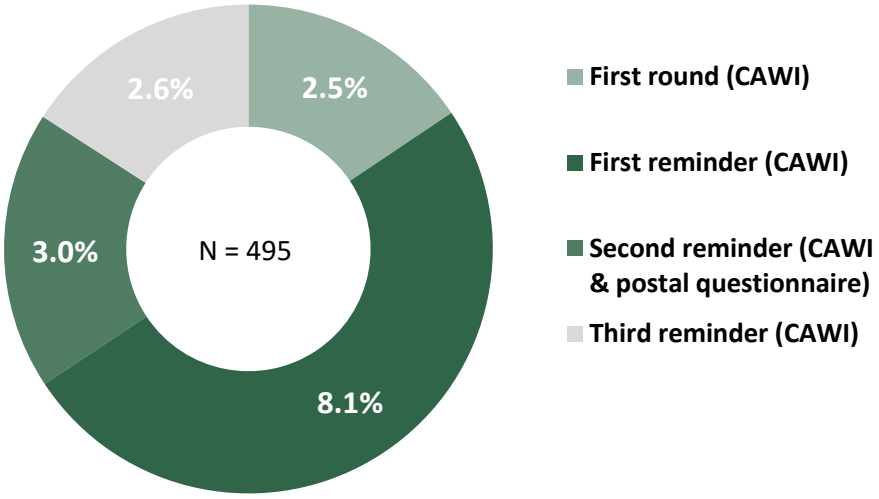
The response rate is the ratio between the number of firms providing complete answers to at least the first section of the questionnaire and the number of businesses sampled.

Questionnaires were sent to the management of the firm. Regarding the validity of the answers, as the participation to the survey was not mandatory, there would be no reasons to question the pertinence and honesty of the answers provided by the respondents. It would be assumed that managers could have refused to participate in the study, rather than providing false information.

In total 530 Swiss firms participated in the survey, which represents response rate of 16%.

The figure below shows the distribution of answers according to different waves of reminder. The majority of completed questionnaire were collected during the first reminder.

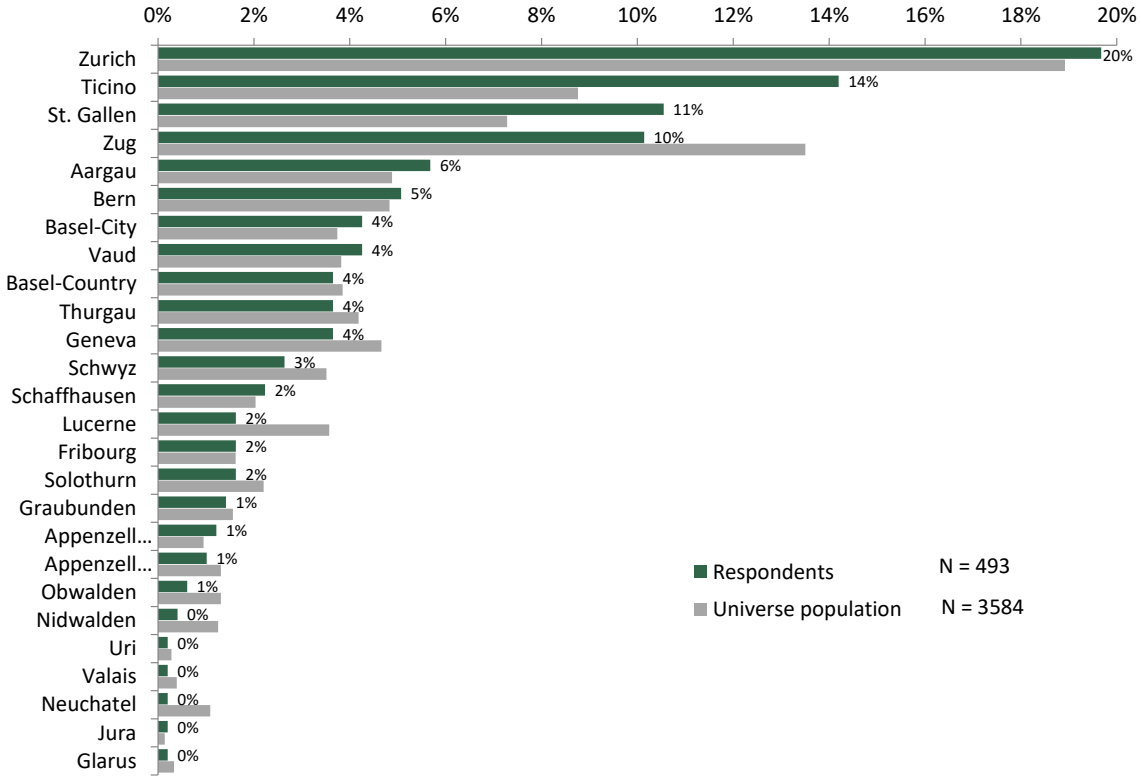
Figure 1 - Response rates by survey rounds. % on the total number of businesses sampled in each round.



1 Characteristics of responding firms[13]

1.1 Canton of location

Figure 2 - Respondents and universe population by canton of location. % of the total number of answers

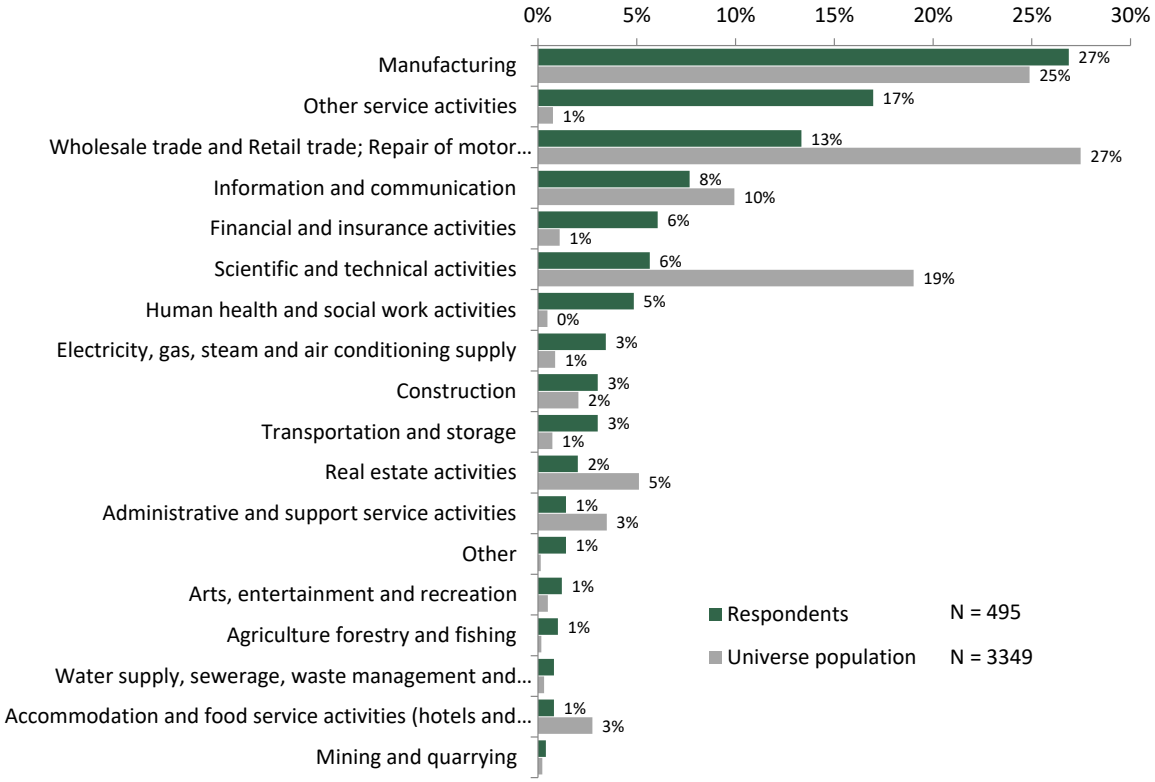


Zurich is the canton where the participation is the highest, following by Ticino and St-Gallen.

[13] The analyses included in this chapter are based on non-weighted data.

1.2 Economic sectors

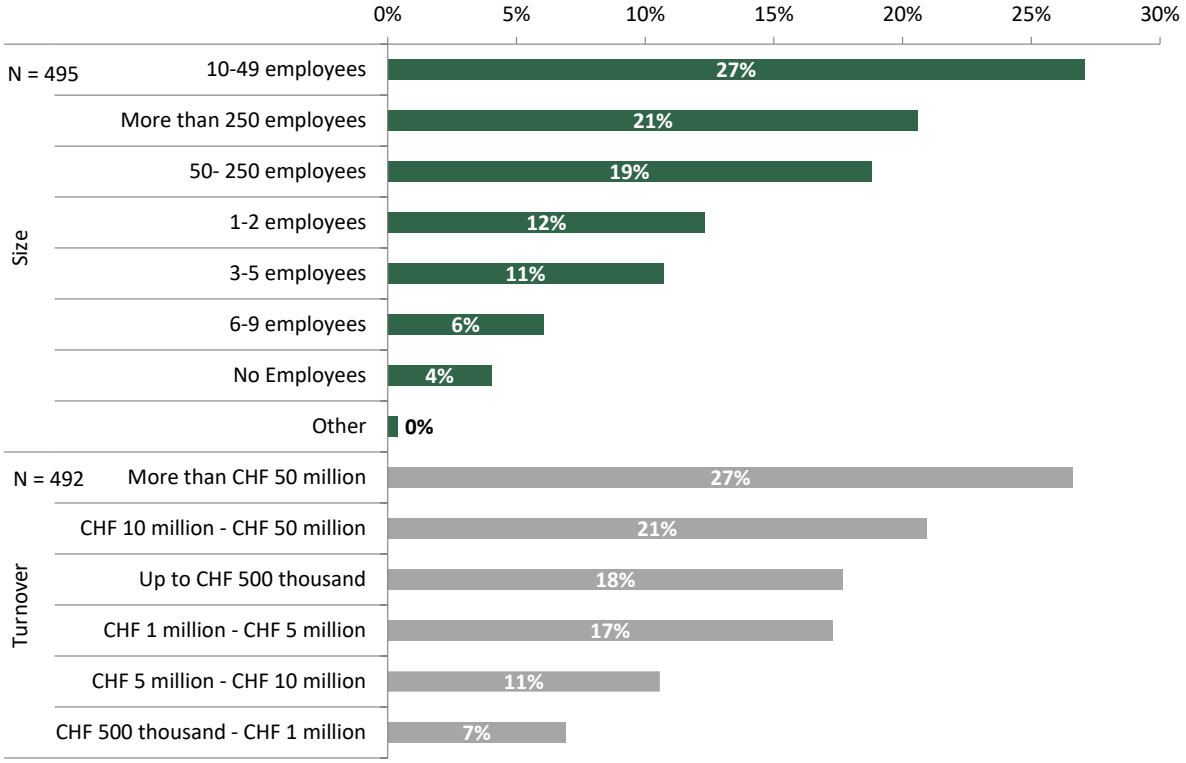
Figure 3 - Respondents and universe population by economic sector. % on the total number of answers



27% of the responding firms belong to the manufacturing activities, following by "other service activities" mentioned as "consulting services or marketing firms" (17%), wholesale trade and retail trade activity (13%), information and communication (8%).

1.3 Size and average annual turnover of the business

Figure 4 - Respondents by size of the business (number of employees) and average annual turnover. % of the total number of answers

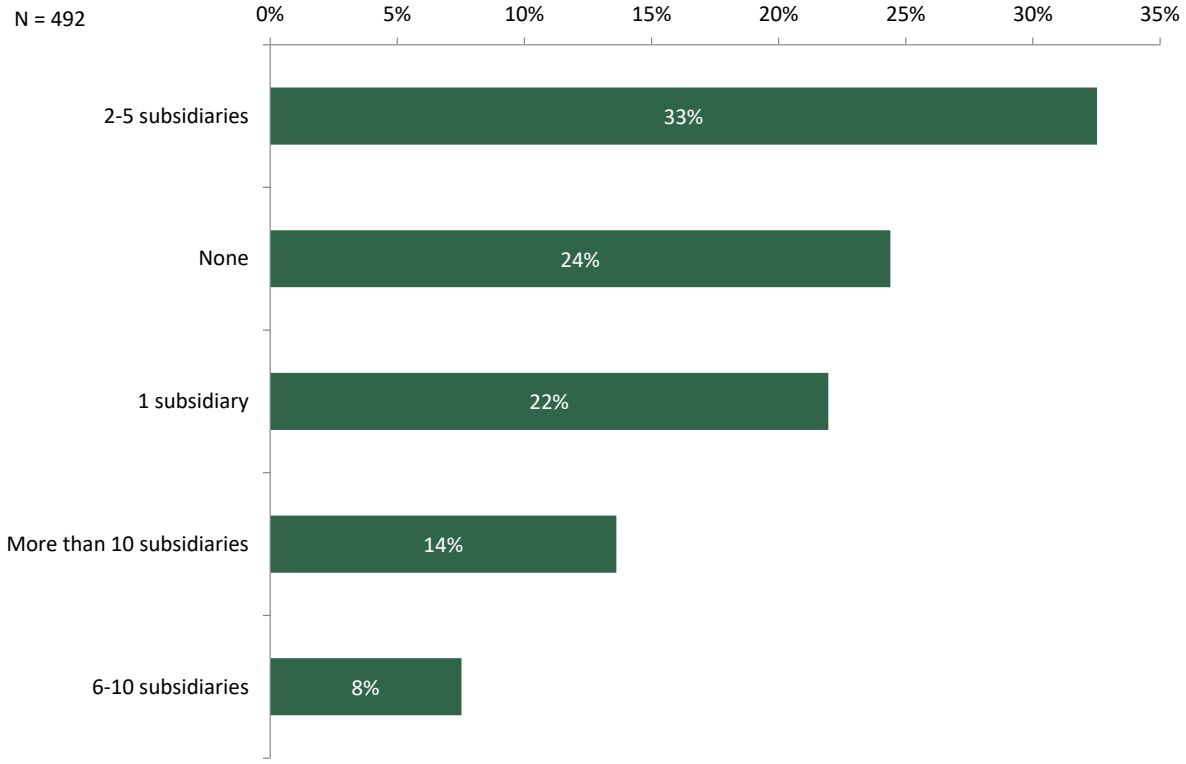


27% of the responding firms employ between 10 and 49 employees. Large firms with more than 250 employees are 21% to have participated in the survey, 19% of them have between 50 and 250 employees. 33% of the responding firms are small firms with up to nine employees.

Regarding the turnover, 27% of the responding firms have an annual turnover of more than CHF 50 million, 21% with a turnover between CHF 10 and CHF 50 million, 17% have a turnover between CHF 1 and CHF 5 million. Responding firms are, in this study, larger firms.

1.4 Number of subsidiaries abroad

Figure 5 - Respondents by number of subsidiaries of the company. % of the total number of answers



33% of the responding firms have two to five subsidiaries abroad, 22% with only one subsidiary. Although we have selected only firms with subsidiaries abroad according to the database ORBIS, 24% of the responding firms mentioned that they have none. Firms with more than ten subsidiaries abroad are 14% to have participated in the study.

1.5 Foreign region of the most frequent business

*Figure 6 - Foreign regions where **responding firms** have the most frequent and regular business activities. % on the total number of answers*

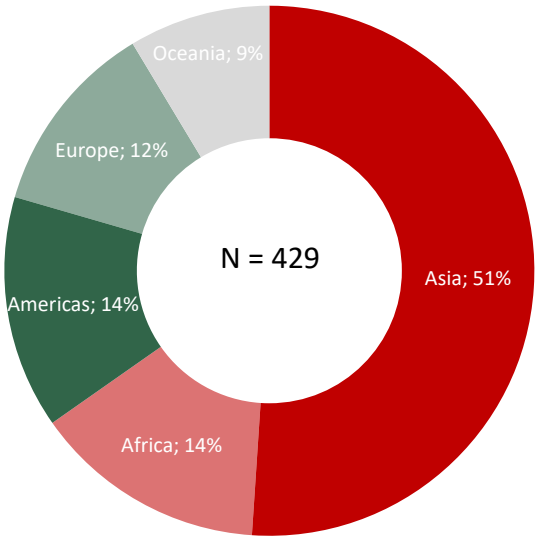
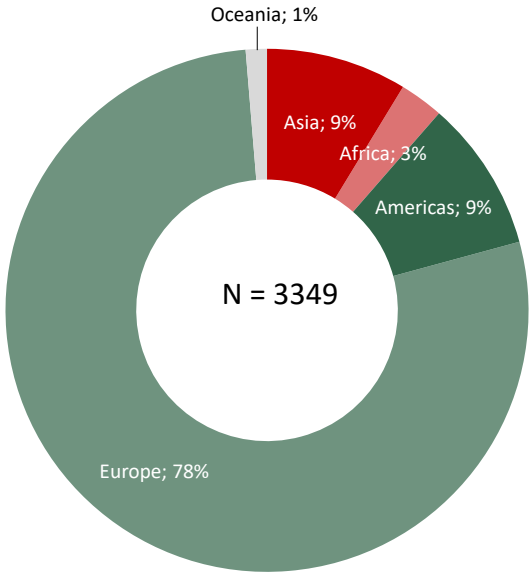


*Figure 7 - Foreign regions where **Swiss firms** do business. % on the total number of Swiss firms with at least one subsidiary abroad*



In Figure 6, Asia is the region where responding firms have the most frequent and regular business activities (51%), following by America (14%), Africa (14%), Europe (12%) and Oceania (9%).

Figure 7 indicates the foreign regions where Swiss firms do business in general. In this case, Europe is the continent where the large majority of activities is located (78%), following by Asia (9%), America (9%) and Africa (3%).

Figure 8 - Foreign sub-regions where responding firms have the most frequent and regular business activities. % on the total number of answers

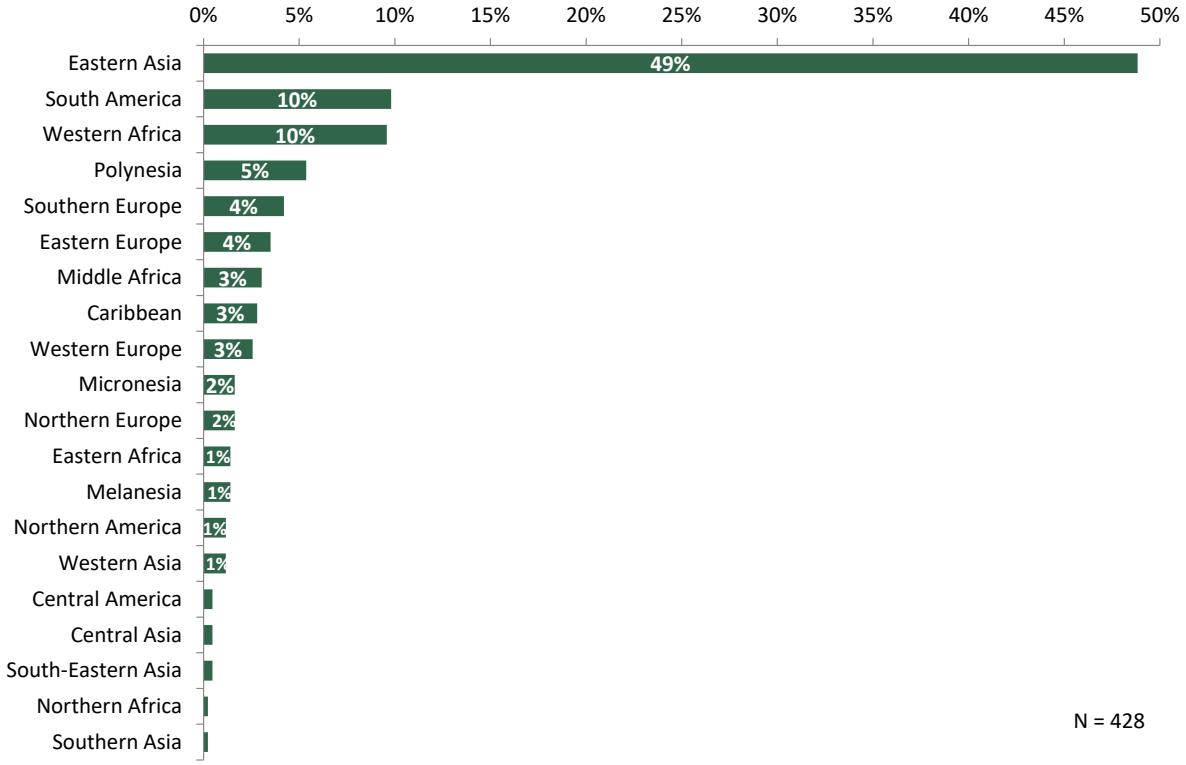
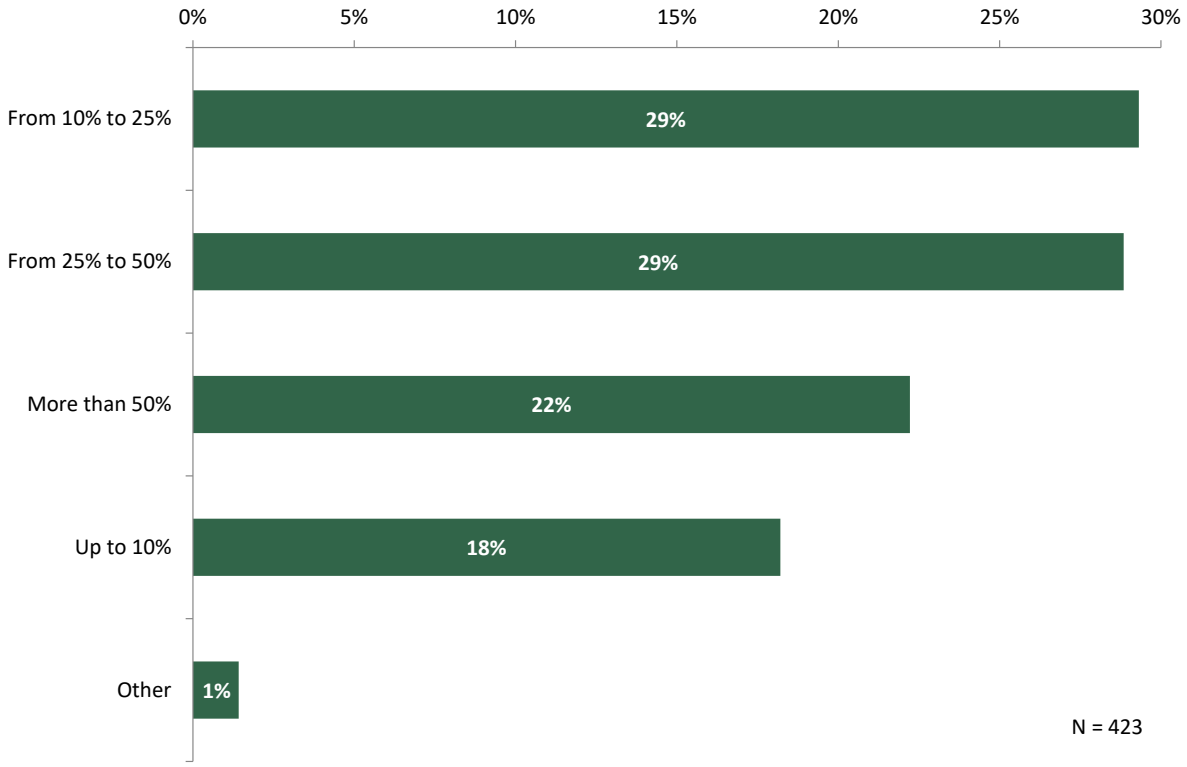


Figure 8 indicates the foreign sub-regions where responding firms have the most frequent and regular business activities. Almost half of the responding firms have business in Eastern Asia, following by South America (10%) and Western Africa (10%).

1.6 Percentage of revenue abroad

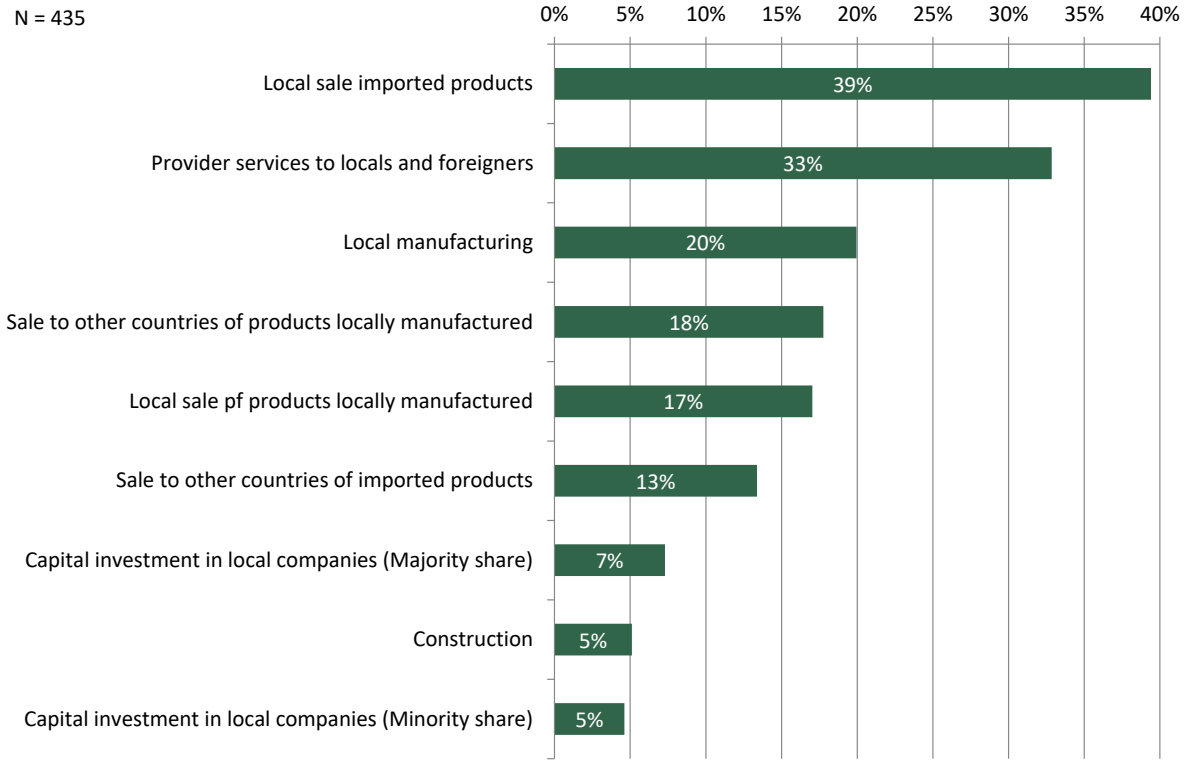
Figure 9 - Percentage of Swiss companies' average annual revenue in the foreign country where they have the most regular and frequent business



Regarding the percentage of revenue abroad as shown in Figure 9, 29% of the responding firms generate from 10 to 25% of their revenue abroad, 29% from 25 to 50% and 22% of the firms have more than half of their revenue/investment abroad.

1.7 Type of business activity in the foreign region

Figure 10 - Type of activities of responding firms in the foreign country where they have the most regular and frequent business. % of the total number of answers



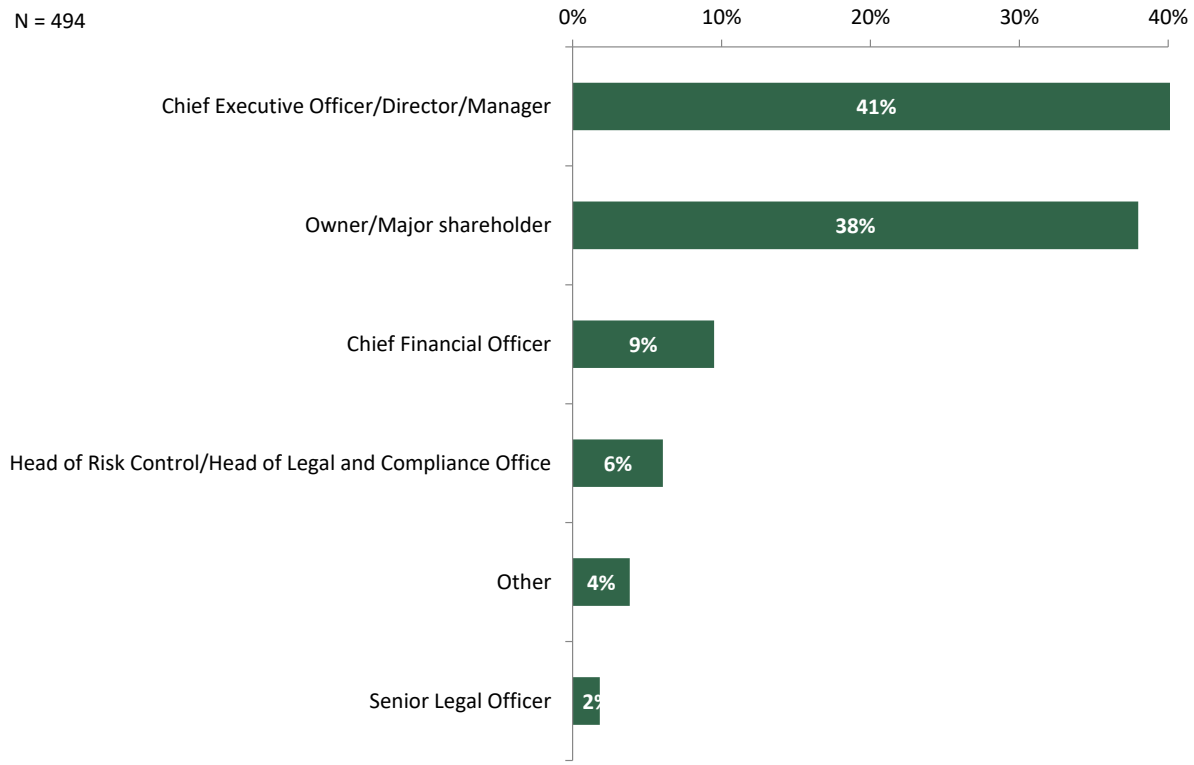
Almost 40% of the responding firms sell local imported products, 33% are providers of services to locals and foreigners, 20% are in local manufacturing, 18% of the firms sell locally manufactured products; 17% of them practice local sale of locally manufactured products. 13% of the firms sell imported products to other countries. Firms in the construction business are 5% to have participated in the survey.

2 Characteristics of the responding persons in charge of the questionnaire's completion[14]

2.1 Hierarchical position

The CEOs, Directors are 41% to have completed the questionnaire.
38% of the questionnaires were completed by the owner or the major shareholder of the firm.
9% of the answers came from the Chief Financial Officers, 6% are from the Head of Risk Control/Legal or Compliance Office.

Figure 11 - Respondents by their hierarchical position in the company. % of the total number of answers



[14] The analyses included in this chapter are based on non-weighted data.

2.2 Language and length of service in the company

Figure 12 - Language of the compiled questionnaire. % on the total number of answers

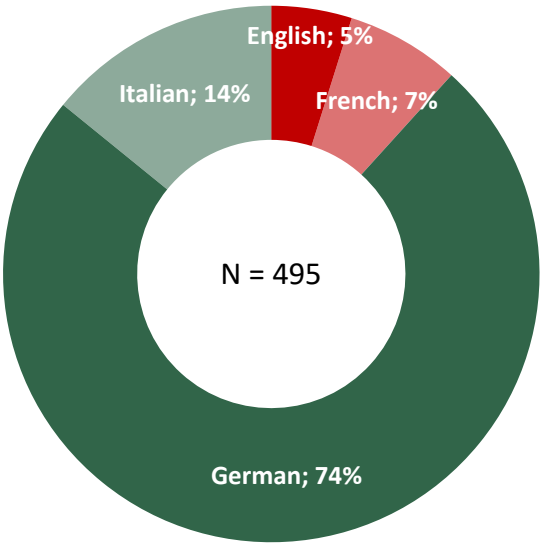
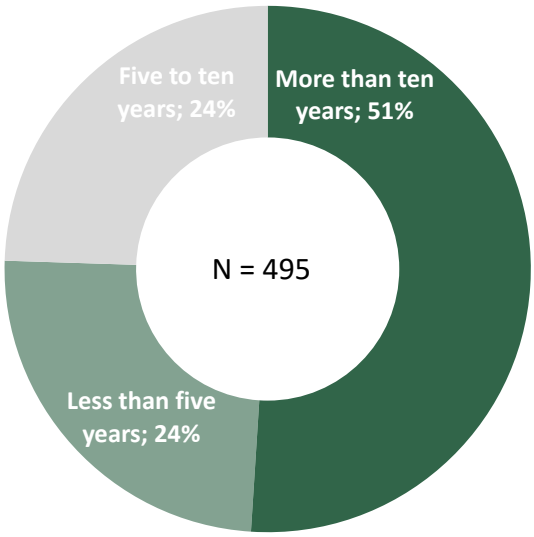


Figure 13 - Length of service of respondents. % on the total number of answers

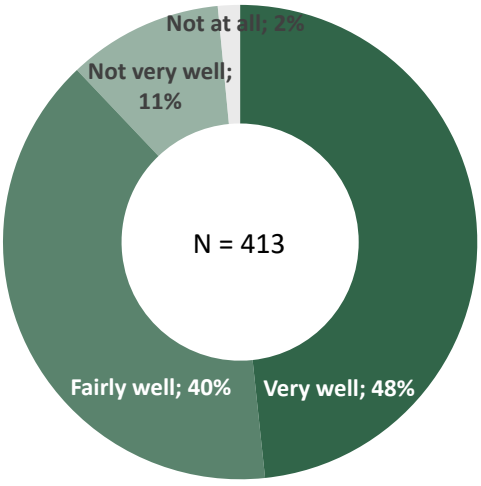


The majority of the questionnaire were completed in German (74%), following by Italian (14%), French (7%) and English (5%). 51% of the respondents have been working for the company for more than ten years, 24% between five to ten years and 24% less than five years.

2.3 Knowledge of the foreign country where their firm have business activities

79% of respondents stated they have been at least once in the foreign country where their company had the most regular and frequent business activities. 48% among them know very well the country, 40% of them know it fairly well and only 11% know the foreign country not very well.

Figure 14 - Knowledge of the country where the company have the most regular and frequent business activities



MAIN FINDINGS OF THE SURVEY[15]

This chapter presents the main findings of the Swiss International Corruption Survey (SICS) and is organized in five main sections:

- ✓ SECTION 1: Analysis of bribe requests from both public authorities and private entities, through both descriptive and inferential statistics, as well as corruption risk factors.
- ✓ SECTION 2: Main obstacles perceived by Swiss companies while doing business abroad and factors influencing this perception.
- ✓ SECTION 3: Perception of corruption of Swiss firms while facing this dilemma abroad and factors influencing this issue.
- ✓ SECTION 4: Main anti-corruption measures adopted by Swiss companies and variables influencing the adoption of specific measures.
- ✓ SECTION 5: Report of the Face-to-Face interviews.

SECTION 1

1 Analysis of bribe requests from public authorities and private entities and detection of risk factors

Introduction

SECTION 1 is organized as follows:

(1) Prevalence of bribe requests (from public authorities and private entities)
(2) Concentration and incidence of bribery
(3) Characteristics of the most serious incident occurred between 2013 and 2015
(4) Risk factors of bribe requests

Three different bribery counts are essential to understanding bribery levels and patterns:

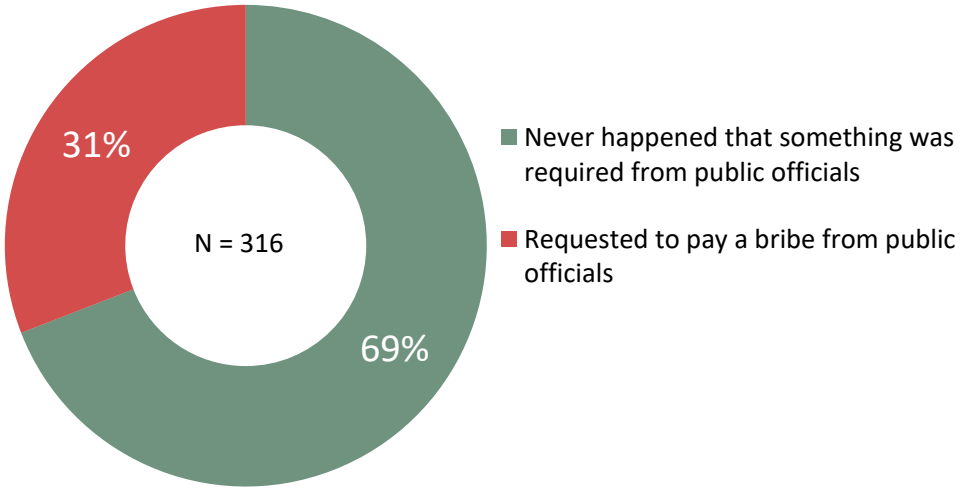
- ✓ **Prevalence of Bribery** refers to the proportion of people (or targets, e.g. households, businesses, properties or cars), in a specific area, who are victimized at least once during a given period of time. For instance, among Swiss firms that had contacts with public officials, 69% have been requested to pay a bribe between 2013 and 2015. *Prevalence rate = number of victims divided by the number of potential targets.*
- ✓ **Concentration of Bribery** refers to the number of incidents per victim. For instance, each company requested/expected to pay a bribe experienced in average more than one request between 2013 and 2015. *Concentration = number of crimes incidents divided by the number of victims.*
- ✓ **Incidence of Bribery** is the product of crime prevalence and crime concentration. It refers to the number of bribe incidents that have occurred in a given area. Incidence is usually expressed as a rate per population (or per business).

[15] The analyses included in this chapter are based on weighted data.

1.1 Prevalence of bribe requests

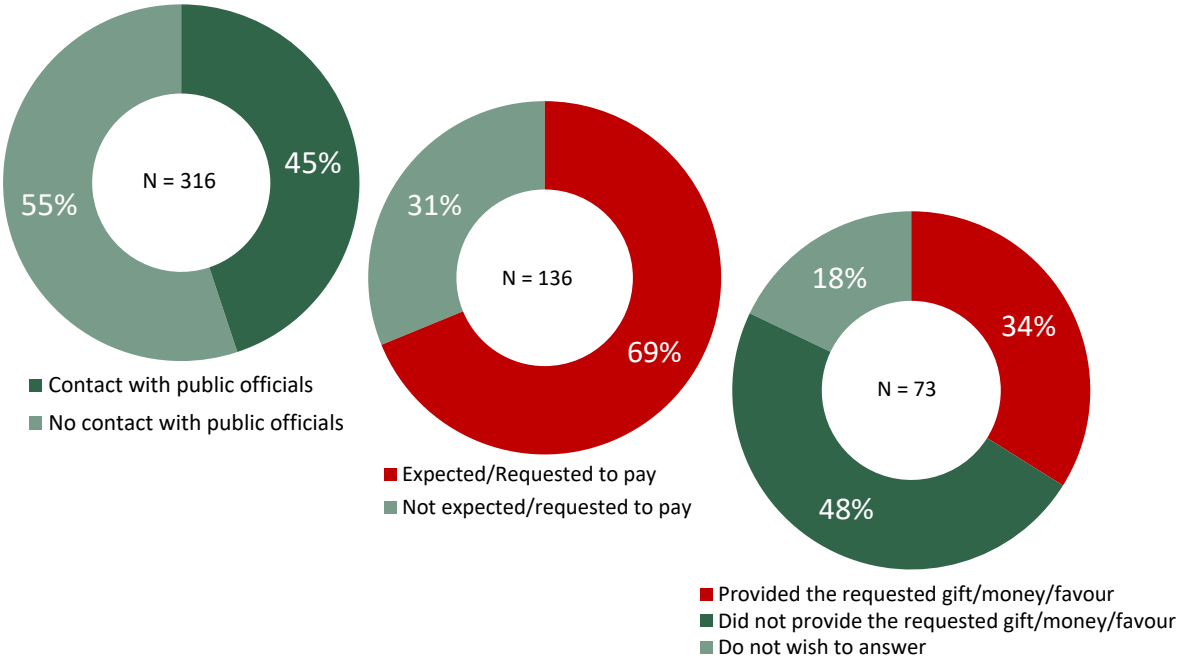
1.1.1 *Bribe requests by public officials*

Figure 15 - Prevalence of bribe requests by public officials. % on the number of respondents. Years 2013-2015



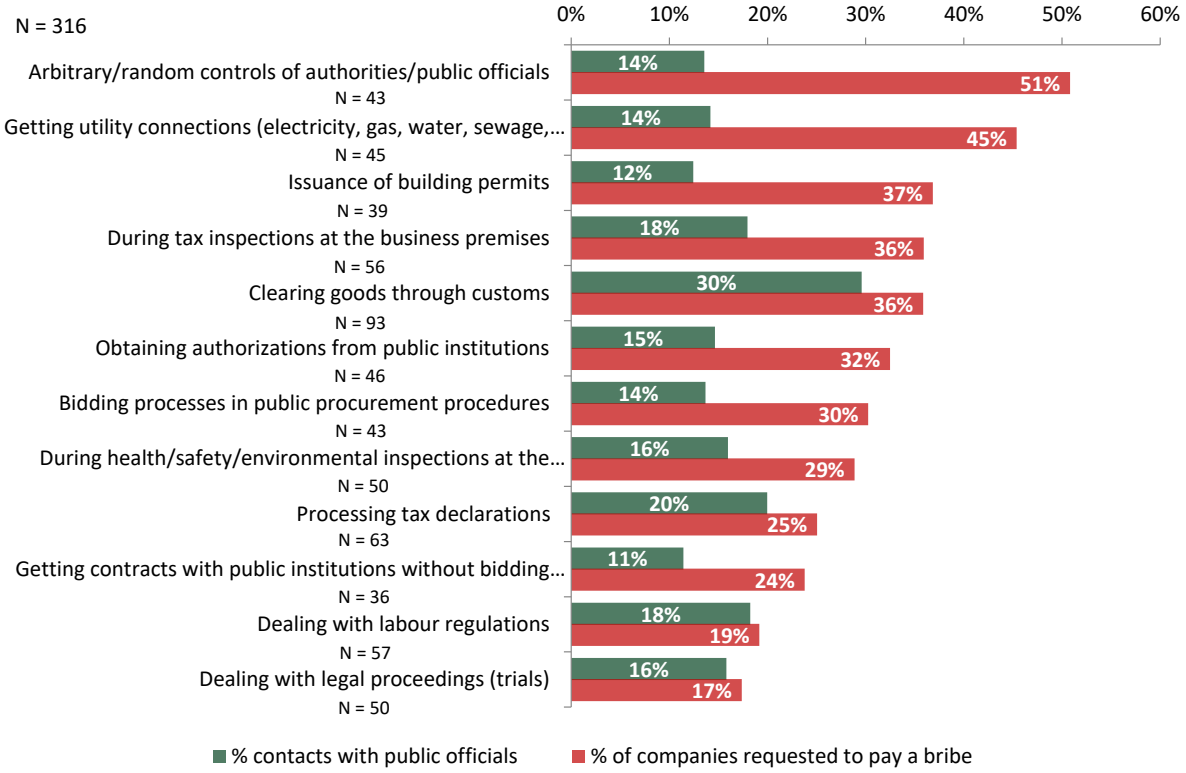
31% of responding companies declared that they have been requested by a public official to pay a bribe while doing business abroad between 2013 and 2015. This percentage refers to all companies answering the survey, regardless of those who have never had any contact with a public official. The chart below shows the percentage of companies requested to pay a bribe only among those companies who had at least one contact with a public official.

Figure 16 - Contacts with public officials (% on the total number of respondents); bribe requests by public officials (% on the total number of companies who had a contact with a public official) and companies who provided the requested bribe (% on the total number of companies requested a bribe). Years 2013-2015



Among Swiss responding firms, 45% had at least one contact with a public official abroad during the past three years. Among those that had contacts with a public official, 69% were requested to pay a bribe. Among those that were requested, 34% provided the requested bribe, 48% did not and 18% did not wish to answer this question.

Figure 17 - Contacts with public officials (% on the total number of respondents) and bribe requests (% on the total number of companies who had a contact with a public official) by type of business procedure. Years 2013-2015



As shown Figure 17, among firms having contacts with public officials, 51% have been asked to pay a bribe during some random controls of authorities, or during a tax inspection (36%). The types of operations during which bribe requests are the most common are while the firms try to obtain some utility connections (45%), a building permit (37%), or an authorization from a public institution (32%), to clear goods through customs (36%), during a bidding process (30%), a health/environmental inspection (29%).

In Figure 18, 26% of the bribe requests are from custom officers, following by municipal or provincial officers (22%), tax officers (13%), inspection officials (10%), police officers (6%).
Figure 19 indicates the bribe requests by region. Although only 19% of the responding firms have regular business operations in Europe, 82% of bribe requests emanate from Europe. Among the 15% of firms having business with Africa, 32% have experienced bribe requests in this region. 13% of firms have been asked for bribes in Asia among 44% of those operating in Asia.

Figure 18 - Bribe requests by type of public official. % on the total number of companies requested a bribe by a public official. Years 2013-2015

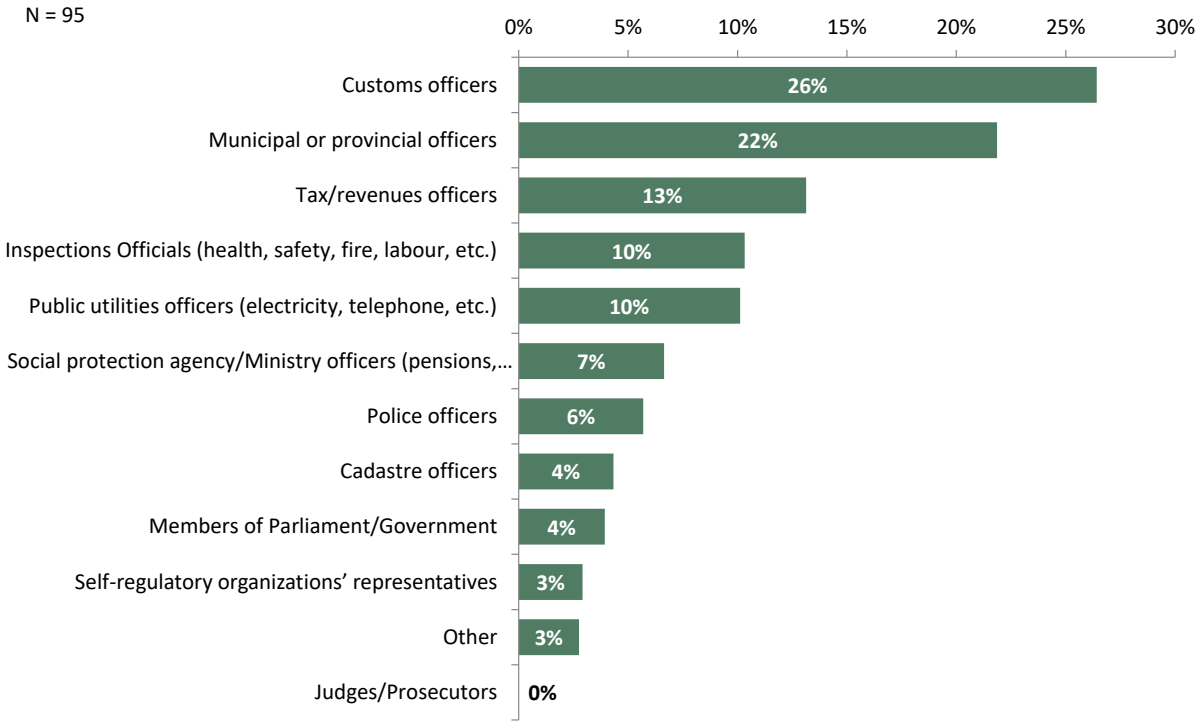
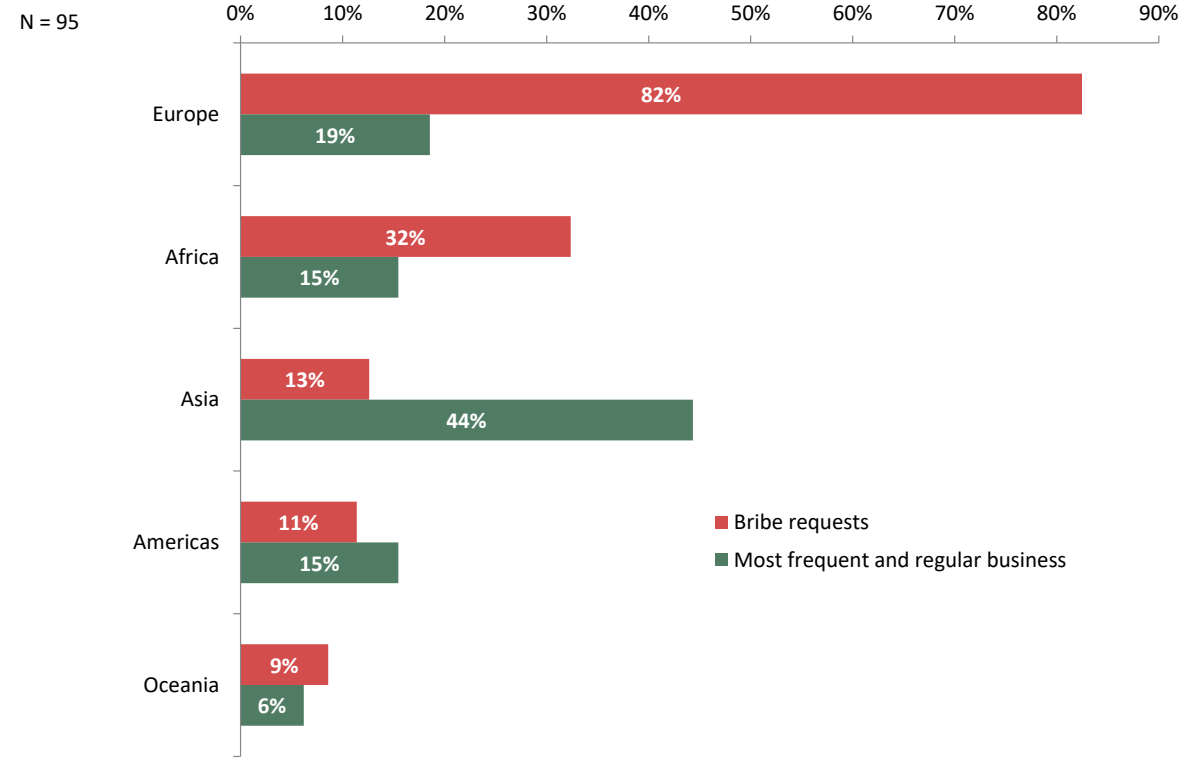
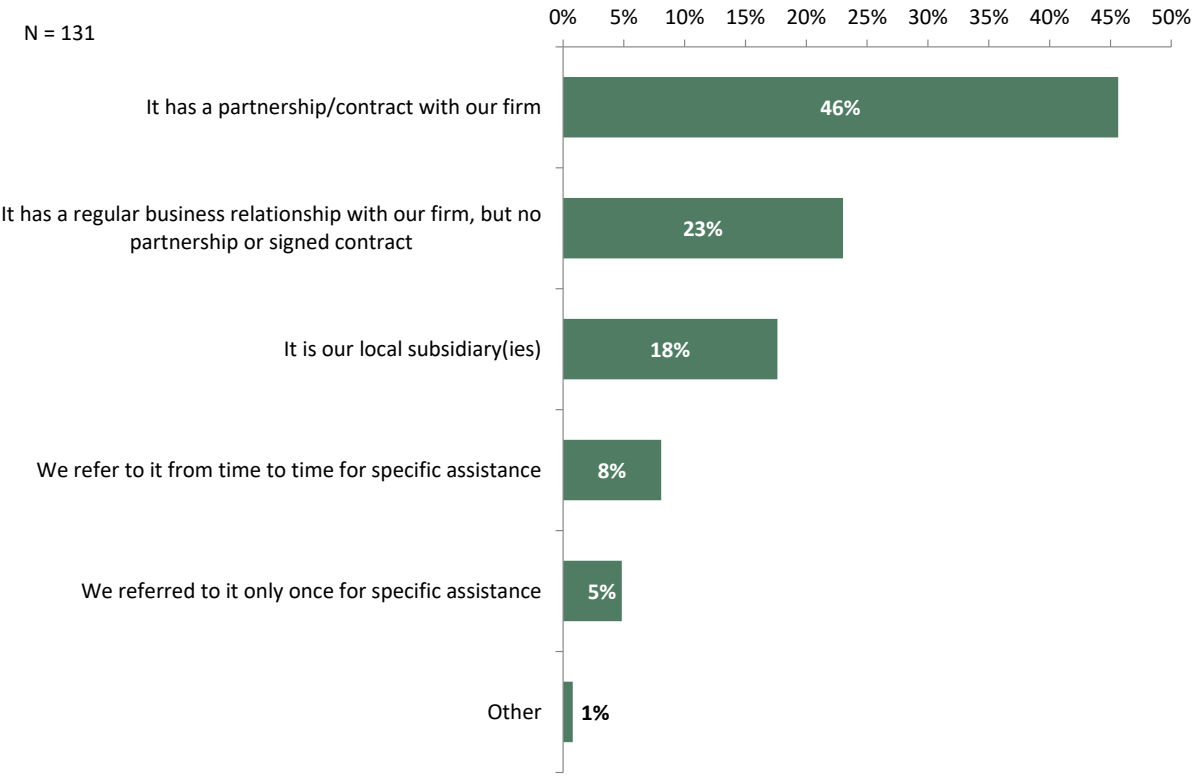


Figure 19 - Bribe requests by region. % on the total number of companies requested a bribe by a public official. Years 2013-2015



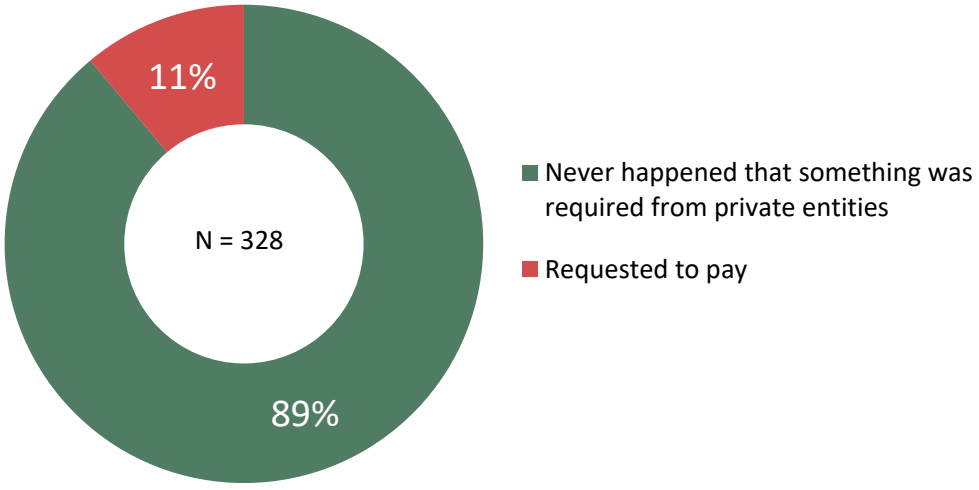
1.1.2 Bribe requests by private entities

Figure 20 - Type of private entities in contact with Swiss companies abroad. % on the total number of companies in contact with private entities abroad. Years 2013-2015



Almost half of the private entities in contact with Swiss firms abroad have a partnership or contract with the latter (46%), 23% has a regular business relationship but no signed contract, 18% represent the local subsidiary of the firm, 8% are in contact with the firm for specific assistance from time to time and 5% are referred to for only one time.

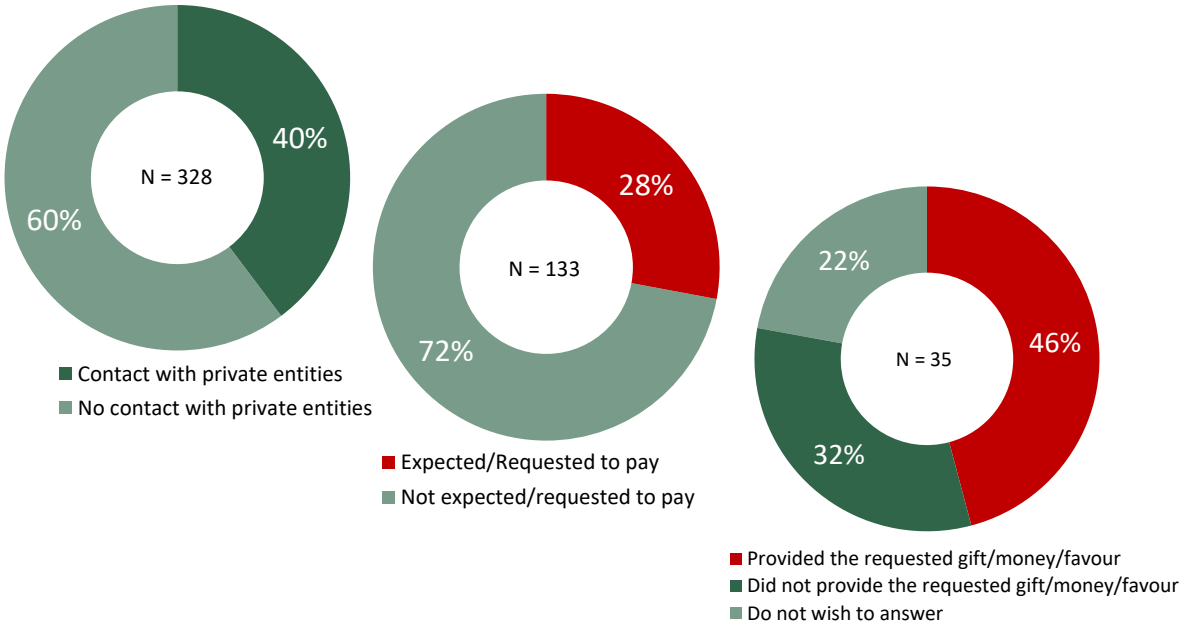
Figure 21 - Prevalence of bribe requests by private entities. % on the total number of respondents. Years 2013-2015



11% of the responding firms have been asked to pay a bribe by a private entity while doing business abroad between 2013 and 2015. This percentage refers to all companies answering the survey, regardless of those who have never had any contact with a private entity.

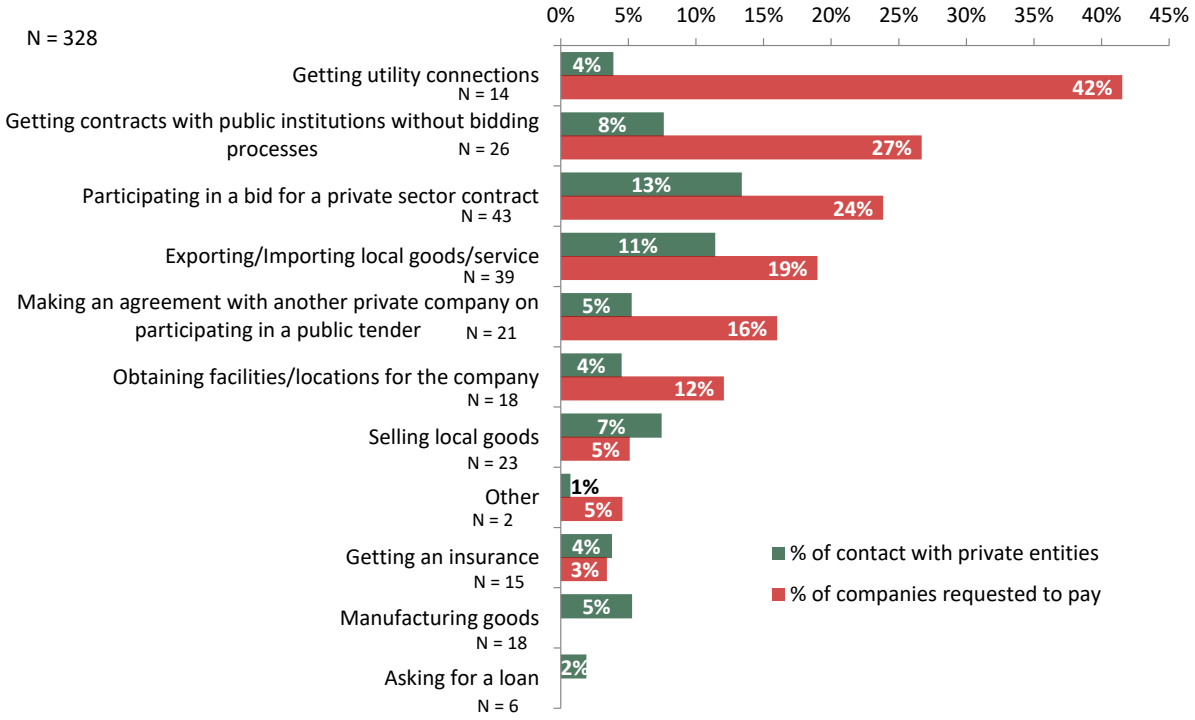
The chart below shows the percentage of firms requested to pay a bribe among those that had at least one contact with a private entity.

Figure 22 - Contacts with private entities (% on the total number of respondents); bribe requests by private entities (% on the total number of companies who had a contact with a private entity) and companies who provided the requested bribe (% on the total number of companies requested to pay a bribe. Years 2013-2015



Among Swiss responding firms, 40% had at least one contact with a private party abroad during the past three years. Among those that had contacts with a private entity, 28% were requested to pay a bribe. Among those that were requested, 46% provided the bribe, 32% did not and 22% did not wish to answer this question.

Figure 23 - Contacts with private entities (% on the total number of respondents) and bribe requests (% on the total number of companies who had a contact with a private entity) by type of business procedure. Years 2013-2015



As shown Figure 23, among 4% of firms having contacts with private entities, 42% have been asked to pay a bribe when trying to obtain utility connections. Some business operations seem to be more exposed to bribe requests from private entities such as while trying to obtain contracts without bidding process (27%), or while participating in a bid for a private sector contract (24%), exporting/importing local products (19%) or during facilities/locations negotiations (12%).

1.2 Incidence and concentration of bribe requests

In Section 1.1, we analyzed c**rime prevalence of bribe requests.** In this Section 1.2., we will explore **the patterns of the crime incidence and concentration**.

With regard to the data of this survey, it was not possible to calculate the exact number of bribes per respondent and the exact number of bribes per victim because the variable "*How many times a gift/favor or extra-payment was expected/required while doing business abroad*" is not cardinal but categorical (including four categories: Once, Twice, 3-5 times, 6-10 times, 11-20 times and more than 20 times).

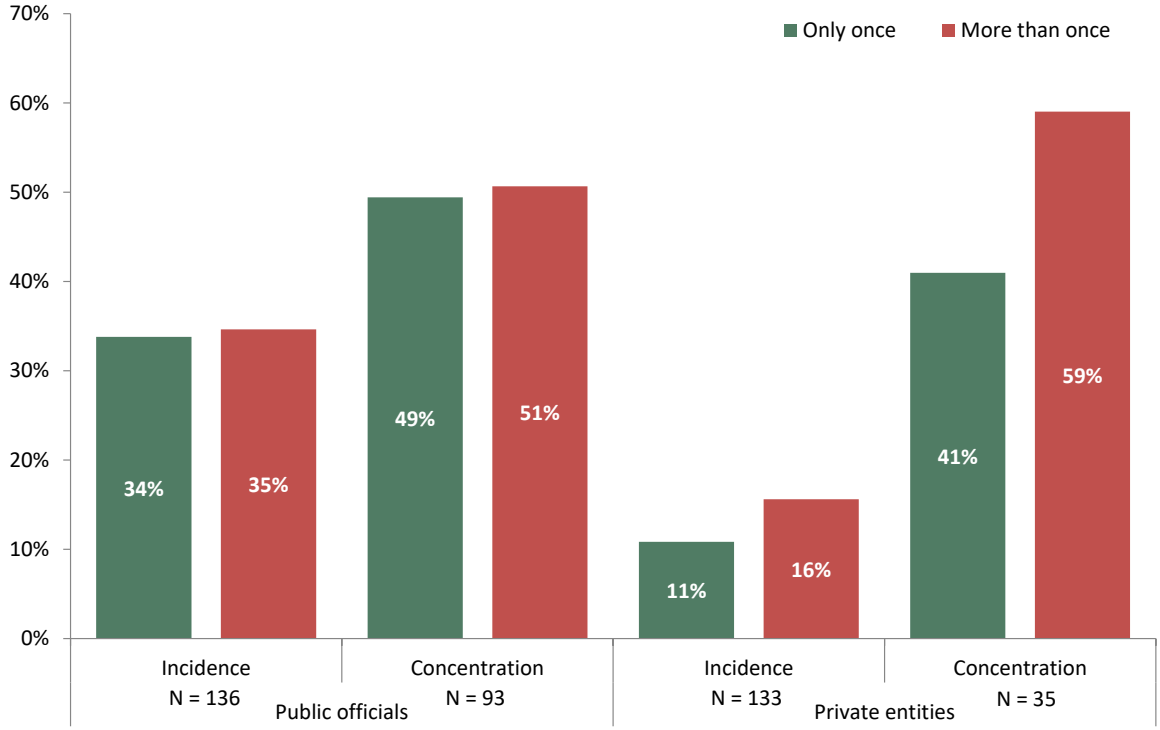
In this report, the **incidence**[16] **of corruption** is represented by the *ratio between the number of businesses requested to pay a bribe only "once" or "more than once" and the total number of companies which had at least one contact with a public official or private entity.*

[16] Average number of crimes for each respondent

The **concentration**[17] **of victimization** is represented by the *ratio between the number of businesses requested to pay a bribe only "once" or "more than once" and the total number of victims.* This measure also represents the level of multi-victimization for a given type of crime.

The figures below compare the incidence and concentration of bribe requests from public officials and private entities.

Figure 24 - Concentration and incidence of bribe requests by public officials and private entities. Years 2013-2015



With regard to the incidence of bribe, 35% of the responding firms in contact with public officials have been requested to pay a bribe more than once (against 34% who have been requested only once) between 2013 and 2014. Among those in contact with private entities, 16% have been requested more than once to pay a bribe (against 11% who have been requested only once).
With regard to the concentration of bribe, more than half of the responding firms that have been requested to pay a bribe between 2013 and 2015 were asked to pay more than once by both public officials and private entities. Repetitions of bribe requests are more likely to happen. These figures demonstrate that multi-victimization is frequent and that firms once victims of bribe requests are more likely to become targets of repetitive requests.

[17] Average number of crimes for each victimized business.

Figure 25 - Concentration of bribe requests by public officials. % on the total number of companies requested a bribe by a public official. Years 2013-2015

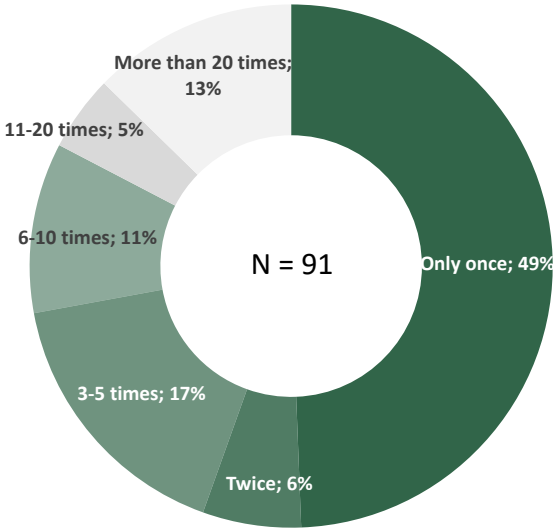
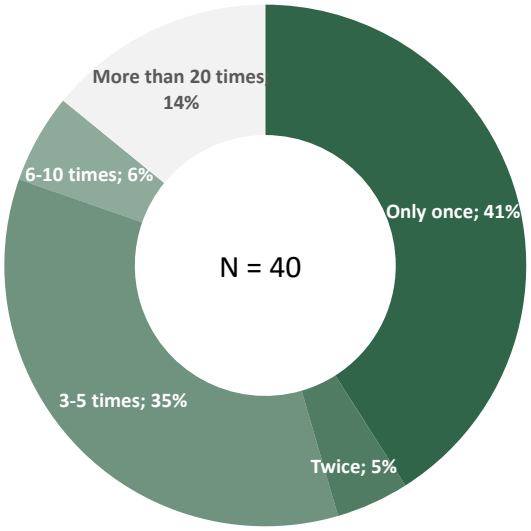


Figure 26 - Concentration of bribe requests by private entities. % on the total number of companies requested a bribe by a private entity. Years 2013-2015

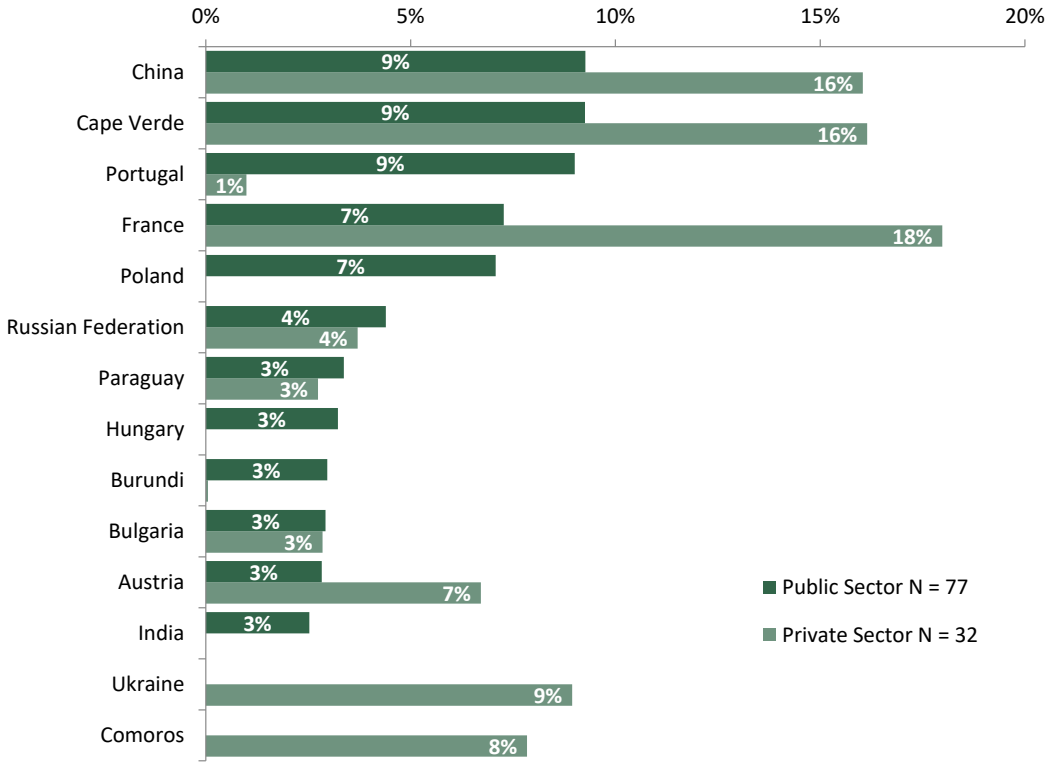


As indicate Figure 25 and Figure 26, responding firms are more likely to have experienced more than once bribe requests, respectively 51% from public officials and 59% from private entities.

1.3 The most serious incident of bribe request

1.3.1 *Country*

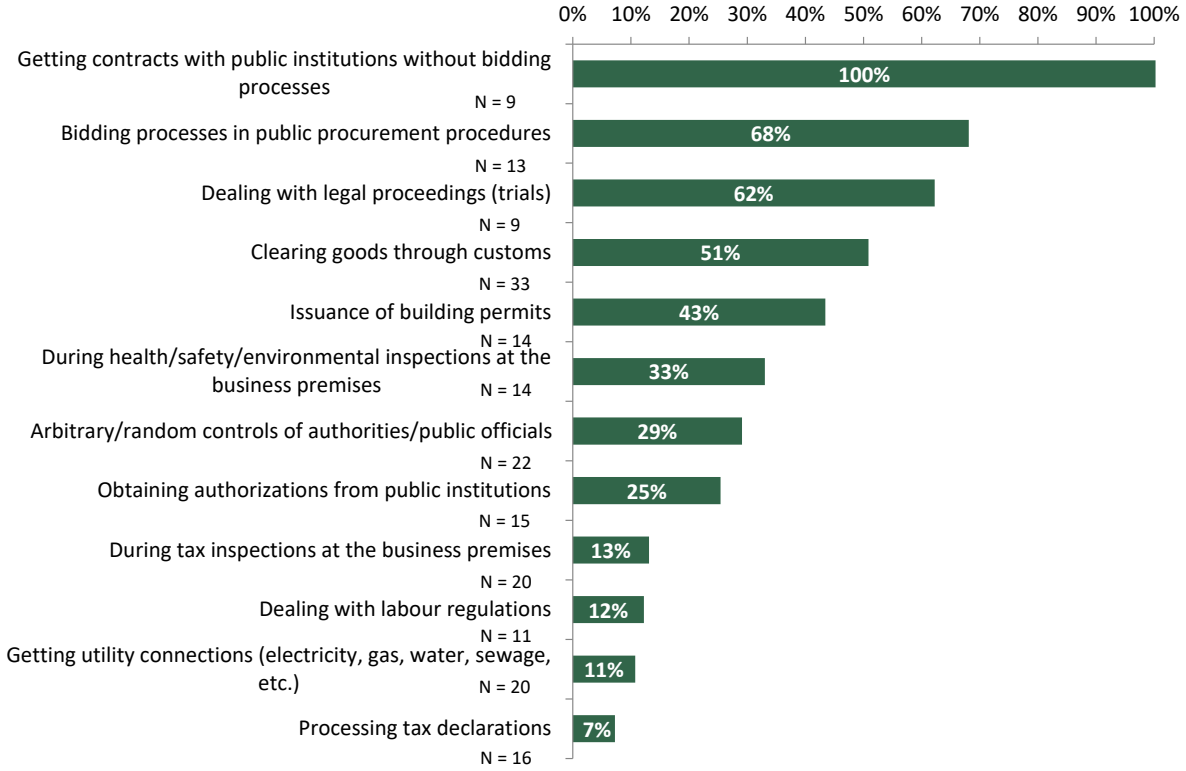
Figure 27 - Countries where the most serious bribe request took place. % on firms requested a bribe at least once. Years 2013-2015



According to the answers collected, as far as bribe requests from public authorities is concerned, China, Cape Verde and Portugal appear equally to be the countries where the most serious incident had happened (9%), following by France and Poland (7%). When it comes to bribes from the private third-party, France is the most often indicated (18%), following by China and Cape Verde (16%), Ukraine (9%) and Austria (7%).

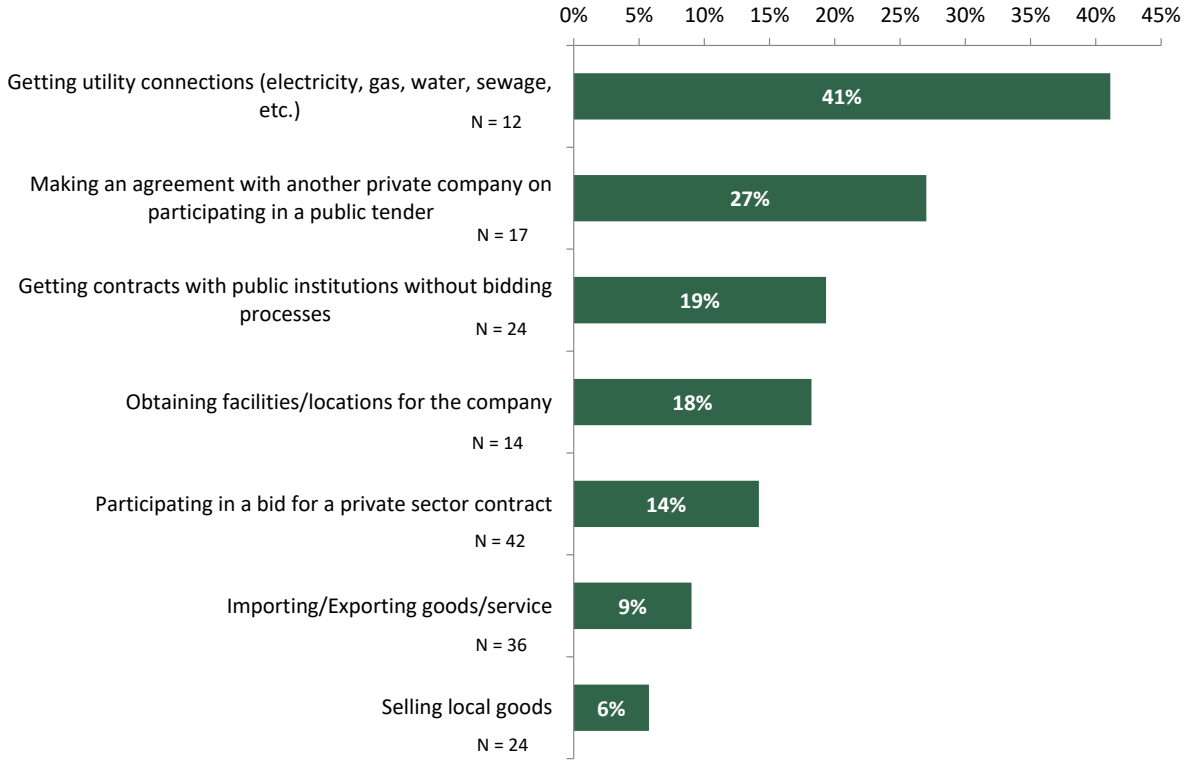
1.3.2 *Type of business operation*

Figure 28 - Business operations related to the most serious incident with public officials. % on firms requested a bribe at least once by type of operation



The most serious incident happened with public officials is most likely to be reported when getting contracts with a public institution (100%). Bidding related to public procurement procedures is quoted in 68% of the cases, following by legal proceedings operations (62%), customs clearing (51%), or building permit issuance (43%).

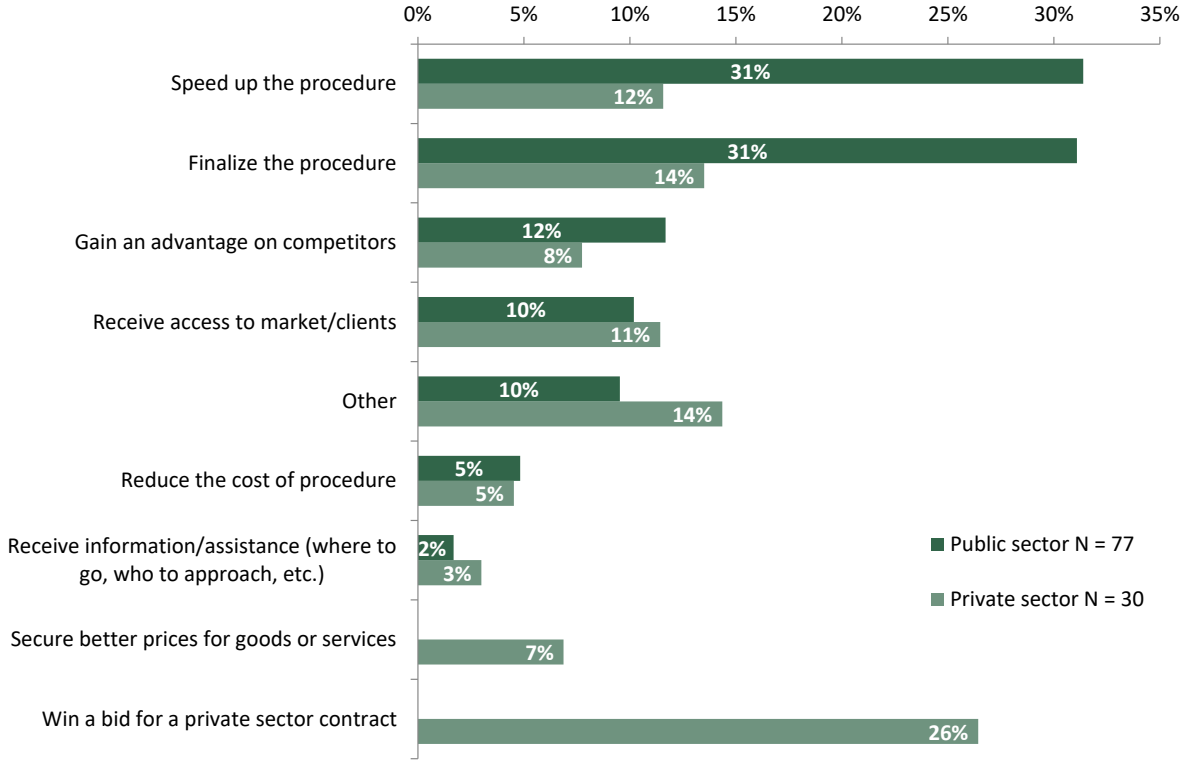
Figure 29 - Business operations related to the most serious incident with private entities. % on firms requested a bribe at least once by type of operation



The most serious incident with private entities is most likely to happen during some utility requests (41%), during a participation in a public tender (27%), or while obtaining contracts without a bidding process with a public institution (19%).

1.3.3 *Reasons of the bribe requested*

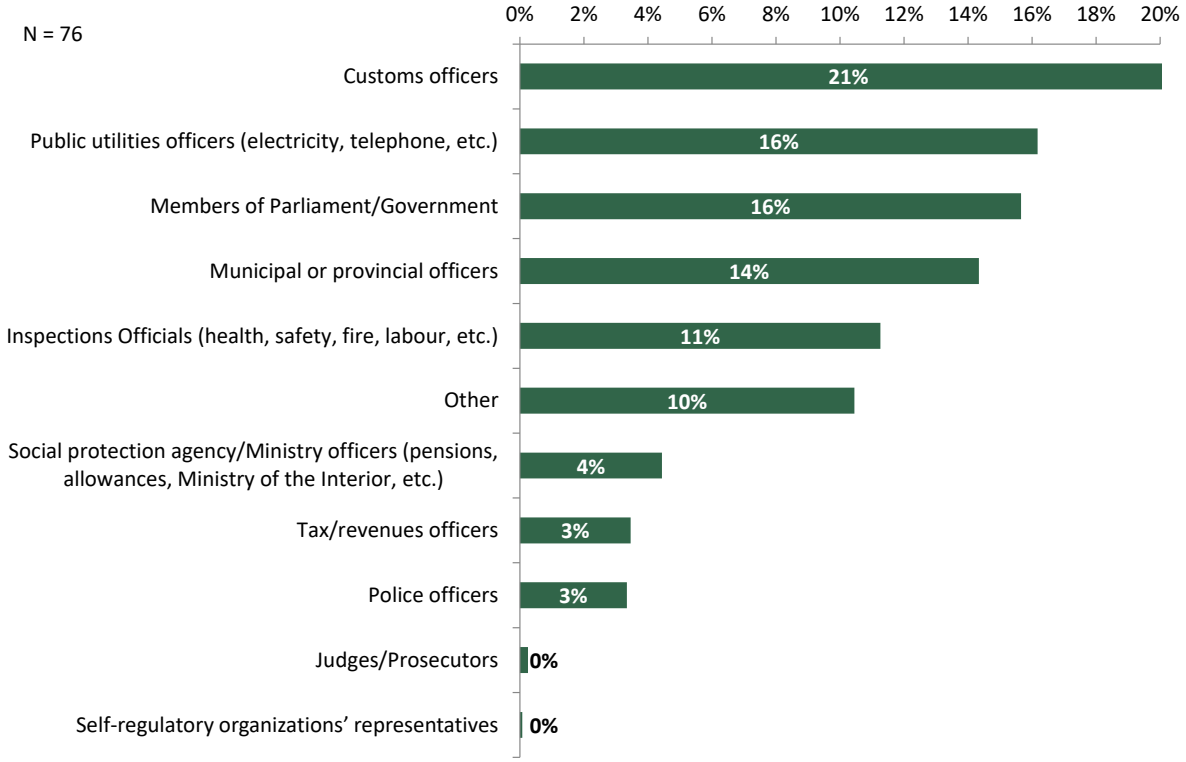
Figure 30 - Reasons of the most serious bribe request by public officials and private entities. % on firms requested a bribe at least once



For the most serious incident, requests from public officials are most likely to speed up a procedure (31%), to finalize it (31%), or to gain advantages on competitors (12%).Bribe requests by a private party have more or less the same motivations but with a lower percentage comparing to the ones requested from public officials – win a bid for a private sector contract (26&%), speed up a procedure (12%), finalize a procedure (14%), receive access to market/clients (11%).

1.3.4 *Type of public official involved*

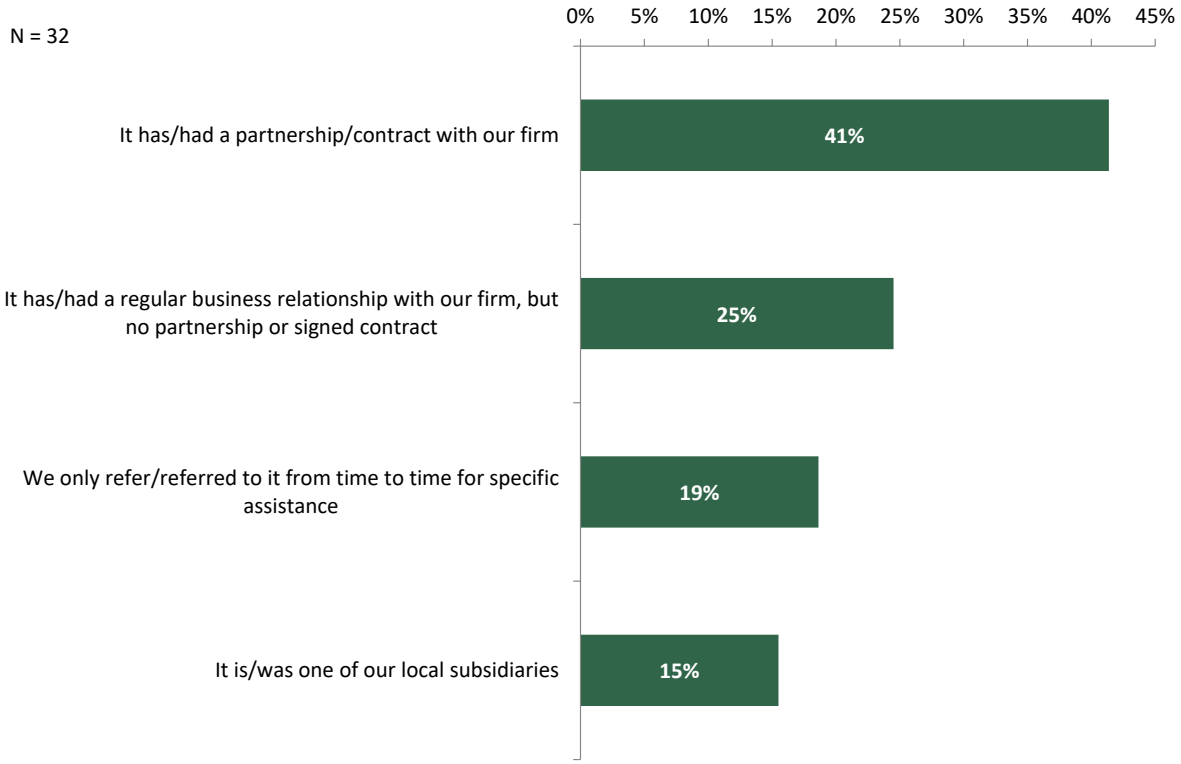
Figure 31 - Public officials involved in the most serious incident. % on firms requested a bribe at least once. Years 2013-2015



Custom officers are the most likely to be quoted in the serious incident (21%), following by public utilities officers (16%), members of Government and Parliament (16%), municipal officers (14%), inspection officials (11%).

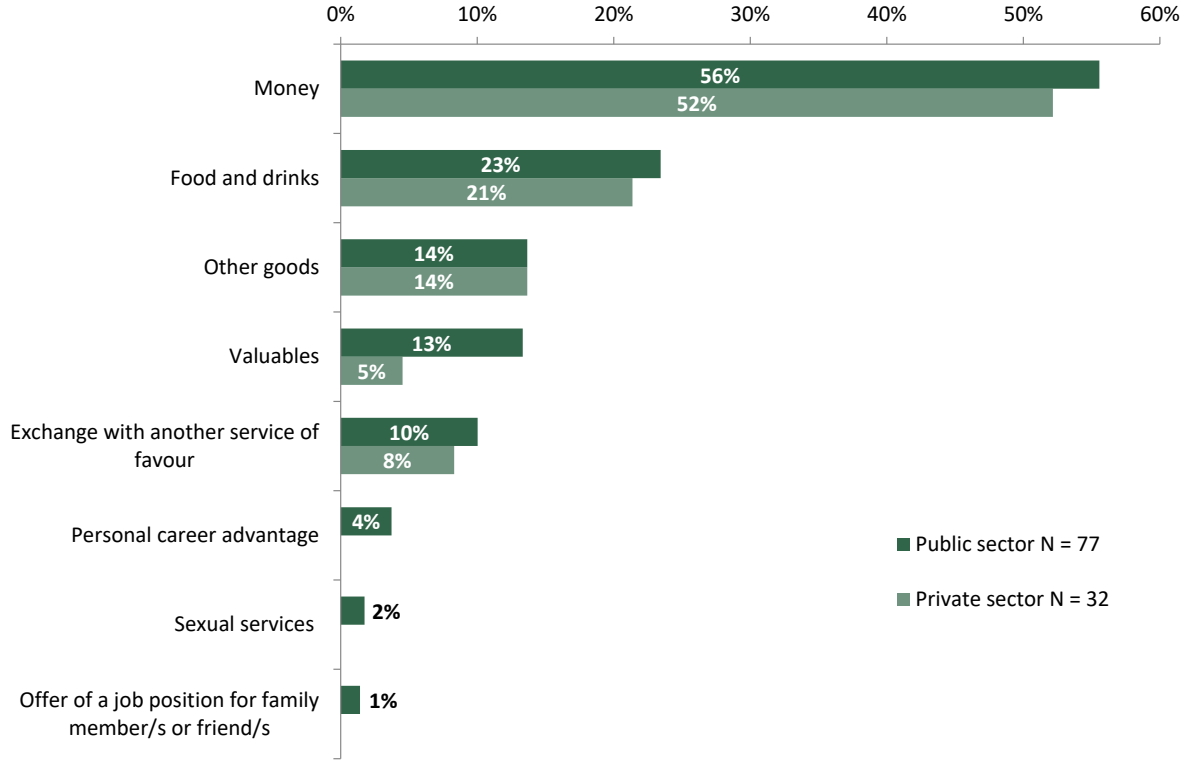
1.3.5 *Type of private entity involved*

Figure 32 - Type of private entities involved in the most serious incident. % on firms requested a bribe at least once. Years 2013-2015



1.3.6 *Type of bribe requested*

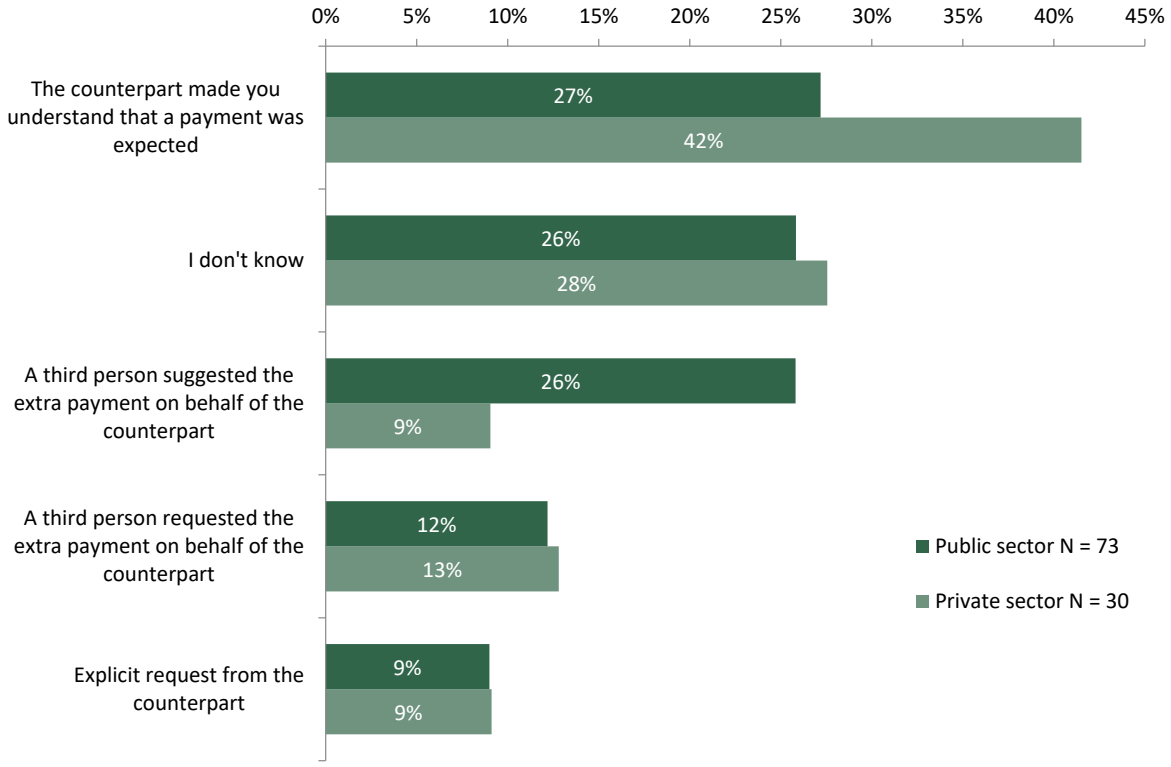
Figure 33 - Type of bribe requested during the most serious incident. % on firms requested a bribe at least once. Years 2013-2015



From both public officials and private parties, money are the most likely to be requested in the most serious incident, respectively 56% and 52%. Food and drinks and other goods are also common in bribe requests.

1.3.7 *How the bribe was requested*

Figure 34 - How was the bribe requested during the most serious incident? % on firms requested a bribe at least once. Years 2013-2015



Bribes from the private party are most likely requested implicitly (42%) or some third person requests the extra payment on behalf of the counterpart (13%); 9% of the firms declare that the request was explicit from the counterpart. With regard to public officials the rate of implicit bribe requests is lower (27%), but the one of explicit bribes is the same (9%) as that of private entities.

1.3.8 *With or without intermediary*

Figure 35 - Involvement of an intermediary in the bribe request by public officials. % on firms requested a bribe at least once by a public official. Years 2013-2015

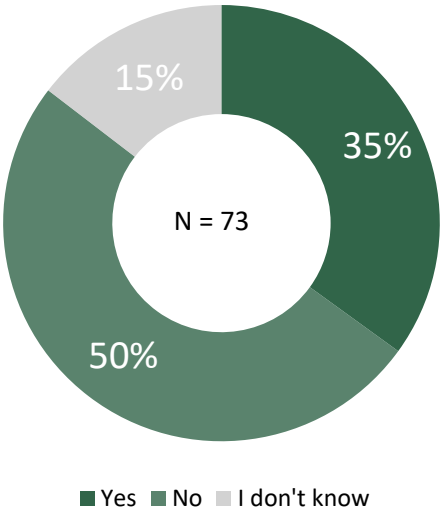
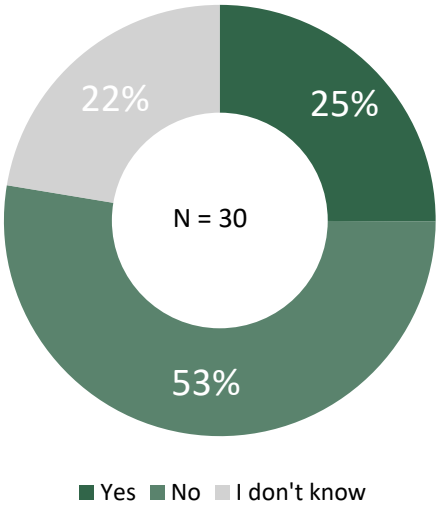


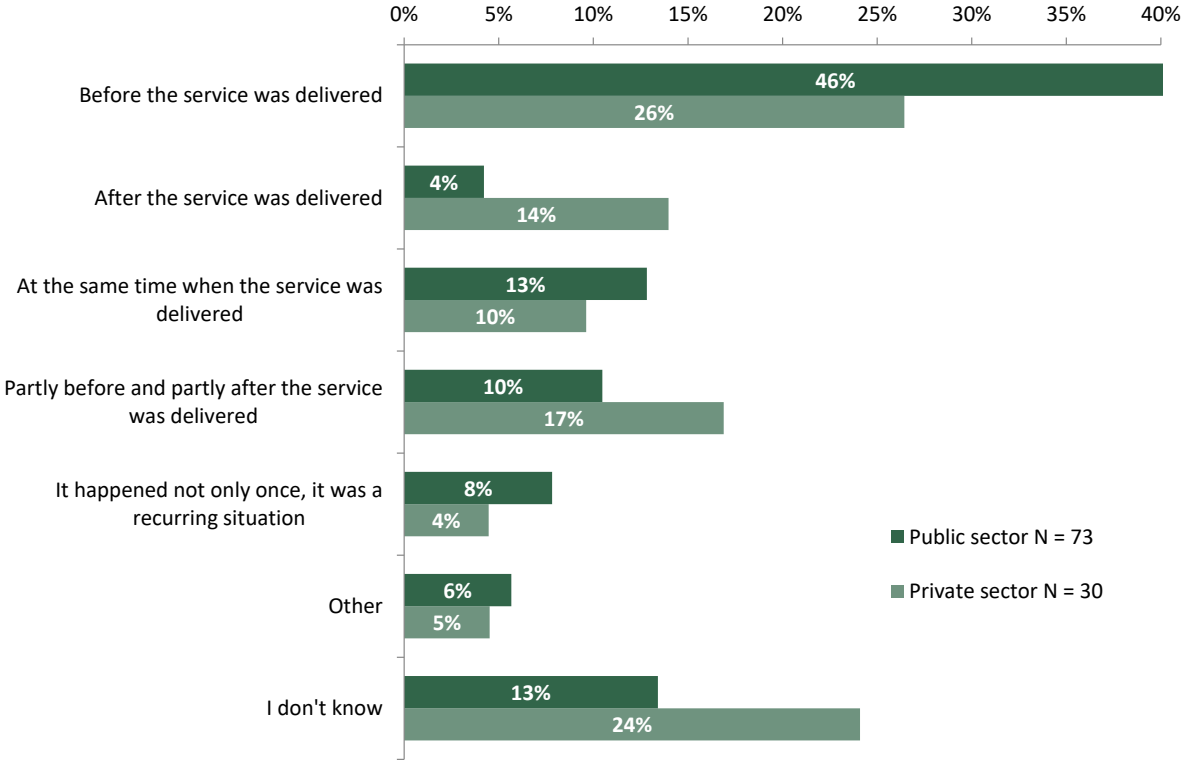
Figure 36 - Involvement of an intermediary in the bribe request by private entities. % on firms requested a bribe at least once by a private entity. Years 2013-2015



We have asked the firms whether or not an intermediary was involved in the bribe request. In 35% of bribe requests from public officials, there has been a third person involved. But bribe requests from a private party with an intermediary were found in only 25% of the cases. The majority of the incidents happened without any intermediary involved.

1.3.9 *When the bribe was requested*

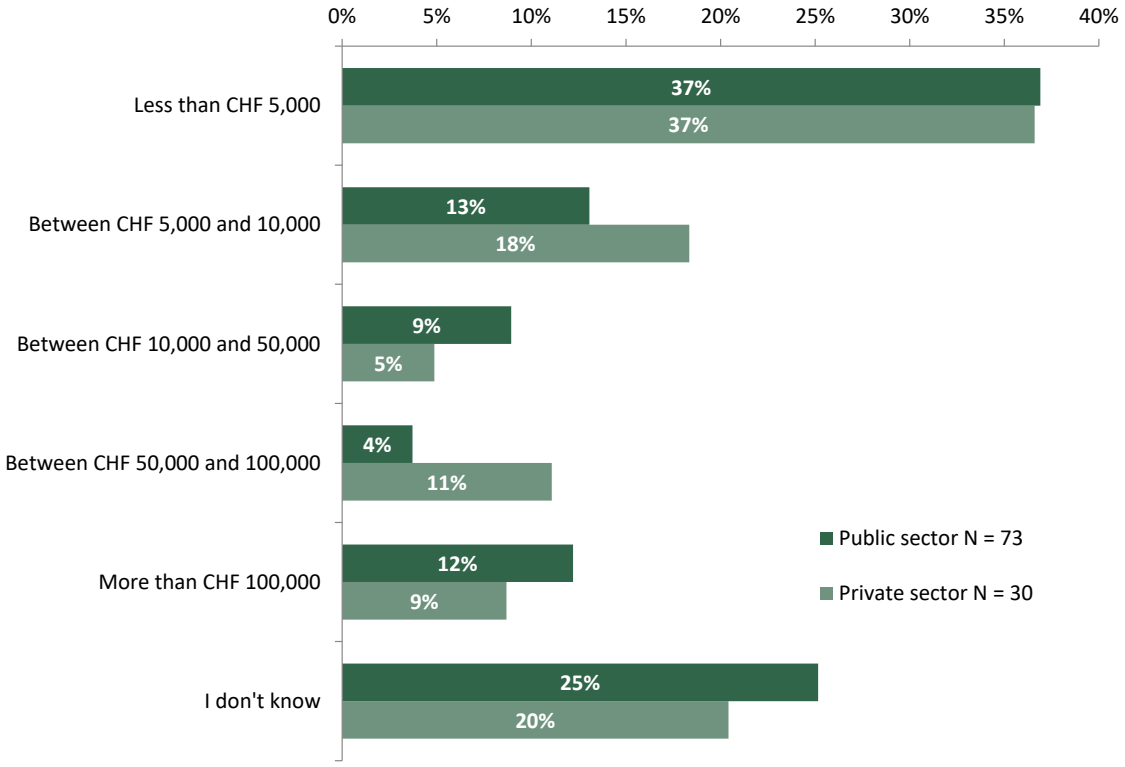
Figure 37 - When the bribe was requested. % on firms requested a bribe at least once. Years 2013-2015



Most commonly bribes from public officials were formulated before the delivery of service (46% of the cases). In the case of bribes from a private party, this rate is a bit lower (27%). Rare are bribes that were requested after the delivery of service (4% vs. 46% and 14% vs. 26%) or at the same time (13% vs. 46% and 10% vs. 26%).

1.3.10 *Cost of the most serious incident*

Figure 38 - Economic costs of the most serious incident. % on firms requested a bribe at least once. Years 2013-2015



According to the answers, from both public officials and private entities, the cost of the most serious incident is more likely to be less than CHF 5000.- (37%). Bribe requests from private parties seem to cost more to the company than the ones from public officials at least in the case of the most serious incident reported here (18% between CHF 5000 and 10000.- --- 11% between CHF 50000 and 100000.-). However, bribe requests from public officials generating costs of more than CHF 100000.- are not negligible (12%).

1.3.11 *Effective payment of the bribe request*

Figure 39 - Did your company provide the bribe requested by a public official? % on the total number of companies being requested to pay by a public official. Years 2013-2015

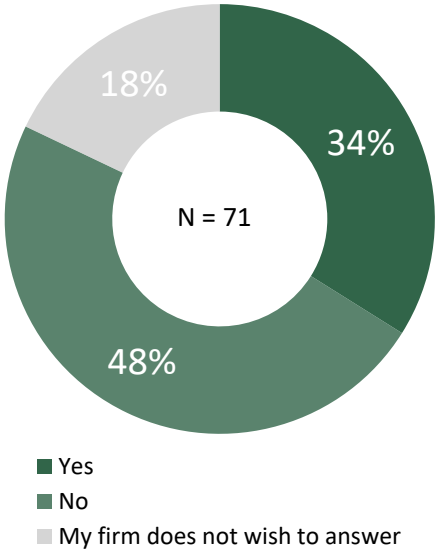
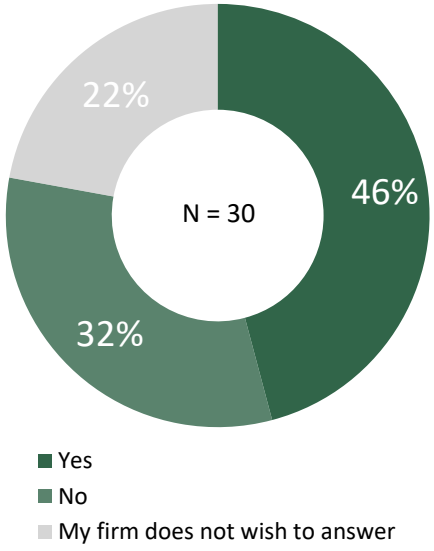


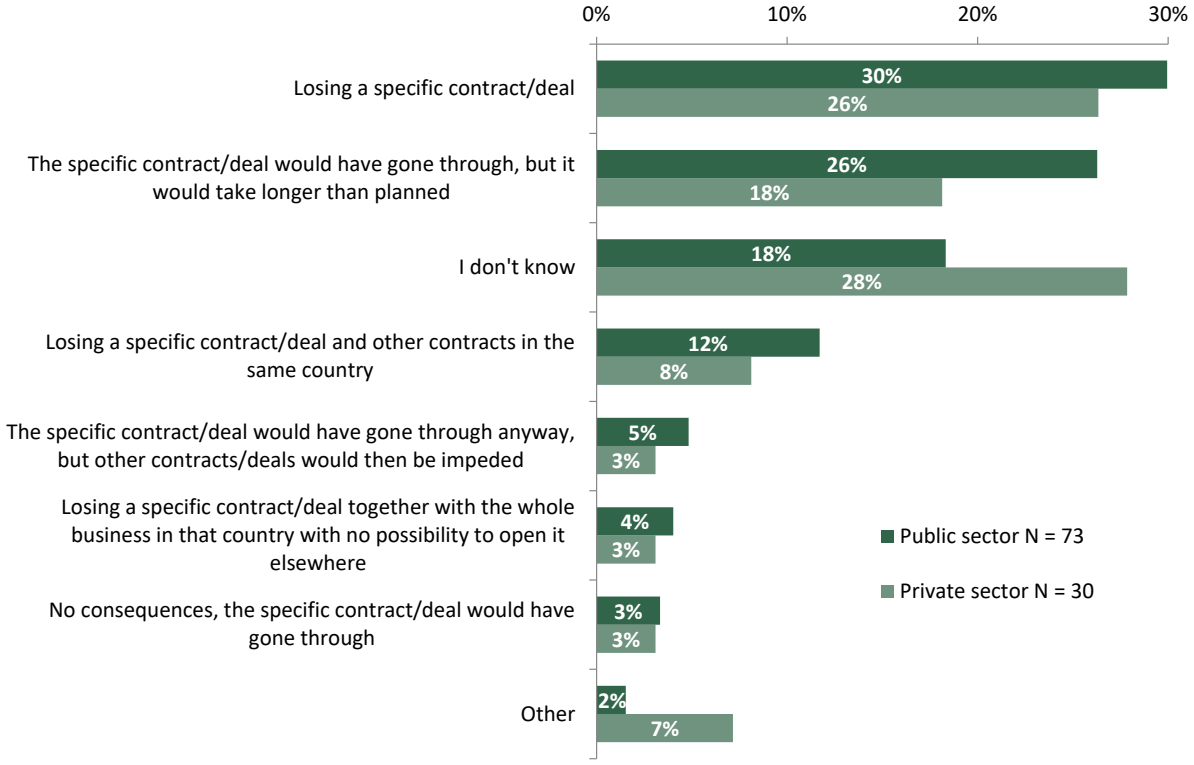
Figure 40 - Did your company provide the bribe requested by a private entity? % on the total number of companies being requested to pay by a private entity. Years 2013-2015



When asked if the firm did go through with the payment for the bribe request by public officials, 34% of the firms confirmed that they did pay, 48% however refused to pay and 18% of the responding firms did not wish to answer this question. The same question was asked in the case of bribe by private third-parties, 46% of the firms said they did pay the bribe and 32% did not and 22% did not want to answer this question. Interesting is the proportion of firms that do not wish to answer this question.

1.3.12 *Consequences of non-payment*

Figure 41 - Consequences of potential refusal to provide the bribe. % on firms requested/expected to pay at least once. Years 2013-2015



When asked what the consequences of a potential non-payment would be, the most reported consequence is to lose the business contract (30% in public sector and 26% in private sector), following by the likelihood of longer process in obtaining a deal or contract (26% for public sector and 18% for private sector).

1.3.13 *Hypothetical question on results of payment*

Figure 42 - If a firm had agreed to provide the bribe to a public official, would the contract/deal be obtained? % on the total number of companies requested by a public official to pay. Years 2013-2015

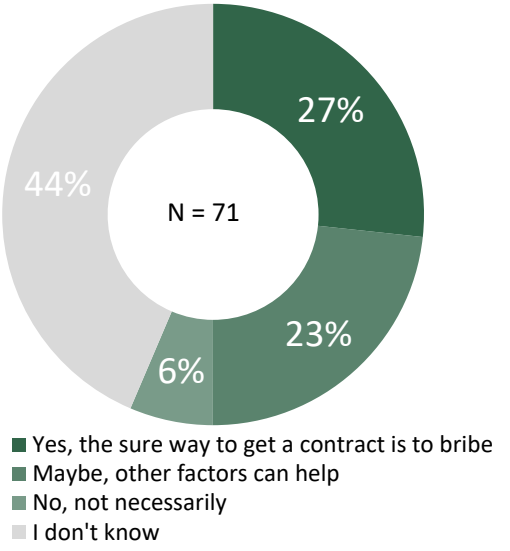
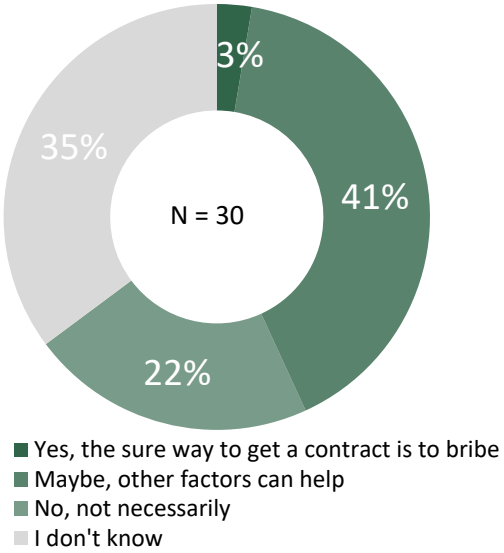


Figure 43 - If a firm had agreed to provide the bribe to a private entity, would the contract/deal be obtained? % on the total number of companies requested by a private entity to pay. Years 2013-2015



For firms that did not accept to pay, a hypothetical question was formulated about the procurement of the contract if they had accepted to provide the payment, even if the percentage of "I don't know" answer is quite high (44%), 27% still think that paying would be the sure way to obtain the contract. In the case of bribes requested by private entities, only 3% think that payment would be the best way to have the deal, 41% of them think that besides the payment, other factors could have intervened and helped. The proportion of answers stating that the payment would not help to get the contract is much higher than the one with regard to public officials, 22% vs. 6%. This is probably due to the fact that private third parties and private companies, when doing business together, could find other ways to make the deal finalized and furthermore, between private partners in business, asking for more money would not necessarily mean "bribes" as in the case of business with public authorities but rather "market rules" or "business negotiations".

1.3.14 *Hypothetical question on Swiss firms' behavior facing the bribe*

Figure 44 - If other Swiss firms had experienced a bribe request by a public official, how would they have acted? % on the total number of companies requested by a public official to pay. Years 2013-2015

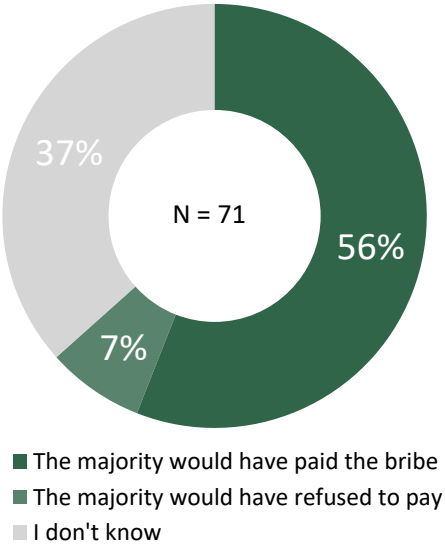
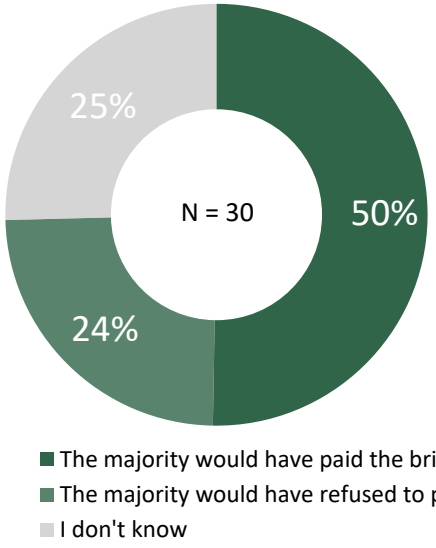


Figure 45 - If other Swiss firms had experienced a bribe request by a private entity, how would they have acted? % on the total number of companies requested by a private entity to pay. Years 2013-2015



A hypothetical question was formulated in order to assess to which extent Swiss firms would agree to pay bribes. More than half of the responding firms think that Swiss firms would pay if they experienced a bribe request, both by public official and private parties (56% and 50%). The proportion of firms stating that firms would refuse to pay bribes requested by public authorities is much lower than the one regarding bribes from private entities (7% vs. 24%).

1.3.15 *Hypothetical question on Swiss firms 'behavior facing the bribe in comparison to other Western companies*

*Figure 46 - How would Swiss firms react facing a bribe request by a **public official** (in comparison to other Western companies)? % on the total number of companies being requested by a public official to pay. Years 2013-2015*

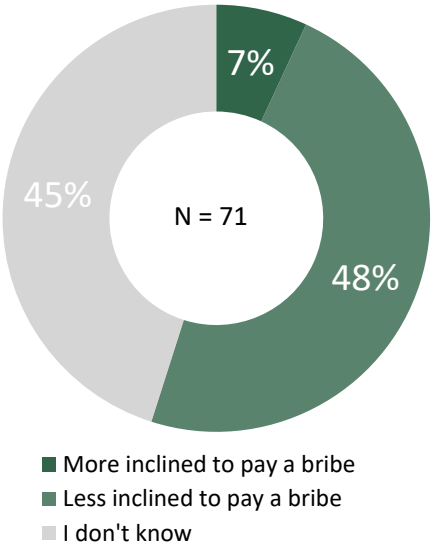
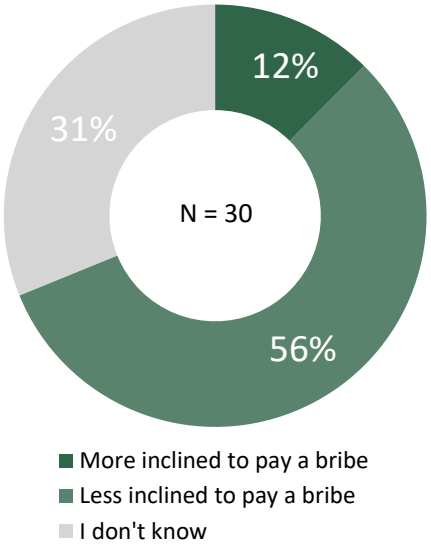


*Figure 47 - How would Swiss firms react facing a bribe request by a **private entity** (in comparison to other Western companies)? % on the total number of companies being requested by a private entity to pay. Years 2013-2015*



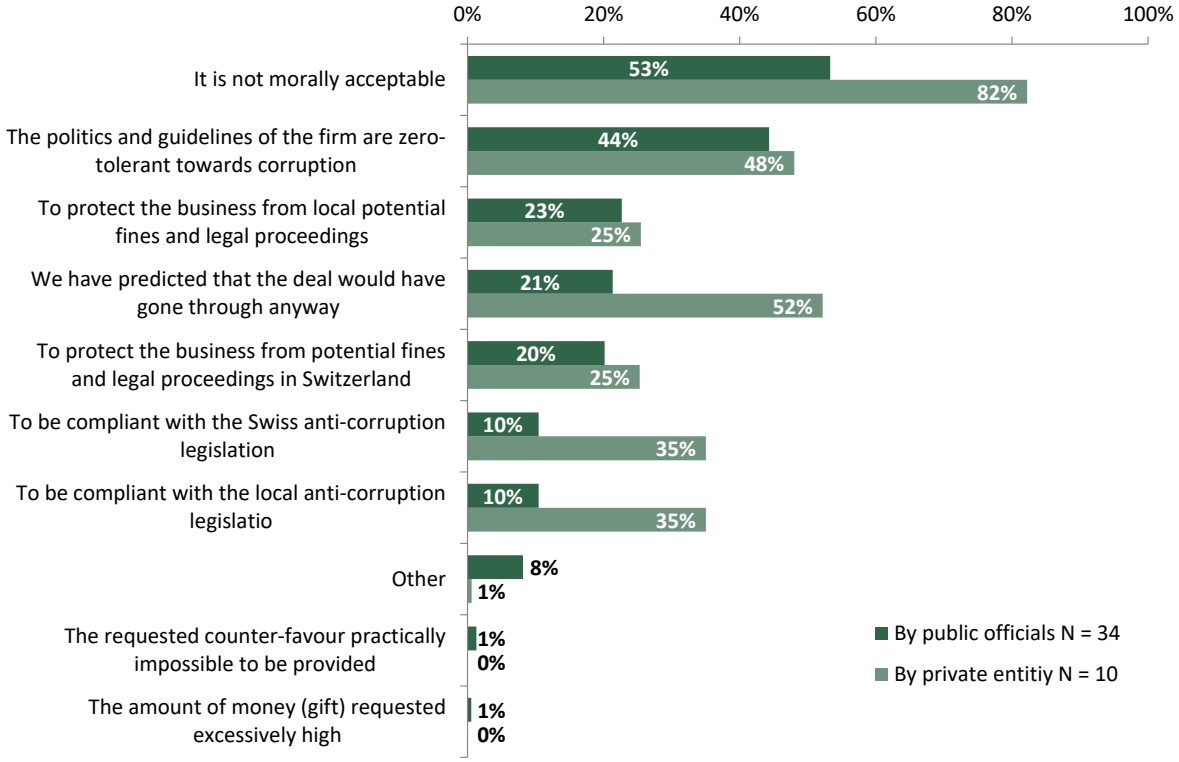
Firms were also asked to give their opinion on Swiss firms' potential reactions facing bribe in comparison to other Western companies. With regard to bribes from both public officials and private parties, the majority of responding firms think that Swiss firms would refuse to pay the bribes (48% in the public sector and 56% in the private sector would say no to the payment). It seems, through this opinion, that Swiss firms would not give way to bribe requests in comparison to other Western companies.

1.3.16 *Other costs besides the economic costs*

The majority of businesses that are requested to pay bribes only endure economic costs.

1.3.17 *Reasons of non-payment*

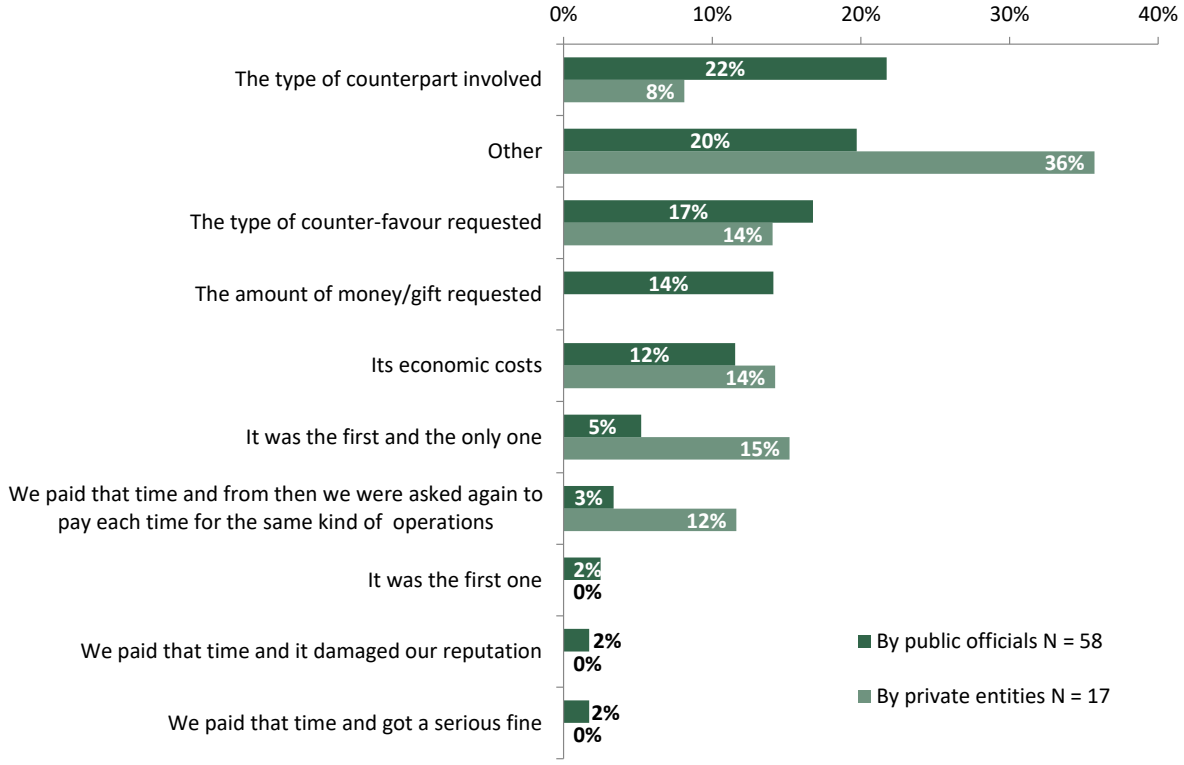
Figure 48 - Reasons why the requested bribe was not provided % on the total number of companies being requested a bribe. Years 2013-2015



Some of the most frequent reasons of non-payment quoted were that bribe payment is not morally acceptable (53% with regard to bribes from public officials and 82% when it comes to private entity), following by the fact that corruption is not tolerated at all according to some firms' politics and guideline (respectively 44% and 48%). 52% of the responding firms that refused to pay a bribe from private entities predicted that the deal would have gone through without the payment. Almost a quarter of the responding firms refused to pay in order to avoid further complications and legal proceedings as well as to protect the frim from potential fines. 35% of the responding firms refused to pay bribe requested in the private sector to be compliant with either the Swiss anti-corruption legislation or the local one (35%). This proportion is less significant when it relates to bribe requests from authorities.

1.3.18 *Reason why the described incident being the most serious one*

Figure 49 - Reasons why the described incident is considered the most serious one % on the total number of companies who have been requested a bribe. Years 2013-2015



The type of counterpart involved in the bribe requests is most likely the reason explaining why the incident mentioned was considered the most serious one: 22% of bribes by public officials, following by the type of favor requested in exchange (17%) and the amount of money requested (14%). With regard to bribes from private parties, 14% mentioned the economic cost of the incident as well as the type of favor requested. 15% also considered the incident as the most serious one because it was the first incident and the only one.

1.4 Risk factors for bribery

This chapter focuses on the identification of the main risk factors exposing firms to bribe requests from public officials and private entities in business activities abroad.
The statistical analysis will explore some specific characteristics (independent variables) of Swiss firms which could explain variations in the distribution of bribe requests (dependent variables). Those independent variables are considered as risk factors for bribery.

In particular, the analyses included in this chapter aim at testing the following hypothesis:
Do the specific characteristics of Swiss businesses (e.g. size, turnover, economic sector, etc.) influence the level of bribe requests by public officials and private entities while doing business abroad?

The chapter will describe (1) the bivariate association between bribe request and specific independent variables, through the analysis of *cross-tabulations and association's coefficients* such as the Chi-square, the Phi coefficient, Cramer V and Odds ratio (see Annex 2 for further explanations). The conventional levels of confidence taken into consideration for refusing the null hypothesis are $p<0.01$ and $p<0.05$[18]. Then it will identify (2) the relationship between bribe request and the selected independent variables and quantifies their effects, through a *binary logistic regression* (see Annex 3 for further explanations).

1.4.1 Defining the dependent and independent variables

Dependent variables

Both analyses are carried out on three main dependent variables (DVs):

a) **Total number of bribe requests**, indicating whether a company has been requested to pay a bribe either by a public official or by a private entity, between 2013 and 2015, in business activities abroad (1=Yes, 0=No).
b) **Bribe requests by public officials**, indicating whether a company has been requested to pay a bribe by a public official, between 2013 and 2015 (1=Yes, 0=No).
c) **Bribe request by private entities**, indicating whether a company has been requested to pay a bribe by a private entity, between 2013 and 2015 (1=Yes, 0=No).

DISCLAIMER

The count of the number of bribe requests could have been performed in two different ways: (1) all cases from all firms participating in the survey (305 cases) or (2) all cases reported only from firms that had contacts either with public officials (136 cases) or with private entities (133 cases).
In order to test the consistency and reliability of both options we run two different binary logistic regression models for each dependent variable (bribe requests on total number of answers, and bribe requests only on those companies which had at least one contact with either a public official or a private entity).
Only the results for public officials are reported below. The results of the regression models based on the total number of bribe requests and on bribe requests by private entities are very similar.
The first model (based on the dependent variable "Bribe Request by public officials_on Answers") has a very low predictive power (Nagelkerkes R-Square= 0.096). When including in the regression model, among the independent variables, "Number of contacts with Public Officials", the model's predictive power increases to Nagelkerkes R-Square= 0.730.
This result suggested that running the logistic regression on the dependent variable "Bribe requests on contacts" (130 cases) is the best choice. Indeed, even if the number of cases is lower, the variable is more representative of the real distribution of bribe requests and the results of the regression more consistent.
As already mentioned above, the same reasoning applies for the total number of bribe requests by private entities.

Independent variables

[18] The bivariate analysis will be carried out first considering all the categories of the independent variables, and then, in order to obtain more significant results and in order to focus on the most specific and relevant features of each variable, it will concentrate on only one specific modality. In order to consider the presence/absence of a specific feature related to each variable, the categories of the independent variables will be treated as single dummy-coded variables themselves (e.g. the category 1-9 employees of the variable size of the business will be treated as dummy-coded variable indicating the presence/absence of businesses with 1-9 employees. Its categories will be: 1. Yes, 0. No).

The independent variables, selected on the basis of their availability in the SICS dataset, and statistical consistency, are mainly related to:

- ✓ specific characteristics of Swiss firms (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country);
- ✓ types of activity abroad;
- ✓ region of the most frequent and regular business activity;
- ✓ presence of anti-corruption measures;
- ✓ perception of obstacles in business activities abroad;
- ✓ types of operation with public officials involved[19];

The specific variables included in this analysis are:

1. **Macro-economic sector** of activity (1= Manufacturing and wholesale activity; 2= Electricity and water supply and transportation; 3= Construction and real estate; 4= Other services);
2. **Size** (1= 0-2 employees; 2= 3-9 employees; 3 = 10-40 employees; 4= 50-250 employees; 5=more than 250 employees);
3. **Average annual turnover** (last 3 years) (1 = Up to CHF 500 thousands; 2= CHF 500 thousands - CHF 1 million; 3= CHF 1 million – CHF 5 million; 4= CHF 5 million – CHF 10 million; 5= CHF 10 million – CHF 50 million; 6= More than CHF 50 million);
4. **Canton of location** (1= ZH; 2= BE; 3= LU; 4= UR; 5= SZ; 6= OW; 7= NW; 8= GL; 9= ZG; 10= FR; 11= SO; 12= BS; 13= BL; 14= SH; 15= AR; 16= AI; 17= SG; 18= GR; 19= AG; 20= TG; 21= TI; 22= VD; 23= VS; 24= NE; 25= GE; 26= JU);
5. **Number of subsidiaries** (1 = None; 2= 1 subsidiary; 3= 2-5 subsidiaries; 4= 6-10 subsidiaries; 5= More than 10 subsidiaries);
6. **Foreign region of most regular and frequent business activities** (1= Africa; 2= America; 3= Asia, 4= Europe, 5= Oceania);
7. **Type of business activity in the foreign country** (most frequent and regular business) (1= Local manufacturing; 2= Construction; 3= Sale to other countries of products locally manufactured; 4= Sale to other countries of imported products; 5= Local sale of products locally manufactured; 6= Local sale of imported products; 7=Providers of services to locals/foreigners/expatriates; 8= Capital investments in local companies (minority share); 9= Capital investments in local companies (majority share); 10=Other);
8. **Percentage of average annual revenues in the foreign country of** most frequent and regular business activities (1= Up to 10%; 2= From 10% to 25%; 3= From 25% to 50%; 4= More than 50%; 5= Other);
9. **Level of obstacles in doing business abroad** (1= High/Moderate; 0= Low);
10. **Perception of corruption as obstacle in doing business abroad** (1= Yes; 0= No).

[19] In the survey, the question on the types of business procedure during which Swiss firms got in contact with public officials was optional. Therefore, it is possible that not all respondents have answered this specific question. However, looking at the answers to a second question *"Whether they have been requested to provide something during that procedure to a public official"*, answers to the previous one could be partially validated. This being said, the results of the regression model should be interpreted with caution.

1.4.2 Bivariate analysis

1.4.2.1 Bribe request by economic sector

Table 7 - ***Total bribe request (both public officials and private entities)*** *by* ***macro-economic sector****. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Macro-economic sector				Total
Bribe request	**Manufacturing and Wholesale activities**	**Electricity and water supply and transportation**	**Construction and real estate**	**Other services**	
No	52	5	2	38	97
	42.6%	62.5%	50.0%	52.8%	47.1%
Yes	70	3	2	34	109
	57.4%	37.5%	**50.0%**	47.2%	52.9%

Chi-square= 2.688 DF=3 P=0.442 (n.s.)
Phi = 0.114 P=0.442
Cramer V = 0.114 P=0.442

Even though the distribution of bribe requests is higher for firms belonging in the manufacturing/ wholesale trade sector (57%) and in the construction/real estate sector (50%), this association is not significant at the established level of confidence of 0.05. Hence, at the bivariate level the type of economic sector does not influence the odds of experiencing a bribe request by public officials and private entities in business abroad.

Table 8 - ***Bribe requests from public officials*** *by* ***macro-economic sector****. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Macro-economic sector				Total
Bribe request	**Manufacturing and Wholesale activities**	**Electricity and water supply and transportation**	**Construction and real estate**	**Other services**	
No	31	1	1	19	51
	33.7%	25.0%	33.3%	38.0%	34.5%
Yes	61	3	2	31	97
	66.3%	**75.0%**	66.7%	62.0%	65.5%

Chi-square= 0.446 DF=3 P=0.931 (n.s.)
Phi = 0.055 P=0.931 (n.s.)
Cramer V = 0.055 P=0.931 (n.s.)

When analyzing bribe requests by public officials and private entities separately, the type of macro-economic sector does not significantly influence the likelihood of being requested a bribe. The proportion of firms in areas of electricity, water and transportation supply having been requested for bribes is more important than the ones in other economic sectors (75%) but this relationship is not statistically significant. The same is observed in Table 9 related to bribes from private parties (37.5%).

Table 9 - ***Bribe requests from private entities*** *by* ***macro-economic sector.*** *% on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Macro-economic sector				
Corruption as obstacle	**Manufacturing and Wholesale activities**	**Electricity and water supply and transportation**	**Construction and real estate**	**Other services**	**Total**
No	161	5	8	99	273
	80.9%	62.5%	88.9%	81.8%	81.0%
Yes	38	3	1	22	64
	19.1%	**37.5%**	11.1%	18.2%	19.0%

Chi-square= 2.198 DF=3 P=0.532 (n.s.)
Phi = 0.081 P=0.532
Cramer V = 0.081 P=0.532

1.4.2.2 Bribe request by the size of the firm

Table 10 - ***Total bribe request (both public officials and private entities)*** *by* ***size*** *of the firm. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Size of the business					
Bribe request	**0-2 employees**	**3-9 employees**	**10-49 employees**	**50- 250 employees**	**More than 250 employees**	**Total**
No	14	22	27	15	18	96
	46.7%	61.1%	52.9%	37.5%	36.7%	46.6%
Yes	16	14	24	25	31	110
	53.3%	38.9%	47.1%	62.5%	**63.3%**	53.4%

Chi-square= 7.118 DF=4 P=0.130 (n.s.)
Phi = 0.186 P=0.130
Cramer V = 0.186 P=0.130

The bivariate association between the size of the firm and the likelihood of being requested a bribe/gift/counter-favor by a public official or a private entity is not statistically significant at the established level of confidence of 0.05, although it is observed a higher proportion of firms with more than 250 employees having experienced bribe requests (63.3%).

*Table 11 - **Total bribe request (both public officials and private entities)** by **microbusinesses**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

Bribe request	Size of the business		Total
	Less than 10 employees	10-250 employees	
No	63	33	96
	55.3%	36.7%	47.1%
Yes	51	57	108
	44.7%	**63.3%**	52.9%

Chi-square= 6.981 DF=1 P=0.008
Phi = -0.185 P=0.008
Cramer V = 0.185 P=0.008
Odds ratio = 0.469 95% CI [0.266, 0.825]

When focusing the analysis on microbusinesses, it emerges that smaller firms with less than ten employees are twice less likely to be exposed to bribes (either from public officials or private entities) than larger firms (44.7% vs 63.3%),

*Table 12 - **Bribe requests from public officials** by **size** of the firm. % on the total number of respondents who had contact with a public official. Years 2013-2015*

Bribe request	Size of the business					Total
	0-2 employees	3-9 employees	10-49 employees	50- 250 employees	More than 250 employees	
No	9	10	14	6	12	51
	37.5%	41.7%	37.8%	22.2%	33.3%	34.5%
Yes	15	14	23	21	24	97
	62.5%	58.3%	62.2%	**77.8%**	66.7%	65.5%

Chi-square= 2.648 DF=4 P=0.618 (n.s.)
Phi = 0.134 P=0.618 (n.s.)
Cramer V = 0.134 P=0.618 (n.s.)

Table 12 shows the relationship between bribe requests from public officials and the size of the business. Though not significant the distribution of medium-sized firms with between 50 and 250 employees and being requested to pay is the highest (77.8%).

*Table 13 - **Bribe requests from public officials** by **microbusinesses**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

Bribe request	Size of the business		Total
	Less than 10 employees	10-250 employees	
No	33	18	51
	40.2%	27.3%	34.5%
Yes	49	48	97
	59.8%	**72.7%**	65.5%

Chi-square= 2.724 DF=1 P=0.099 (n.s.)
Phi = -0.139 P=0.099 (n.s.)
Cramer V = 0.139 P=0.099 (n.s.)
Odds ratio = 0.557 95% CI [0.277, 1.120]

The same analysis is performed in Table 13 but with businesses up to 250 employees. Even though larger firms seem to have experienced more bribe requests from public officials, the bivariate association is not statistically significant (72.7% vs. 59.8%).

*Table 14 - **Bribe requests from private entities** by **size** of the business. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

Bribe request	Size of the business					Total
	0-2 employees	3-9 employees	10-49 employees	50- 250 employees	More than 250 employees	
No	18	18	24	12	18	90
	94.7%	90.0%	72.7%	50.0%	62.1%	72.0%
Yes	1	2	9	12	11	35
	5.3%	10.0%	27.3%	**50.0%**	37.9%	28.0%

Chi-square= 15.276 DF=4 P=0.004
Phi = 0.350 P=0.004
Cramer V = 0.350 P=0.004

The bivariate association between the size of the business and the likelihood of being requested a bribe by a private entity is statistically significant and positive. Large companies are, indeed, more likely to be requested to pay a bribe than smaller businesses. The highest percentage of bribe requests is registered for companies having more than 50 employees (50%).

*Table 15 - **Bribe requests from private entities** by **microbusinesses**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Size of the business		Total
Bribe request	**Less than 10 employees**	**10-250 employees**	
No	60	30	90
	85.7%	54.5%	72.0%
Yes	10	25	35
	14.3%	**45.5%**	28.0%

Chi-square= 14.842 DF=1 P=0.000
Phi = -0.345 P=0.000
Cramer V = 0.345 P=0.000
Odds ratio = 0.200 95% CI [0.085, 0.470]

With regard to bribes from private parties, the analysis on microbusinesses as shown in Table 15 reveals a statistically significant relationship between the size of the firm and bribe requests. Smaller companies with less than ten employees are five times less likely to experience a bribe request than larger firms (14.3% vs. 45.5%).

1.4.2.3 Bribe request by turnover

*Table 16 - **Total bribe request (both public officials and private entities)** by **turnover** of the firm[20]. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Turnover of the business						
Bribe request	**Up to CHF 500 thousand**	**CHF 500 thousand - CHF 1 mil**	**CHF 1 - 5 million**	**CHF 5 – 10 million**	**CHF 10 – 50 million**	**More than CHF 50 million**	**Total**
No	14	10	18	7	23	24	96
	45.2%	71.4%	60.0%	46.7%	41.8%	40.0%	46.8%
Yes	17	4	12	8	32	36	109
	54.8%	28.6%	40.0%	53.3%	**58.2%**	**60.0%**	53.2%

Chi-square= 7.206 DF=5 P=0.206
Phi = 0.187 P=0.206
Cramer V = 0.187 P=0.206

Even though the association between the average annual turnover of the companies and the odds of being requested a bribe is not statistically significant, it appears that the frequency of bribe requests proportionally increases with the turnover of the business (58.2% of firms with a turnover between 10 – 50 million CHF; 60% with a turnover more than CHF 50 million), with the exception of firms with a turnover lower than CHF 500000.- which present a very high frequency of bribe requests (54.8%).

In particular, the highest levels of bribe requests are associated with turnovers greater than 10 million.

[20] Three years average annual turnover.

*Table 17 - **Total bribe request (both public officials and private entities)** by **turnover higher than 10 million**[21]. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Turnover of the business		Total
Bribe request	**Less than 10 million**	**More than 10 million**	
No	49	47	96
	54.4%	40.9%	46.8%
Yes	41	68	109
	45.6%	**59.1%**	53.2%

Chi-square= 3.737 DF=1 P=0.053
Phi = 0.135 P=0.053
Cramer V = 0.135 P=0.053
Odds ratio = 1.729 95% CI [0.991, 3.018]

As shown in Table 17, when further analyzing this specific range (turnover lower and higher than 10 million) the significance of the association increases but the confidence level of the odds ratio still indicates a not very reliable value.

The bivariate association between the turnover of the business and the likelihood of being asked by a public official for bribes is not statistically significant at the established level of confidence of 0.05. At the bivariate level the turnover of the business does not influence the odds of experiencing a bribe request by a public official while doing business abroad.

*Table 18 - **Bribe requests from public officials** by **turnover** of the firm[22]. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Turnover of the business						Total
Bribe request	**Up to CHF 500 thousand**	**CHF 500 thousand - CHF 1 mil**	**CHF 1 - 5 million**	**CHF 5 – 10 million**	**CHF 10 – 50 million**	**More than CHF 50 million**	
No	11	4	7	3	12	14	51
	40.7%	50.0%	36.8%	33.3%	29.3%	31.8%	34.5%
Yes	16	4	12	6	29	30	97
	59.3%	50.0%	63.2%	66.7%	**70.7%**	**68.2%**	65.5%

Chi-square= 2.005 DF=5 P=0.848 (n.s.)
Phi = 0.116 P=0.848 (n.s.)
Cramer V = 0.116 P=0.848 (n.s.)

The association between the turnover of the firm and bribe requests from public officials is not statistically significant although larger companies with a turnover between 10 – 50 million CHF or more than 50 million CHF are more likely to experience bribes (respectively 70.7% and 68.2%).

[21] Three years average annual turnover.

[22] Three years average annual turnover.

*Table 19 - **Bribe requests from public officials** by **turnover higher than 10 million**[23]. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Turnover of the business		Total
Bribe request	**Less than 10 million**	**More than 10 million**	
No	25	26	51
	30.5%	39.4%	34.5%
Yes	57	40	97
	69.5%	60.6%	65.5%

Chi-square= 1.284 DF=1 P=0.257 (n.s.)
Phi = -0.093 P=0.257 (n.s.)
Cramer V = 0.093 P=0.257 (n.s.)
Odds ratio = 0.675 95% CI [0.341, 1.334]

*Table 20 - **Bribe requests from private entities** by **turnover** of the firm[24]. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Turnover of the business						Total
Bribe request Private entity	**Up to CHF 500 thousand**	**CHF 500 thousand - CHF 1 mil**	**CHF 1 - 5 million**	**CHF 5 – 10 million**	**CHF 10 – 50 million**	**More than CHF 50 million**	
No	18	8	17	6	17	25	91
	85.7%	100.0%	89.5%	60.0%	68.0%	56.8%	71.7%
Yes	3	0	2	4	8	19	36
	14.3%	0.0%	10.5%	40.0%	32.0%	**43.2%**	28.3%

Chi-square= 13.780 DF=5 P=0.017
Phi = 0.329 P=0.017
Cramer V = 0.329 P=0.017

*Table 21 - **Bribe requests from private entities** by **turnover higher than 10 million**[25]. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Turnover of the business		Total
Bribe request	**Less than 10 million**	**More than 10 million**	
No	48	42	90
	84.2%	61.8%	72.0%
Yes	9	26	35
	15.8%	**38.2%**	28.0%

Chi-square= 7.749 DF=1 P=0.005
Phi = 0.249 P=0.005
Cramer V = 0.249 P=0.005
Odds ratio = 3.302 95% CI [1.392, 7.832]

[23] Three years average annual turnover.

[24] Three years average annual turnover.

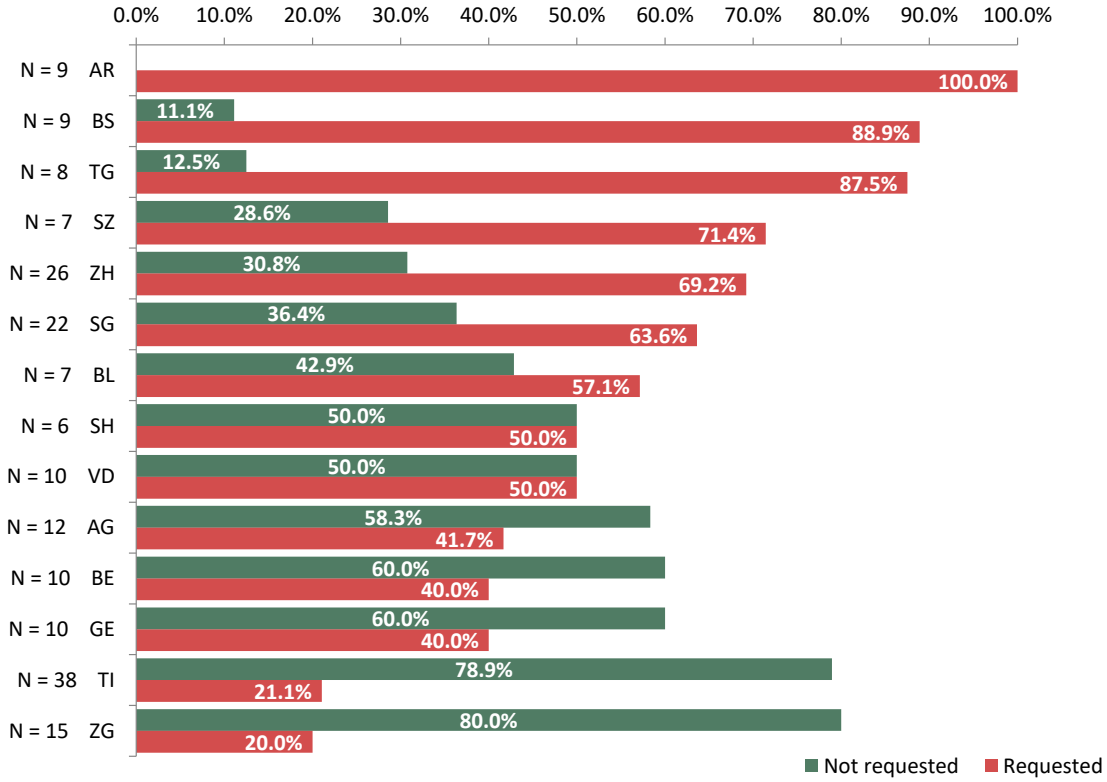
[25] Three years average annual turnover.

As shown in Tables 20 and 21, the level of turnover significantly influences the likelihood of being requested a bribe by a private entity. The odd of bribe request is, indeed, greater for companies with a higher turnover.

In particular, companies with a turnover higher than ten million are almost three times more likely to be requested a bribe by a private entity.

1.4.2.4 Bribe request by largest Cantons

*Table 22 - **Total bribe request (both public officials and private entities)** by **canton of location** of the firm[26]. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*



Chi-square = 57.223 DF=22 P=0.000
Phi = 0.530 P=0.000
Cramer V = 0.530 P=0.000

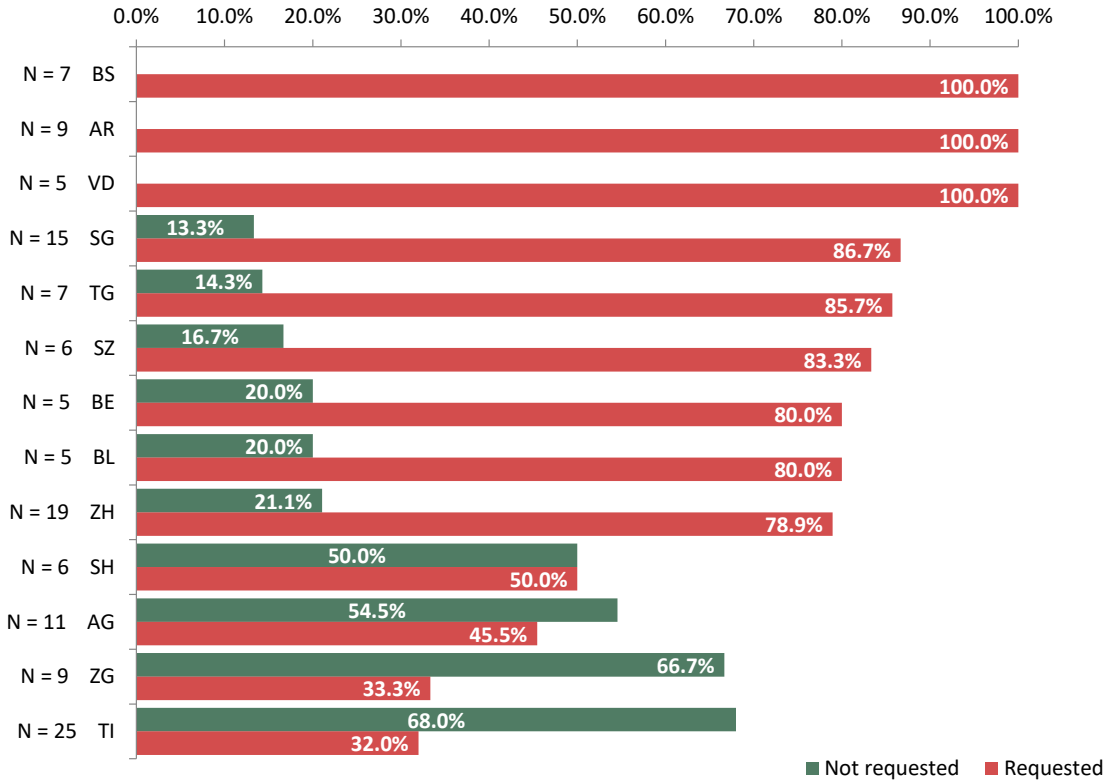
The Table 22 shows the statistically significant correlation between cantons of location of Swiss firms and the likelihood of being asked for bribes.

Firms located in cantons like Appenzell, Basel City and Thurgau have been requested to pay a bribe more than eight times out of ten contacts with a public official or private entity. Those located Schwyz

[26] The chart includes only the results of the main Swiss cantons, but the correlations coefficients have been calculated on all the cantons covered by the SICS (26 cantons).

and Zurich cantons also present a quite high percentage of bribe requests (71% and 69% respectively). Firms from cantons such as Aargau, Bern, Geneva, Ticino and Zug experienced a lower rate of bribe requests (less than 50%).

*Table 23 - **Bribe request from public officials** by **canton of location** of the business[27]. % on the total number of respondents who had contact with a public official. Years 2013-2015*

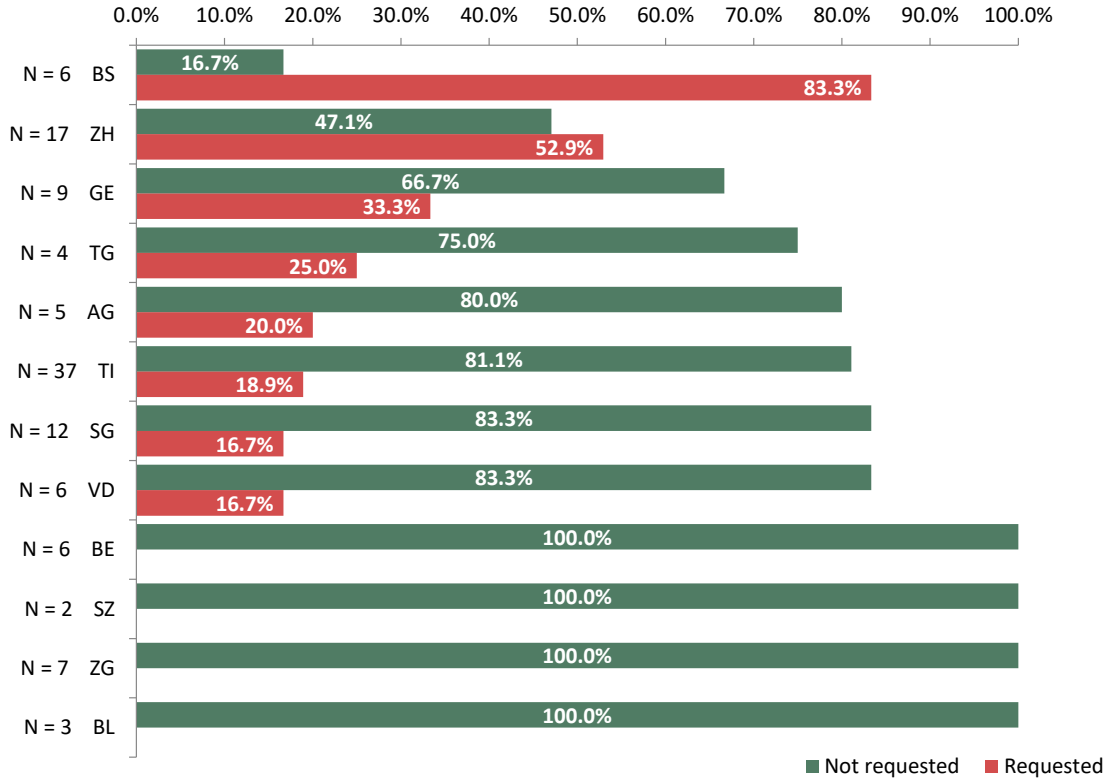


Chi-square = 54.662 DF=20 P=0.000
Phi = 0.606 P=0.000
Cramer V = 0.606 P=0.000

The Table 23 shows findings on bribe requests only by public officials and the statistically significant correlation between the canton of location of Swiss firms and the likelihood of being requested to pay bribes. Firms from Basel City and Appenzell still present the highest percentage of bribe requests, together with Vaud. Furthermore, firms from Bern seem to experience a higher rate of bribe request than at the aggregated level (40% at the aggregated level vs. 80%). Firms located in Aargau, Ticino and Zug experienced less bribe requests from public officials abroad.

[27] The chart includes only the figures for the main Swiss cantons, but the correlation coefficients have been calculated on all the cantons covered by the SICS (21 cantons: ZH; BE ; LU; SZ; OW; ZG; FR; SO; BS; BL; SH; AR; AI; SG ; GR; AG; TG; TI; VD; NE; GE).

*Table 24 - **Bribe request from private entities** by **canton of location** of the firm[28]. % on the total number of respondents who had contact with a private entity. Years 2013-2015*



Chi-square = 40.187 DF=20 P=0.005
Phi = 0.567 P=0.005
Cramer V = 0.567 P=0.005

As shown in Table 24, the correlation between the canton of location of Swiss firms and the likelihood of being asked for bribes by private entities is also statistically significant.
Companies from Zurich and Geneva seem to have experienced a higher rate of bribe requests from private entities, while that of Bern Schwyz, Zug and Basel-Landschaft have never been asked to pay bribes by private third-parties.

[28] The chart includes only the results of the main Swiss cantons, but the correlations coefficients have been calculated on all the cantons covered by the SICS (21 cantons: ZH; BE ; LU; SZ; OW; ZG; FR; SO; BS; BL; SH; AR; AI; SG ; GR; AG; TG; TI; VD; NE; GE.

1.4.2.5 Bribe request by number of subsidiaries

*Table 25 - **Total bribe request (both public officials and private entities) by number of subsidiaries**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	N of subsidiaries abroad					Total
Bribe request	**None**	**1 subsidiary**	**2-5 subsidiaries**	**6-10 subsidiaries**	**More than 10 subsidiaries**	
No	10	25	46	2	12	95
	43.5%	59.5%	53.5%	10.0%	35.3%	46.3%
Yes	13	17	40	18	22	110
	56.5%	40.5%	46.5%	**90.0%**	64.7%	53.7%

Chi-square= 17.069 DF=4 P=0.002
Phi = 0.289 P=0.002
Cramer V = 0.289 P=0.002

The Table 25 shows that the bivariate association between the number of subsidiaries and the likelihood of being asked for bribes is statistically significant and positive. In particular, Swiss firms having between six to ten subsidiaries seem to have experienced the highest rate of bribe requests (90%). Those with more than ten subsidiaries are also very exposed to bribe requests (65%).

*Table 26 - **Total bribe request (both public officials and private entities) by number of subsidiaries (six or more)**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	N of subsidiaries abroad		Total
Bribe request	**Less than 6 subsidiaries**	**6 or more subsidiaries**	
No	82	15	97
	53.9%	27.8%	47.1%
Yes	70	39	109
	46.1%	**72.2%**	52.9%

Chi-square= 10.952 DF=1 P=0.001
Phi = 0.231 P=0.001
Cramer V = 0.231 P=0.001
Odds ratio = 3.046 95% CI [1.550, 5.985]

In the Table 26 (where the variable "number of subsidiaries" is dichotomized into two categories – "less than 6 subsidiaries" and "6 or more subsidiaries"), the statistical analysis focuses on the relationship between businesses with six or more subsidiaries and the likelihood of being requested to pay a bribe (from both public officials and private entities) and finds that the two variables are significantly associated. Firms with six or more subsidiaries are three times more likely to be requested a bribe by either a public official or a private entity (72.2% vs. 46.1%). This association could probably be linked to the fact that companies with a higher number of subsidiaries are also more likely to be larger firms with more employees and a higher turnover. Therefore, this association should be further controlled with the mentioned variables.

*Table 27 - **Bribe requests from public officials by number of subsidiaries**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Number of subsidiaries abroad					Total
Bribe request	**None**	**1 subsidiary**	**2-5 subsidiaries**	**6-10 subsidiaries**	**More than 10 subsidiaries**	
No	3	14	25	1	8	51
	18.8%	48.3%	41.7%	5.9%	30.8%	34.5%
Yes	13	15	35	16	18	97
	81.3%	**51.7%**	58.3%	**94.1%**	69.2%	65.5%

Chi-square= 11.833 DF=4 P=0.018
Phi = 0.283 P=0.018
Cramer V = 0.283 P=0.018

When analyzing the relationship of bribe requests by public officials and private entities separately, the association with the number of subsidiaries significantly emerges. In particular, 94.1% of Swiss companies with up to 10 subsidiaries have been requested to pay bribes by a public official, against 51.7% of companies with only one subsidiary.

*Table 28 - **Bribe requests from public officials by number of subsidiaries (six or more)**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Number of subsidiaries		Total
Bribe request	**0-6 subsidiaries**	**6 or more subsidiaries**	
No	41	10	51
	39.4%	22.7%	34.5%
Yes	63	34	97
	60.6%	**77.3%**	65.5%

Chi-square= 3.816 DF=1 P=0.051
Phi = 0.161 P=0.051
Cramer V = 0.161 P=0.051
Odds ratio = 2.213 95% CI [0.987, 4.961]

In Table 28, it is observed that companies with over six subsidiaries are more likely to be requested for extra-payments (77.3% vs. 60.6%).

*Table 29 - **Bribe requests from private entities by number of subsidiaries**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	N of subsidiaries					Total
Bribe request	**None**	**1 subsidiary**	**2-5 subsidiaries**	**6-10 subsidiaries**	**More than 10 subsidiaries**	
No	9	16	48	4	14	91
	75.0%	88.9%	69.6%	80.0%	63.6%	72.2%
Yes	3	2	21	1	8	35
	25.0%	11.1%	30.4%	20.0%	36.4%	27.8%

Chi-square= 3.3740 DF=4 P=0.442 (n.s.)
Phi = 0.172 P=0.442
Cramer V = 0.172 P=0.442

The same analysis was performed with bribes by private parties and observed a non-significant bivariate association between the number of subsidiaries and the likelihood of being requested for bribes at the established level of confidence of 0.05. At a bivariate level the number of subsidiaries abroad does not influence the odds of experiencing a bribe request by a private entity.

*Table 30 - **Bribe requests from private entities by number of subsidiaries (more than 1)**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	N of subsidiaries		Total
Bribe request	**0-1 subsidiary**	**More than 1 subsidiary**	
No	25	66	91
	83.3%	68.8%	72.2%
Yes	5	30	35
	16.7%	**31.3%**	27.8%

Chi-square= 2.423 DF=1 P=0.120 (n.s.)
Phi = 0.139 P=0.120
Cramer V = 0.139 P=0.120
Odds ratio = 2.273 95% CI [0.793, 6.512]

Even when the variable "number of subsidiaries" is dichotomized, the association with the variable "bribe request" is still not statistically significant, although it could be observed that firms with more than one subsidiary seem to have experienced more bribe requests from private third-parties (31.3% vs. 16.7%).

1.4.2.6 Bribe request by foreign region

*Table 31 - **Total bribe request (both public officials and private entities)** by **region of business**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Region of business					Total
Bribe request	**Africa**	**Americas**	**Asia**	**Europe**	**Oceania**	
No	15	22	45	10	4	96
	48.4%	56.4%	47.4%	34.5%	40.0%	47.1%
Yes	16	17	50	19	6	108
	51.6%	43.6%	52.6%	65.5%	60.0%	52.9%

Chi-square= 3.436 DF=4 P=0.488 (n.s.)
Phi = 0.130 P=0.488
Cramer V = 0.130 P=0.488

As shown in Table 31, the bivariate association between the region where Swiss companies have the most frequent and regular business activities and the likelihood of being asked for bribes from both public officials and private entities is not significant at the established level of confidence of 0.05.

*Table 32 - **Total bribe request (both public officials and private entities)** by **sub-region of business**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Sub-Region of business									
Bribe request	**Central-South America and Caribbean**	**Northern America**	**Eastern and Western Asia**	**Southern and Eastern Asia**	**Middle and Western Africa**	**Northern and Eastern Africa**	**Melanesia Polynesia and Micronesia**	**Eastern and Southern Europe**	**Northern and Western Europe**	**Total**
No	19	2	45	0	10	5	4	8	2	95
	55.9%	50.0%	48.4%	.	41.7%	71.4%	40.0%	38.1%	22.2%	47.0%
Yes	15	2	48	0	14	2	6	13	7	107
	44.1%	50.0%	51.6%	.	58.3%	28.6%	60.0%	61.9%	**77.8%**	53.0%

Chi-square= 6.197 DF=8 P=0.625 (n.s.)
Phi = 0.175 P=0.625
Cramer V = 0.175 P=0.625

In Table 32, when disaggregating the distribution of bribe requests by sub-regions the association increases its significance but it is still lower than the established level.

When analyzing separately bribe requests by public officials, a significant association between the region where Swiss companies have the most frequent and regular business activities and the likelihood of being asked for bribes appears. In particular, at the aggregated level, Swiss companies operating in Europe have the highest probability of being asked for bribes by a public official (90%), followed by firms operating in Africa (79%).

*Table 33 - **Bribe requests from public officials** by **region of business**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Region of business					Total
Bribe request	**Africa**	**Americas**	**Asia**	**Europe**	**Oceania**	
No	4	7	36	2	2	51
	21.1%	31.8%	45.6%	10.0%	25.0%	34.5%
Yes	15	15	43	18	6	97
	78.9%	68.2%	54.4%	**90.0%**	75.0%	65.5%

Chi-square= 11.513 DF=4 P=0.021
Phi = 0.279 P=0.021
Cramer V = 0.279 P=0.021

When analyzing separately bribe requests by public officials, a significant association between the region where Swiss companies have the most frequent and regular business activities and the likelihood of being asked for bribes appears. In particular, at the aggregated level, Swiss companies operating in Europe have the highest probability of being asked for bribes by a public official (90%), followed by firms operating in Africa (78.9%).

*Table 34 - **Bribe requests from public officials** by **sub-region of business**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Region of business								Total
Bribe request	**Central-South America and Caribbean**	**Northern America**	**Eastern and Western Asia**	**Middle and Western Africa**	**Northern and Eastern Africa**	**Melanesia Polynesia and Micronesia**	**Eastern and Southern Europe**	**Northern and Western Europe**	
No	36	4	0	2	2	0	51	36	4
	46.2%	23.5%	0.0%	25.0%	14.3%	0.0%	34.9%	46.2%	23.5
Yes	42	13	2	6	12	5	95	42	13
	53.8%	76.5%	100.0%	75.0%	85.7%	100.0%	65.1%	53.8%	76.5

Chi-square= 12.122 DF=7 P=0.097
Phi = 0.288 P=0.097
Cramer V = 0.288 P=0.097

However, when disaggregating bribe requests by sub-regions the association becomes non-significant statistically.

*Table 35 - **Bribe requests from private entities** by **region of business**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Region of business					Total
Bribe request	**Africa**	**Americas**	**Asia**	**Europe**	**Oceania**	
No	16	19	37	14	4	90
	69.6%	82.6%	72.5%	60.9%	66.7%	71.4%
Yes	7	4	14	9	2	36
	30.4%	17.4%	27.5%	**39.1%**	33.3%	28.6%

Chi-square= 2.802 DF=4 P=0.591 (n.s.)
Phi = 0.149 P=0.591
Cramer V = 0.149 P=0.591

Table 35 shows that the bivariate association between the region where Swiss companies have the most frequent and regular business activities and the likelihood of being asked for bribes is not significant at the established level of confidence of 0.05, even if Europe is where the risk was the highest (39.1%).

*Table 36 - **Bribe requests from private entities** by **sub-region of business**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Region of business								Total
Bribe request	**Central-South America and Caribbean**	**Northern America**	**Eastern and Western Asia**	**Middle and Western Africa**	**Northern and Eastern Africa**	**Melanesia Polynesia and Micronesia**	**Eastern and Southern Europe**	**Northern and Western Europe**	
No	17	2	37	0	10	5	4	12	2
	85.0%	66.7%	75.5%	.	66.7%	71.4%	66.7%	85.7%	22.2
Yes	3	1	12	0	5	2	2	2	7
	15.0%	33.3%	24.5%	.	33.3%	28.6%	33.3%	14.3%	77.8

Chi-square= 14.792 DF=8 P=0.063 (n.s.)
Phi = 0.347 P=0.063
Cramer V = 0.347 P=0.063

When disaggregating the distribution of bribe requests by sub-regions the association increases its significance but it is still lower than the established level (Table 36). Therefore, at a bivariate level, regions of most frequent and regular business does not influence the odds of being requested a bribe by a private entity.

1.4.2.7 Bribe request by percentage of annual revenue abroad

*Table 37 - **Total bribe request (both public officials and private entities) by** percentage of **annual revenue abroad**[29]. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Percentage annual revenue abroad					Total
Bribe request	**Up to 10%**	**From 10% to 25%**	**From 25% to 50%**	**More than 50%**	**Other**	
No	13	29	26	28	0	96
	43.3%	51.8%	43.3%	49.1%	0.0%	47.1%
Yes	17	27	34	29	1	108
	56.7%	48.2%	56.7%	50.9%	100.0%	52.9%

Chi-square= 1.990 DF=4 P=0.738
Phi = 0.308 P=0.017
Cramer V = 0.308 P=0.017

The bivariate association between the percentage of annual revenue in the foreign country where the firm has the most frequent and regular business, and the likelihood of being requested a bribe/gift/counter-favor is not significant at the established level of confidence of 0.05. At a bivariate level the annual revenue in the foreign country where the most frequent and regular business happens does not influence the odds of experiencing a bribe request.

The association is not significant even when the analysis is focused only on bribe requests by public officials (Table 38).

*Table 38 - **Bribe requests from public officials by** percentage of **annual revenue abroad**[30]. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Percentage annual revenue abroad					Total
Bribe request	**Up to 10%**	**From 10% to 25%**	**From 25% to 50%**	**More than 50%**	**Other**	
No	8	11	17	15	0	51
	38.1%	32.4%	35.4%	34.1%	0.0%	34.5%
Yes	13	23	31	29	1	97
	61.9%	**67.6%**	64.6%	65.9%	100.0%	65.5%

Chi-square= 0.738 DF=4 P=0.947 (n.s.)
Phi = 0.071 P=0.947 (n.s.)
Cramer V = 0.071 P=0.947 (n.s.)

[29] Percentage of the turnover in the country where the company has the most frequent and regular business

[30] Percentage of the turnover in the country where the company has the most frequent and regular business

*Table 39 - **Bribe requests from private entities by** percentage of **annual revenue abroad**[31]. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Percentage annual revenue abroad					Total
Bribe request	**Up to 10%**	**From 10% to 25%**	**From 25% to 50%**	**More than 50%**	**Other**	
No	11	26	23	31	0	91
	50.0%	72.2%	65.7%	91.2%	.	71.7%
Yes	11	10	12	3	0	36
	50.0%	27.8%	34.3%	8.8%	.	28.3%

Chi-square= 12.072 DF=4 P=0.017
Phi = 0.308 P=0.017
Cramer V = 0.308 P=0.017

As shown in Table 39, the odds of being asked for bribes by a private entity is significantly and negatively associated with the proportion of annual revenue earned abroad. It appears that the less firms generate revenue abroad, the more likely they are asked to pay. Firms with a turnover higher than 50% are almost six times less likely to be requested a bribe by a private entity (8.8% vs. 50%). When the variable "Percentage annual revenue abroad" is dichotomized into two categories "less than 50%" and "more than 50%", the association stays significant: firms with revenue less than 50% abroad are more likely to have experienced bribe requests from private third-parties (35.2% vs. 8.8%).

*Table 40 - **Bribe requests from private entities by** percentage of **annual revenue abroad**[32]. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Percentage annual revenue abroad		Total
Bribe request	**Less than 50%**	**More than 50%**	
No	59	31	90
	64.8%	91.2%	72.0%
Yes	32	3	35
	35.2%	8.8%	28.0%

Chi-square= 8.519 DF=1 P=0.004
Phi = -0.261 P=0.004
Cramer V = 0.261 P=0.004
Odds ratio = 0.178 95% CI [0.051, 0.630]

[31] Percentage of the turnover in the country where the company has the most frequent and regular business

[32] Percentage of the turnover in the country where the company has the most frequent and regular business

1.4.2.8 Bribe request by type of activity abroad

*Table 41 - **Total bribe request (both public officials and private entities) by type of activity abroad**. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Type of activity abroad								
Bribe request	**Local manufact**	**Construct ion**	**Sale local products (abroad)**	**Sale imported products (abroad)**	**Local sale of local products**	**Local sale imported products**	**Providers of services**	**Minority share**	**Majority share**
No	23	3	23	12	23	40	31	2	4
	42.1%	68.2%	44.8%	41.6%	51.1%	50.7%	54.8%	32.8%	31.5%
Yes	32	1	29	16	22	39	26	4	8
	57.9%	31.8%	55.2%	**58.4**%	48.9%	49.3%	45.2%	**67.2%**	**68.5%**

Chi-square= 6.825 DF=9 P=0.655 (n.s.)

The Table 41 shows the distribution of bribe requests from both public officials and private entities by the type of activity carried out by Swiss firms[33]. Even if the frequency of bribe request is higher for some specific activities (e.g. capital investment, sale of imported products abroad, local manufacturing), there is no statistically significant association between the two variables.

Even when performing separated bivariate analyses between the variables "bribe request" and each "specific type of activity", there is no significant bivariate association.

*Table 42 - **Bribe requests from public officials** by **type of activity abroad**. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Type of activity abroad									
Bribe request	**Local manufact**	**Construc tion**	**Sale local products (abroad)**	**Sale imported products (abroad)**	**Local sale of local products**	**Local sale imported products**	**Providers of services**	**Minority share**	**Majority share**	**Total**
No	13	1	16	8	15	18	15	0	0	86
	29.8%	44.0%	39.5%	33.3%	41.3%	34.8%	40.9%	4.0%	1.2%	34.7%
Yes	32	1	25	15	22	33	22	4	8	162
	70.2%	56.0%	60.5%	66.7%	58.7%	65.2%	59.1%	**96.0%**	**98.8%**	65.3%

Chi-square= 9.926 DF=9 P=0.357 (n.s.)

In case of bribe requests from public officials, at the aggregated level, the type of activity is not significantly associated with the odds of bribe request, although being shareholders (majority or minority) seems to expose the firm to more bribe requests (98.8% and 96% respectively).

[33]This activity concerns only the country where they have the most frequent and regular business.

*Table 43 - **Bribe requests from public officials by companies having capital investments (majority share) abroad.** % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Capital investments (majority share) abroad		Total
Bribe request	**No**	**Yes**	
No	51	0	51
	36.4%	0.0%	34.5%
Yes	89	8	97
	63.6%	**100.0%**	65.5%

Chi-square= 4.447 DF=1 P=0.035
Phi = 0.173 P=0.035
Cramer V = 0.173 P=0.035
Odds ratio = 1.090 95% CI [1.027, 1.157]

In the Table 43, separate bivariate analyses for each type of activity were performed and reveal that, the presence of capital investment abroad (majority share) is to be significantly and positively associated with the likelihood of being asked for bribes. All firms with capital investments abroad are exposed to bribe requests.

*Table 44 - **Bribe requests from private entities** by **type of activity abroad**. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Type of activity abroad								
Bribe request	**Local manufact**	**Construction**	**Sale local products (abroad)**	**Sale imported products (abroad)**	**Local sale of local products**	**Local sale imported products**	**Providers of services**	**Minority share**	**Majority share**
No	22	3	18	11	19	36	26	2	7
	72.8%	100.0%	55.1%	65.5%	73.9%	71.0%	80.4%	96.0%	85.0%
Yes	8	0	14	6	7	15	6	0	1
	27.2%	0.0%	**44.9%**	34.5%	26.1%	29.0%	19.6%	4.0%	15.0%

Chi-square= 11.390 DF=9 P=0.250 (n.s.)

As shown in Table 44, companies involved in sales activity of local products abroad are more likely to be asked for bribes by a private entity than firms in other activities, although the association is not statistically significant (44.9%).

*Table 45 - **Bribe requests from private entities by companies with sale local products abroad.** % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Sale of local products abroad		Total
Bribe request	**No**	**Yes**	
No	73	18	91
	77.7%	56.3%	72.2%
Yes	21	14	35
	22.3%	**43.8%**	27.8%

Chi-square= 5.455 DF=1 P=0.020
Phi = 0.208 P=0.020
Cramer V = 0.208 P=0.020
Odds ratio = 2.704 95% CI [1.155, 6.329]

When the variable "sale of local products abroad" is dichotomized into "yes: sale of local products" and "no", the proportion of firms involved in sale of local products abroad is higher than that of firms with no such activity (43.8% vs. 22.3%) and the association between this activity and bribe requests from private parties is moreover statistically significant (Table 45).

1.4.2.9 Bribe request by the perceived level of obstacles abroad

*Table 46 - **Total bribe request (both public officials and private entities) by level of obstacles** in doing business abroad. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Level of obstacles in doing business abroad		Total
Bribe request	**High/Moderate**	**Low**	
No	45	51	96
	40.2%	55.4%	47.1%
Yes	67	41	108
	59.8%	44.6%	52.9%

Chi-square= 4.719 DF=1 P=0.030
Phi = 0.152 P=0.030
Cramer V = 0.152 P=0.030
Odds ratio = 1.852 95% CI [1.060, 3.237]

Swiss firms reporting a high or moderate level of obstacles (e.g. cumbersome labor regulations and health and safety regulations; burdensome and inefficient administrative regulations; political instability; specific cultural factors; etc.) while doing business in the foreign country of the most frequent and regular business activity are twice more likely to be asked for bribes than the ones reporting a low level of obstacles. Corruption is with no doubt more present in countries perceived as high risk and high level of obstacle for business dealing.

*Table 47 - **Total bribe request (both public officials and private entities) by perception of corruption** as obstacle in doing business abroad. % on the total number of respondents who had contact with a public official or a private entity. Years 2013-2015*

	Perception of corruption as obstacle in doing business abroad		Total
Bribe request	**Yes**	**No**	
No	9	85	94
	21.4%	54.5%	47.5%
Yes	33	71	104
	78.6%	45.5%	52.5%

Chi-square= 14.503 DF=1 P=0.000
Phi = 0.271 P=0.000
Cramer V = 0.271 P=0.000
Odds ratio = 4.390 95% CI [1.969, 9.785]

In Table 47, we analyzed the relationship between the perception of corruption as main obstacle and the experience of bribe requests (from both public officials and private entities) and notices that firms that perceive corruption as the main issue for business abroad are also the ones that have experienced more bribe requests (78.6% vs. 45.5%). This observation is totally logical as those firms were effectively asked to pay bribes.

*Table 48 - **Bribe requests from public officials** by **level of obstacles** in doing business abroad. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Level of obstacles in doing business abroad		Total
Bribe request	**High/Moderate**	**Low**	
No	21	30	51
	26.3%	44.1%	34.5%
Yes	59	38	97
	73.8%	55.9%	65.5%

Chi-square= 5.196 DF=1 P=0.023
Phi = 0.187 P=0.023
Cramer V = 0.187 P=0.023
Odds ratio = 2.218 95% CI [1.112, 4.426]

In Table 48, the analysis is focused on the relationship between bribe requests and the level of obstacles in business abroad. A higher to moderate level of obstacles abroad perceived by respondents is correlated to the proportion of bribe requests. 73.8% of the respondents having contacts with a public official confirmed that their firms have been asked to pay against 55.9% of those perceiving the level of obstacles as low.

*Table 49 - **Bribe requests from public officials by perception of corruption** as obstacle in doing business abroad. % on the total number of respondents who had contact with a public official. Years 2013-2015*

	Perception of corruption as obstacle in doing business abroad		Total
Bribe request	**No**	**Yes**	
No	45	6	51
	42.1%	15.8%	35.2%
Yes	62	32	94
	57.9%	**84.2%**	64.8%

Chi-square= 8.485 DF=1 P=0.004
Phi = 0.242 P=0.004
Cramer V = 0.242 P=0.004
Odds ratio = 3.871 95% CI [1.493, 10.036]

The same analysis as in Table 47 was performed but with only bribes by public officials. It is observed that firms perceiving corruption as the main obstacle are also the ones that have been exposed to bribe requests in the country of the most frequent and regular business activity (84.2% vs. 57.9%). This association is statistically significant.

*Table 50 - **Bribe requests from private entities by level of obstacles** in doing business abroad. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Level of obstacles in doing business abroad		Total
Bribe request	**High/Moderate**	**Low**	
No	48	48	91
	66.7%	66.7%	71.7%
Yes	24	24	36
	33.3%	**33.3%**	28.3%

Chi-square= 2.036 DF=1 P=0.154
Phi = 0.127 P=0.154
Cramer V = 0.127 P=0.154
Odds ratio = 1.792 95% CI [0.800, 4.011]

Concerning bribe request by private entities as shown in Table 50, the level of obstacles either high or low does not indicate an indicator of the likelihood of being requested for bribes.

*Table 51 - **Bribe requests from private entities by perception of corruption** as obstacle in doing business abroad. % on the total number of respondents who had contact with a private entity. Years 2013-2015*

	Perception of corruption as obstacle in doing business abroad		Total
Bribe request	**No**	**Yes**	
No	72	17	89
	76.6%	63.0%	73.6%
Yes	22	10	32
	23.4%	**37.0%**	26.4%

Chi-square= 2.004 DF=1 P=0.157
Phi = 0.129 P=0.157
Cramer V = 0.129 P=0.157
Odds ratio = 1.925 95% CI [0.771, 4.809]

However, firms that perceive corruption from a private third-party as the main issue for business activity abroad seem to have been more victims of bribe requests (37% vs. 23.4%). As the matter of fact the perception of corruption do relate to the experience of bribe requests.

1.4.2.10 Summary of the bivariate analysis on risk factors for bribe requests

Figure 50 - Main risk factors for the total number of bribe requests by either a public official or a private entity. % on the number of firms who had contact with a public official or a private entity in the past three years (2013-2015)

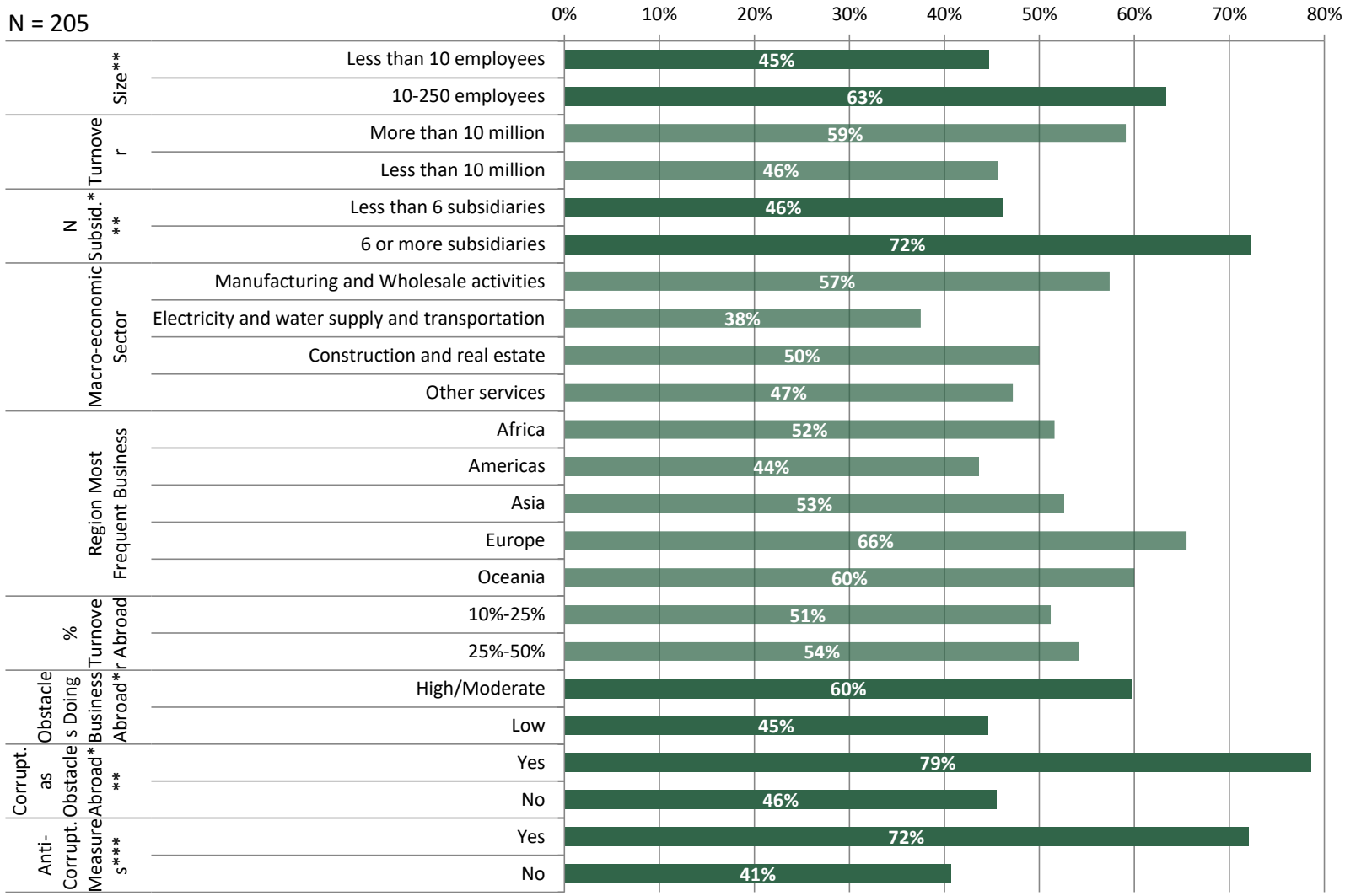


Figure 51 - Main risk factors for bribe requests by public officials. % on the number of firms who had contact with a public official in the past three years (2013-2015)

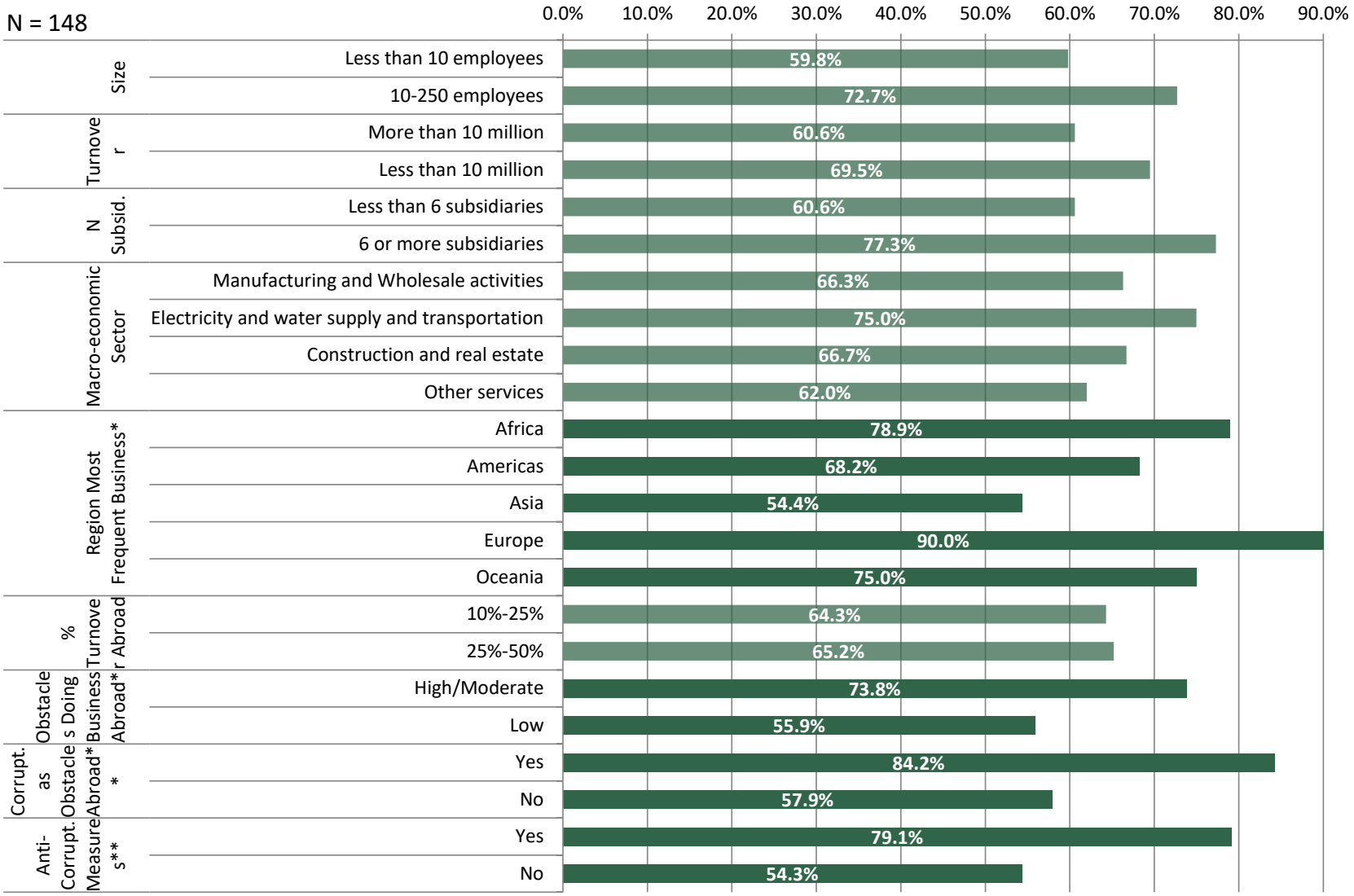
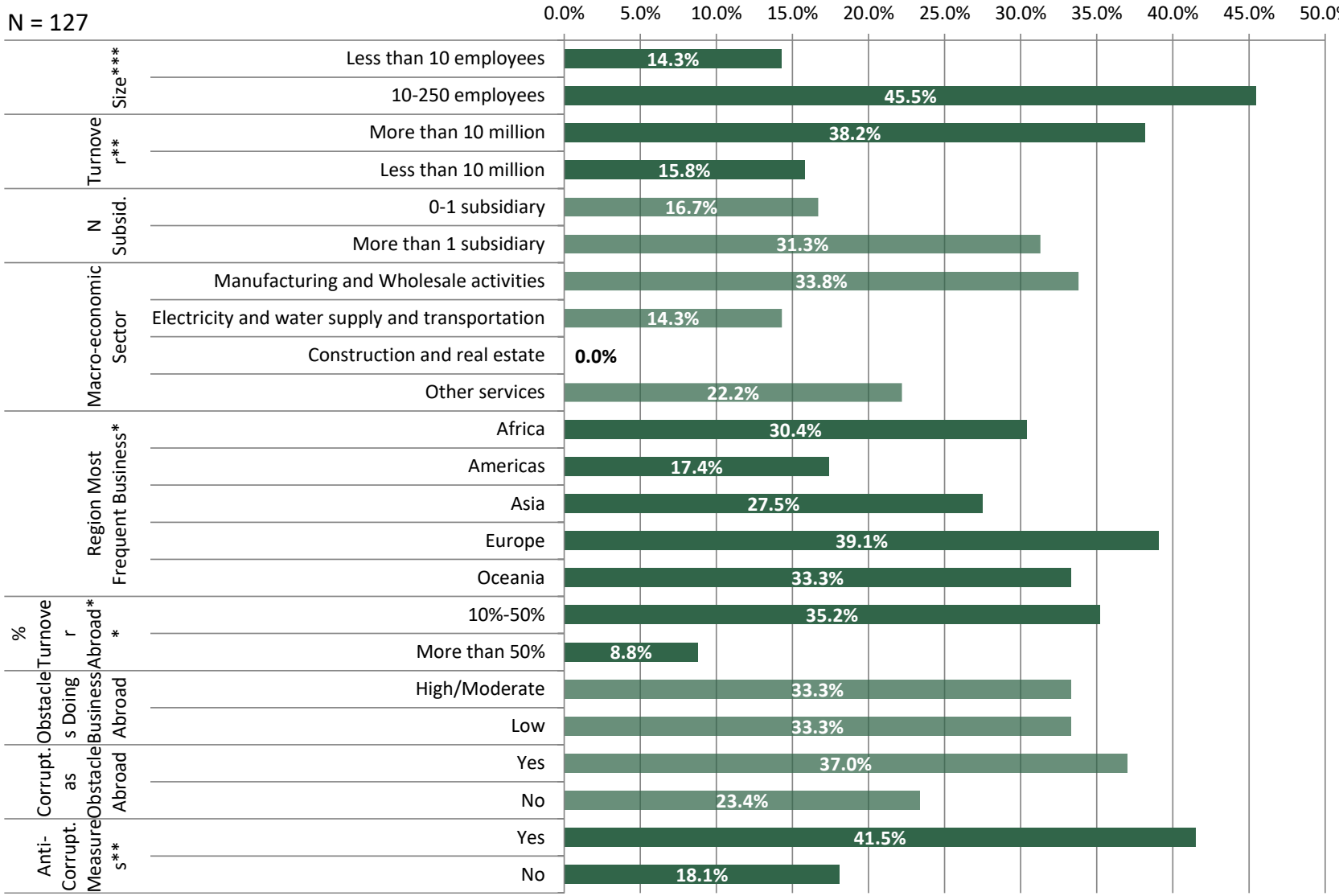


Figure 52 - Main risk factors for bribe requests by private entities - % on the number of firms who had contact with a private entity in the past three years (2013-2015)



Summary of the main risk factors of bribes at the bivariate analysis

From public officials and private parties:

- **Size of the firm**: larger firms are more exposed to bribe requests.
- **Number of subsidiaries**: owning six or more subsidiaries abroad is a risk.
- **High to moderate level of obstacles** for business activity abroad expose firms to more risk of bribes.
- **The perception of corruption as the main obstacle** for business abroad is correlated to the victimization of bribe requests.
- **Anti-corruption programs**: firms being equipped with anti-corruption programs and measures acknowledge a higher level of bribe requests. **

From public officials:

- **The region of the most frequent and regular business activity** is a risk factor. Some regions expose firms to more bribe requests than others.
- **High to moderate level of obstacles** for business activity abroad expose firms to more risk of bribes.
- **The perception of corruption as the main obstacle** for business abroad is correlated to the victimization of bribe requests.
- **Capital investments (majority share) as activity abroad:** the presence of capital investment abroad in a majority share is a risk factor for bribe requests.

From private entities:

- **Size of the firm**: larger firms are more vulnerable to bribe requests.
- **Turnover of the firm**: important annual turnover is a risk factor.
- **The region of the most frequent and regular business activity** is a risk factor. Some regions expose firms to more bribe requests than others.
- **Proportion of annual revenue abroad**: low proportion of revenue abroad constitutes a risk for bribe requests.
- **Sale of local products as activity abroad**: higher risk of bribe requests

** *to be explained in further sections of the report*

1.4.3 Multiple logistic regression

This section analyses the result of a three different multiple logistic regression models (see Annex 3 for further details) estimating the likelihood for Swiss firms to have experienced bribe requests by both public officials and private entities while operating abroad. This likelihood is estimated on the basis of the following factors:

- ✓ specific characteristics of Swiss companies (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country)
- ✓ firm's activities
- ✓ region of the most frequent and regular business activity
- ✓ presence of anti-corruption measures
- ✓ firm perception of obstacles in doing business abroad
- ✓ types of operation with public officials involved[34]

1.4.3.1 Total number of bribe requests (by both public officials and private entities)

The dependent variable (DV) of this first regression model indicates whether a company has been requested to pay a bribe, either by both public officials or private entities, during a specific business operation, in the last three years (1=Yes, 0=No). The specific independent variables included in this regression model are the following:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Percentage_Revenues_Abroad (categorical, More than 25%=1);
4. Number_Subsidiaries (categorical, None=1);
5. Region_Most-Regular_Frequent_Business (categorical, Africa=1);
6. Macro_Economic_Sector (categorical, Manufacturing and wholesale activity=1);
7. Obstacles_doing_Business_Abroad_High/Moderate (1= Yes, 0=No);
8. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
9. Activity Foreign Country_Construction (1=Yes, 0=No);
10. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
11. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
12. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);
13. Activity Foreign Country_Capital investments in local companies (minority and majority share) (1=Yes, 0=No);
14. Monitoring_Bodies_Int/Ext (1=Yes, 0=No);
15. Control Systems_Due Diligence (1=Yes, 0=No);

[34] In the survey, the question on the types of business procedure during which Swiss firms got in contact with public officials was optional. Therefore, it is possible that not all respondents have answered this specific question. However, looking at the answers to a second question *"Whether they have been requested to provide something during that procedure to a public official"*, answers to the previous one could be partially validated. This being said, the results of the regression model should be interpreted with caution.

16. Anti-Corruption_Training (1=Yes, 0=No);
17. Legal Measures (1=Yes, 0=No);
18. Code of Conducts (1=Yes, 0=No);
19. Reporting Lines (1=Yes, 0=No);
20. Contact_Private Entities;
21. Contact_Public Officials.

The above-mentioned independent variables have been selected on the basis of their statistical consistency and association with the dependent variable and also in order to avoid collinearity problems.

Table 52 - Main results of the binary logistic regression – ***Bribe requests by both public officials and private entities (on contacts)***

Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
							Lower limit	Upper limit
Obstacle_Doing_Business_Abroad	1.182	.394	8.998	1	**.003**	3.261	1.506	7.059
Size_N_Employees_5categories			10.728	4	**.030**			
N_Employees_5categories(1)	-1.764	.814	4.701	1	**.030**	.171	.035	.844
N_Employees_5categories(2)	-1.519	.728	4.354	1	**.037**	.219	.053	.912
N_Employees_5categories(3)	-1.147	.633	3.280	1	.070	.318	.092	1.099
N_Employees_5categories(4)	-.056	.644	.008	1	.930	.945	.268	3.339
ControlSystems_DueDiligence	1.942	.572	11.507	1	**.001**	6.970	2.270	21.401
AntiCorruption_Training	-2.030	.710	8.172	1	**.004**	.131	.033	.528
Contact_Public Officials	2.336	.477	23.954	1	**.000**	10.339	4.057	26.346
Constant	-1.961	.652	9.039	1	**.003**	.141		

N = 185; Model Chi-square= 76.594, p< .000. -2 Log-Likelihood= 175.970; Cox & Snell R-Square= 0.343, Nagelkerkes R-Square= 0.457

The sample of 185 cases is numerous enough to avoid numerical problems, according to the Peduzzi et al. (1996). "rule"[35].

The results of the regression model show that the contribution to the prediction of bribe requests comes from the variables "Contact_Public Officials" (Chi-square = 34.837), "Control Systems_Due Diligence" (Chi-square = 14.955), "Size_N_Employees" (Chi-square = 11.623); "Obstacles Doing Business Abroad" (Chi-square = 9.590) and "Anti-Corruption Training" (Chi-square = 5.589). All other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood equal to 175.970, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.000, witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

[35] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=5 and p=0.48 (48%), the minimum N should be 105.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 46% (for further explanations on the coefficient see Annexes 2 and 3). This value is pretty high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the four predictors of victimization (see table above), all of them have a relatively low standard error and the p-values < 0.050. The four variables which influence the risk of being requested to pay bribes by public officials and/or private entities are the following: "contacts with public officials", "control system and due diligence", "size by number of employees counted", "anti-corruption training" and "presence of obstacles abroad".

In particular, the Exp(B) of the variable "Contact Public Officials" indicates that **firms having contacts with public officials due to business operations are ten times more likely to be requested a bribe** than firms having no contacts with public authorities, when the other variables in the model are controlled.

The Exp(B) of the categorical variable "N_Employees" indicate that the odds of being requested a bribe for **small firms with less than three employees** and for **those having between three and nine employees are respectively six and five times lower than for larger firms with more than 250 employees**.

A high or moderate level of obstacles abroad constitutes a risk of bribe requests of three times higher.

The Exp(B) of the variable "Anti-corruption Training" indicates that **the odds of being victims of bribe requests is seven times higher for companies with no investments in anti-corruption training in the last three years.**

On the other hand, the model finds that **firms equipped with a due diligence system are more exposed to bribe requests.** This result could not be interpreted as the non-efficiency of due diligence but on the contrary, it might be that after some serious bribe requests incidents, firms might have adopted anti-corruption programs to prevent potential new incidents and without these measures, the rate of victimization might be even higher.

1.4.3.2 Bribe requests by public officials

The dependent variable (DV) of this regression model indicates whether a company has been requested to pay a bribe by a public official while performing business procedures, in the last three years (1=Yes, 0=No). The specific independent variables included in the regression model are:

1. Size_Microbusinesses (Yes=1, No=0);
2. Average_Annual_Turnover_More than 10 million (Yes=1, No=0);
3. Percentage_Revenues_Abroad_More 25% (Yes=1, No=0);
4. Subsidiaries_More than one (Yes=1, No=0);
5. Region_Most-Regular_Frequent_Business_Europe (Yes=1, No=0);
6. Region_Most-Regular_Frequent_Business_Africa (Yes=1, No=0)
7. Obstables_doing_Business_Abroad_High/Moderate (1= Yes, 0=No);
8. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
9. Activity Foreign Country_Construction (1=Yes, 0=No);

10. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
11. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
12. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);
13. ControlSystems_DueDiligence (1=Yes, 0=No);
14. AntiCorruption_Training (1=Yes, 0=No);
15. LegalMeasures (1=Yes, 0=No);
16. CodeConducts (1=Yes, 0=No);
17. ReportingLines (1=Yes, 0=No);
18. Contact_Clearing_Goods_Customs (1=Yes, 0=No);
19. Contact_BiddingPublicProcurement (1=Yes, 0=No);
20. Contact_ContractsPubInstNoBidding (1=Yes, 0=No);
21. Contact_BuildingPermits (1=Yes, 0=No);
22. Contact_LegalProceedings (1=Yes, 0=No);
23. Contact_UtilityConnections (1=Yes, 0=No);
24. Contact_AuthorizPublicInstitutions (1=Yes, 0=No);
25. Contact_LabourRegulations (1=Yes, 0=No);
26. Contact_HealthInspections (1=Yes, 0=No);
27. Contact_TaxInspections (1=Yes, 0=No);
28. Contact_TaxDeclaration (1=Yes, 0=No);
29. Contact_RandomControls (1=Yes, 0=No).

The above mentioned independent variables have been selected on the basis of their statistical consistency and association with the dependent variable and also in order to avoid collinearity problems.

*Table 53 - Main results of the binary logistic regression – **Bribe requests by public officials (on contacts)***

Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
							Lower limit	Upper limit
MicroBusinesses	-1.478	.516	8.221	1	**.004**	.228	.083	.626
ControlSystems_DueDiligence	2.071	.580	12.728	1	**.000**	7.931	2.542	24.739
ReportingLines	-4.071	1.018	15.983	1	**.000**	.017	.002	.126
PO_Contact_BiddingPublicProcurement	-1.403	.512	7.508	1	**.006**	.246	.090	.671
PO_Contact_AuthorizPublicInst	1.898	.601	9.959	1	**.002**	6.670	2.052	21.672
PO_Contact_HealthInspections	-1.893	.556	11.599	1	**.001**	.151	.051	.448
Constant	1.841	.535	11.848	1	**.001**	6.305		

N = 135; Model Chi-square= 45.381, p< .000. -2 Log-Likelihood= 144.494; Cox & Snell R-Square= 0.266, Nagelkerkes R-Square= 0.366

The sample of 135 cases is slightly lower than what it is supposed to be in order to avoid numerical problems, according to the Peduzzi et al. (1996) "rule"[36]. Despite this issue, **this regression model is the most significant and parsimonious among the possible combinations**. It misses only 40 cases to avoid numerical problems and its significance is good enough to justify this choice.
In particular, the results of the regression model show that the contribution to the prediction of bribe requests by public officials comes from the variables "Reporting lines" (Chi-square = 9.045), "ControlSystems_DueDiligence" (Chi-square = 8.555), "Contact_BiddingPublicProcurement" (Chi-square = 8.268); "Contact_Authorizations_PublicInstitutions" (Chi-square = 8.157), "Microbusinesses" (Chi-square = 5.813) and "Contact_HealthInspections" (Chi-square = 5.543).
The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood equal to 45.381, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at $p<0.000$, witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.
The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 37% (for further explanations on the coefficient see Annexes 2 and 3). This value is pretty high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.
Considering the B coefficients of the four predictors of victimization (see table above), all of them have a relatively low standard error and the p-values < 0.010. The following independent variables influence the risk of being asked for bribes by public officials: "presence of control systems and due diligence", "presence of reporting line", "type of procedures/operations" (bidding public procurement, authorization process, health inspections).
In particular, the Exp(B) of the variable "Reporting lines" indicates that **the odds of being requested to pay a bribe by a public official is more than five times higher for firms not having any reporting lines (whistleblowing) in the last three years than for those equipped with a reporting line,** when the other variables in the model are controlled.
The Exp(B) of the variable "ControlSystems_DueDiligence" indicates that **companies with due diligence programs are more likely to be asked for bribes.**
The Exp(B) of the variable "Microbusinesses" shows that **the odds of being asked for bribes is almost five times lower for micro businesses with less than 10 employees than for larger firms**, when the other variables are controlled.
The Exp(B) of the variables "Contact_BiddingPublicProcurement" and "Contact_HealthInspections" reveals that **firms in contacts with public official during bidding processes in public procurement procedures and during health/safety/environmental inspections are less likely to be requested a bribe while companies in contact with public authorities for specific authorizations are six times more likely to be asked for bribes.**

[36] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=6 and p=0.34 (34%), the minimum N should be 174.

1.4.3.3 Bribe requests by private entities

The dependent variable (DV) of this regression model indicates whether a company has been requested to pay a bribe by a private entity in the last three years (1=Yes, 0=No). The specific independent variables included in the regression model are:

11. Size (categorical, More than 250 employees=1);
12. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
13. Percentage_Revenues_Abroad (categorical, More than 25%=1);
14. Number_Subsidiaries (categorical, None=1);
15. Region_Most-Regular_Frequent_Business (categorical, Africa=1);
16. Macro_Economic_Sector (categorical, Manufacturing and wholesale activity=1);
17. Obstables_doing_Business_Abroad_High/Moderate (1= Yes, 0=No);
18. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
19. Activity Foreign Country_Construction (1=Yes, 0=No);
20. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
21. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
22. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);
23. Activity Foreign Country_Capital investments in local companies (minority and majority share) (1=Yes, 0=No);
24. Monitoring_Bodies_IntExt (1=Yes, 0=No);
25. ControlSystems_DueDiligence (1=Yes, 0=No);
26. AntiCorruption_Training (1=Yes, 0=No);
27. LegalMeasures (1=Yes, 0=No);
28. CodeConducts (1=Yes, 0=No);
29. ReportingLines (1=Yes, 0=No);
30. Type Private Entities (Categorical; 1=it is our local subsidiary);
31. PE_Contact_Bid_Private_Sector_Contract;
32. PE_Contact_Manufacturing;
33. PE_Contact_ImportExport;
34. PE_Contact_SellingGoods;
35. PE_Contact_Consortium;
36. PE_Contact_ContractPubliInstNoBid;
37. PE_Contact_UtilityConnections;
38. PE_Contact_Loan;
39. PE_Contact_Insurance;
40. PE_Contact_ObtainingFacilities;
41. PE_Contact_OtherOperations.

The above mentioned independent variables have been selected on the basis of their statistical consistency and association with the dependent variable and also in order to avoid collinearity problems.

*Table 54 - Main results of the binary logistic regression – **Bribe requests by private entities (on contacts)***

Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
							Lower limit	Upper limit
Monitoring_Bodies	-1.833	.857	4.575	1	**.032**	.160	.030	.858
CodeConducts	2.490	.792	9.891	1	**.002**	12.063	2.556	56.939
PE_Contact_Bid_Private_Sector_Contract	1.827	.568	10.331	1	**.001**	6.216	2.040	18.941
PE_Contact_Import/Export	2.075	.567	13.377	1	**.000**	7.966	2.620	24.223
PE_Contact_Loan	-2.458	1.106	4.941	1	**.026**	.086	.010	.748
Constant	-2.954	.514	33.012	1	**.000**	.052		

N = 124; Model Chi-square= 57.231, p< .000. -2 Log-Likelihood= 90.725; Cox & Snell R-Square= 0.369, Nagelkerkes R-Square= 0.530

The sample of 124 cases is slightly lower than what it is supposed to be in order to avoid numerical problems, according to the Peduzzi et al. (1996) "rule"[37]. Despite this issue, this regression model is the most significant and parsimonious among the possible combinations. It misses only 50 cases to avoid numerical problems and its significance is good enough to justify this choice.

In particular, the results of the regression model show that the contribution to the prediction of bribe requests by public officials comes from the variables "Contact_ImportExport" (Chi-square = 29.490), "Codes of Conduct" (Chi-square = 8.627), "Contact_Loan" (Chi-square = 7.165); "Contact_Bid_Private_Sector_Contract" (Chi-square = 6.822) and "Monitoring Bodies" (Chi-square = 5.127). All other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood equal to 57.231, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.000, witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 53% (for further explanations on the coefficient see Annexes 2 and 3). This value is pretty high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the four predictors of victimization (see table above), all of them have a relatively low standard error and the p-values < 0.050. The type of procedures involving private entities and the type of anti-corruption measures adopted have an influence on the likelihood of being requested to pay bribes by a private entity.

In particular, the Exp(B) of the variable "Monitoring Bodies" indicates that **the odds of being asked by a private entity for bribes is six times higher for firms that had not been investing in**

[37] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=5 and p=0.28 (28%), the minimum N should be 176.

monitoring bodies, either within the business (e.g. compliance officers, risk control officers, etc.) or in external corporate intelligence specialists, in the last three years, than for firms with such investments, when the other variables in the model are controlled.
The Exp(B) of the variable "Codes of Conduct" indicates that **companies with a code of conduct are more likely to be asked for bribes.**
The Exp(B) of the variables "Contact_Bid_Private_Sector_Contract" and "Contact_Import/Export" indicate that **companies in contact with private entities during bidding processes for a private sector contract and during import/export activities are twice more likely to be exposed to bribes.**
On the other hand, **firms in contact with private entities for a loan are less likely to have experienced a bribe request.**

1.5 Summary of risk factors of bribe requests – bivariate regression

	More exposed to bribe requests	Less exposed to bribe requests
From public officials & private entities	✓ Contacts with public officials ✓ Large firms with more than 250 employees ✓ High or moderate level of obstacles in countries abroad ✓ Firms with no anti-corruption training ✓ Firms with a due diligence control system***	✓ Small firms less than 3 employees ✓ Small firms between 3 to 9 employees ✓ Firms with anti-corruption training
From public officials	✓ Firms with a due diligence control system*** ✓ Larger firms with more than 10 employees ✓ During bidding process in public procurement procedures ✓ During health/safety inspections	✓ Firms with a reporting line for incidents ✓ Small firms with less than 10 employees
From private entities	✓ Firms with no monitoring bodies (compliance, risk control) ✓ Firms with a code of conduct*** ✓ During bidding process for a private sector contract ✓ During a loan authorization	

***These findings could not be interpreted as the non-efficiency of due diligence control system or codes of conduct but on the contrary, it might be seen as such: after some serious bribe requests incidents, firms might have adopted some anti-corruption programs to prevent potential new incidents and without the implementation of these measures, the rate of victimization of bribe requests might be even higher.

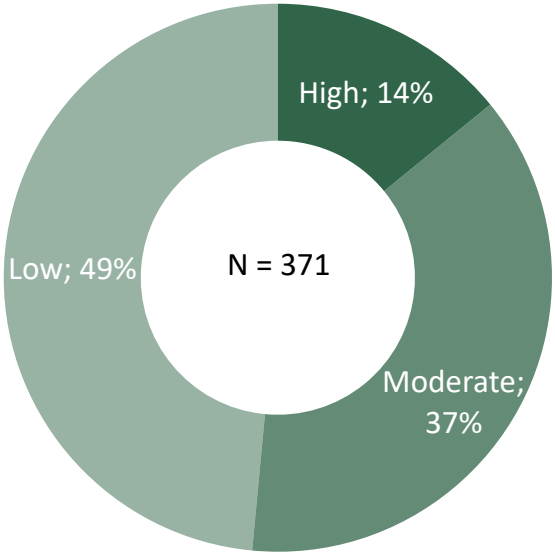
SECTION 2

2 Obstacles in doing business abroad

Section 2 examines the perception of the level of obstacles in countries where Swiss firms have business activities.

2.1 Level of obstacles while doing business abroad

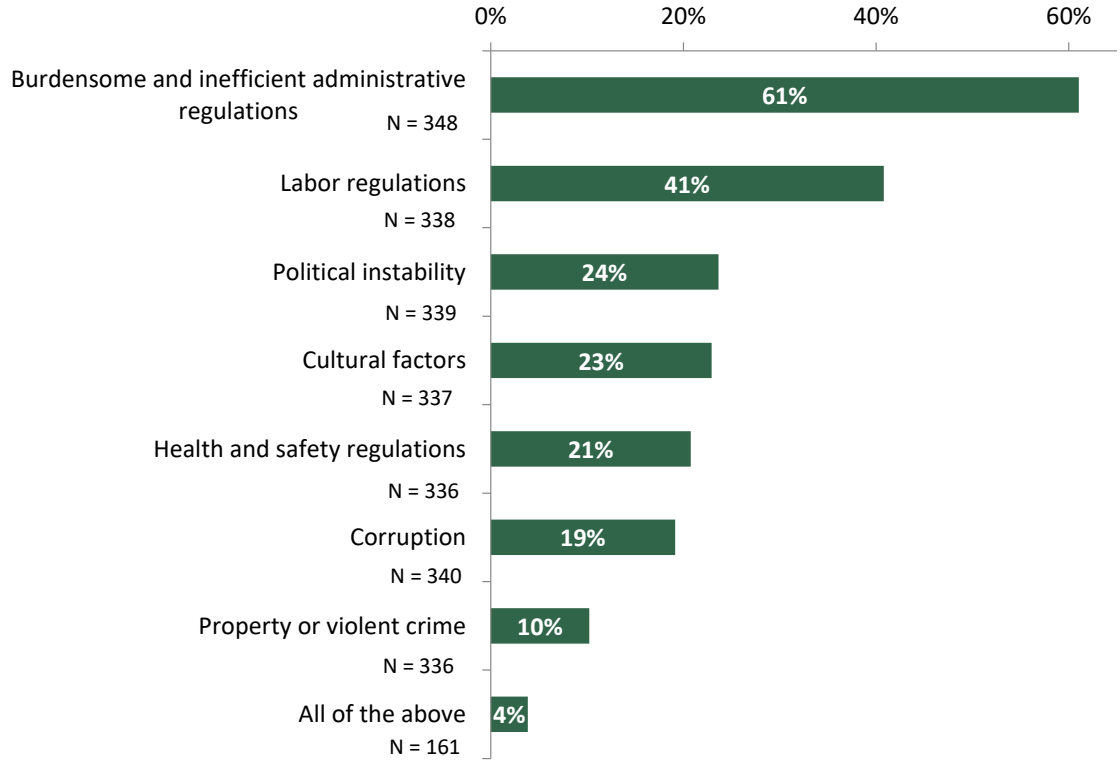
Figure 53 - Level of obstacles in doing business abroad. % on the total number of answers



Among 371 responding firms, 14% estimate the level of obstacles while doing business abroad is high, 37% think that there are some moderate obstacles and 49% perceive the level of obstacles as low.

2.2 Most frequent obstacles in doing business abroad

Figure 54 - Most frequent type of obstacles in doing business abroad. % on the total number of answers



As shown in Figure 54, the most quoted obstacles in doing business abroad are the burdensome and inefficient administrative regulations (61%), following by the burdensome of labor regulations (41%). Political instability and cultural factors also contribute to the level of obstacles abroad (24% and 23 % respectively). Health and safety regulations, corruption and some forms of violent crime are also elements of obstacles for Swiss firms.

2.3 Factors influencing the perception of obstacles in doing business abroad

This part of analysis focuses on the identification of the main factors influencing the perception of obstacles in doing business among Swiss companies operating abroad.
The independent variables (e.g. specific business characteristics) are the ones that could explain variations in the distribution of perception of obstacles (dependent variable).
In particular, the aim of the analyses included in this part is to test the following hypothesis:
Does the level and types of obstacles perceived abroad relate to specific characteristics of Swiss businesses (e.g. size, turnover, economic sector, etc.)?
The chapter firstly tests the bivariate association between the perception of obstacles and specific independent variables, through the analysis of cross-tabulations and association's coefficients such as the Chi-square, the Phi coefficient, Cramer V and Odds ratio (see Annex 2 for further clarifications).

The conventional levels of confidence taken into consideration for refusing the null hypothesis are $p<0.01$ and $p<0.05$[38].
It then identifies the relationship between the perception of obstacles and the selected independent variables and quantifies their effects, through a binary logistic regression (see Annex 3 for further explanations).

2.3.1 Defining the dependent and independent variables

Dependent variable

Both analyses are carried out on the dependent variable (DV): level of obstacles perceived abroad (1= High/Moderate; 0= Low);

Independent variables

The independent variables, selected on the basis of their availability in the SICS dataset, and statistical consistency, are related to:

- ✓ specific characteristics of Swiss companies (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country);
- ✓ types of activity abroad;
- ✓ region of the most frequent and regular business activity;
- ✓ presence of anti-corruption measures;
- ✓ contact with public officials and private entities in the past three years;
- ✓ types of operation with public officials involved[39];
- ✓ bribe requests by public officials and private entities

The specific variables included in these analyses are:

1. **Macro-economic sector** of activity (1= Manufacturing and wholesale activity; 2= Electricity and water supply and transportation; 3= Construction and real estate; 4= Other services);
2. **Size** (1= 0-2 employees; 2= 3-9 employee; 3 = 10-40 employees; 4= 50-250 employees; 5=more than 250 employees);
3. **Average annual turnover** (last 3 years) (1 = Up to CHF 500 thousands; 2= CHF 500 thousands - CHF 1 million; 3= CHF 1 million – CHF 5 million; 4= CHF 5 million – CHF 10 million; 5 = CHF 10 million – CHF 50 million; 6= More than CHF 50 million);
4. **Number of subsidiaries** (1 = None; 2= 1 subsidiary; 3= 2-5 subsidiaries; 4= 6-10 subsidiaries; 5= More than 10 subsidiaries);

[38] The bivariate analysis will be carried out first considering all the categories of the independent variables, as described above, and then, in order to obtain more significant results and in order to focus on the most specific and relevant features of each variable, the analysis will focus on only one specific modality. In order to consider the presence/absence of a specific feature related to each variable, the categories of the independent variables will be treated as single dummy-coded variables themselves (e.g. the category 1-9 employees of the variable size of the business will be treated as dummy-coded variable indicating the presence/absence of businesses with 1-9 employees. Its categories will be: 1. Yes, 0. No).

[39] It has to be considered that the question asking "during which business procedure Swiss companies got in contact with public officials" was optional. It might have happened that not all respondents specified the type of procedure during which they had contact with a public official. However, the answers to this question have been partially validated looking at the answers to a second question "Whether they have been requested to provide something during that procedure to a public official". Anyway, this issue should be considered when interpreting the results of the regression model.

5. **Foreign region of most regular and frequent business activities** (1= Africa; 2= America; 3= Asia, 4= Europe, 5= Oceania);
6. **Type of business activity in the foreign country** where the company has the most frequent and regular business relationship (1= Local manufacturing; 2= Construction; 3= Sale to other countries of products locally manufactured; 4= Sale to other countries of imported products; 5= Local sale of products locally manufactured; 6= Local sale of imported products; 7=Providers of services to locals/foreigners/expatriates; 8= Capital investments in local companies (minority share); 9= Capital investments in local companies (majority share); 10=Other);
7. **Percentage of average annual revenues in the foreign country** where the company has the most frequent and regular business activity (1= Up to 10%; 2= From 10% to 25%; 3= From 25% to 50%; 4= More than 50%; 5= Other);
8. **Contact with public officials in the past three years** (1= Yes; 0= No);
9. **Contact with private entities in the past three years** (1= Yes; 0= No);
10. **Total bribe requests** (1= Yes; 0= No);
11. **Bribe requests by public officials** (1= Yes; 0= No);
12. **Bribe requests by private entities** (1= Yes; 0= No).

2.3.2 Bivariate analysis

2.3.2.1 Turnover of the business

*Table 55 - **Level of obstacles perceived abroad** by **turnover** of the firm[40]. % on the total number of respondents. Years 2013-2015*

	Turnover of the business						
Level of obstacles	**Up to CHF 500 thousand**	**CHF 500 thousand - CHF 1 mil**	**CHF 1 - 5 million**	**CHF 5 – 10 million**	**CHF 10 – 50 million**	**More than CHF 50 million**	**Total**
Low	35	15	22	10	37	55	174
	60.3%	71.4%	37.9%	37.0%	39.8%	54.5%	48.6%
High/Moderate	23	6	36	17	56	46	184
	39.7%	28.6%	62.1%	**63.0%**	60.2%	45.5%	51.4%

Chi-square= 15.951 DF=5 P=0.007
Phi = 0.221 P=0.007
Cramer V = 0.221 P=0.007

Table 55 shows that firms with a higher turnover are more likely to perceive a high/moderate level of obstacles for business abroad.

However, when the independent variable "turnover" is dichotomized to two categories "less than 5 million" and "more than 5 million", this association became statistically non-significant, even though

[40] Three years average annual turnover.

the proportion of firms with a turnover more than 5 million is likely higher than the one of firms with a less important turnover (54.1% vs. 47.4%) to perceive the level of obstacles as high or moderate.

*Table 56 - **Level of obstacles in doing business abroad** by **turnover higher than 5 million**[41]. % on the total number of respondents. Years 2013-2015*

	Turnover of the business		Total
Level of obstacles	**More than 5 million**	**Less than 5 million**	
Low	102	72	174
	45.9%	52.6%	48.5%
High/Moderate	120	65	185
	54.1%	47.4%	51.5%

Chi-square= 1.481 DF=1 P=0.224 (n.s.)
Phi = -0.064 P=0.224
Cramer V = 0.064 P=0.224
Odds ratio = 0.767 95% CI [0.501, 1.176]

2.3.2.2 Region of the most frequent and regular business

*Table 57 - **Level of obstacles in doing business abroad** by **region of business**. % on the total number of respondents. Years 2013-2015*

	Region of business					Total
Level of obstacles	**Africa**	**Americas**	**Asia**	**Europe**	**Oceania**	
Low	24	14	117	9	9	173
	46.2%	22.6%	68.0%	21.4%	31.0%	48.5%
High/Moderate	28	48	55	33	20	184
	53.8%	**77.4%**	32.0%	**78.6%**	69.0%	51.5%

Chi-square= 58.905 DF=4 P=0.000
Phi = 0.406 P=0.000
Cramer V = 0.406 P=0.000

The bivariate association between the region where Swiss companies have the most frequent and regular business activities and the perception of obstacles while doing business abroad is statistically significant and shows that the highest level of obstacles is perceived by companies operating in Europe and in the Americas.

[41] Three years average annual turnover.

*Table 58 - **Level of obstacles in doing business abroad** by **sub-region of activity** % on the total number of respondents. Years 2013-2015*

	Region of business									
Level of obstacles	**Centr-South. America & Caribb.**	**Nord. America**	**East. & West. Asia**	**South. & South East. Asia**	**Middle & West. Africa**	**North. & East. Africa**	**Melanes. Polynes. & Micrones.**	**East. & South. Europe**	**North. & West. Europe**	**Tot.**
Low	10	5	117	0	19	5	9	4	5	174
	17.2%	100.0%	68.8%	0.0%	43.2%	71.4%	31.0%	12.9%	41.7%	48.7%
High/Moderate	48	0	53	1	25	2	20	27	7	183
	82.8%	0.0%	31.2%	**100.0%**	56.8%	28.6%	69.0%	**87.1%**	58.3%	51.3%

Chi-square= 78.488 DF=8 P=0.000
Phi = 0.469 P=0.000
Cramer V = 0.469 P=0.000

When disaggregating the distribution of bribe requests by sub-regions the association coefficients (Chi-Square and Cramer V) increase. In particular, more than 80% of Swiss companies operating in Eastern and Southern Europe and in Central-South America and the Caribbean perceive a high/moderate level of obstacles while doing business in these regions. Also 69% of Swiss firms working in Melanesia, Polynesia and Micronesia, 58% operating in Northern and Western Europe and 57% of those having activities in Northern and Eastern Africa quote that the level of obstacles in doing business in these regions is either high or moderate.

2.3.2.3 Percentage of annual revenue abroad

*Table 59 - **Level of obstacles in doing business abroad by** percentage of **annual revenue abroad**[42]. % on the total number of respondents. Years 2013-2015*

	Percentage annual revenue abroad		Total
Level of obstacles	Less than 25%	More than 25%	
Low	62	108	170
	40.8%	53.7%	48.2%
High/Moderate	90	93	183
	59.2%	46.3%	51.8%

Chi-square= 5.806 DF=1 P=0.016
Phi = -0.128 P=0.016
Cramer V = 0.128 P=0.016
Odds ratio = 0.593 95% CI [0.387, 0.908]

The level of obstacles is more likely to be perceived as high or moderate by firms with less than 25% of turnover abroad (59.2% as compared to 46.3%). Firms generating higher annual revenue might have more resources to skirt obstacles while doing business abroad. Hence, they do not perceive a high level of obstacles.

[42] Percentage of the turnover in the country where the company has the most frequent and regular business

2.3.2.4 Bribe request by public officials and private entities

*Table 60 - **Level of obstacles in doing business abroad by bribe requested by public officials**. % on the total number of companies who had contact with a public official. Years 2013-2015*

	Bribe requests by public officials in the last three years		Total
Level of obstacles	Not requested to pay a bribe	Requested to pay a bribe	
Low	30	38	30
	58.8%	39.2%	58.8%
High/Moderate	21	59	21
	41.2%	**60.8%**	41.2%

Chi-square= 5.196 DF=1 P=0.023
Phi = 0.187 P=0.023
Cramer V = 0.187 P=0.023
Odds ratio = 2.218 95% CI [1.112, 4.426]

As shown in Table 60, for firms having experienced bribe requests from public officials, the perception of obstacles abroad is more likely to be high as compared to those that had never been victims of bribe requests. This association is also statistically significant (60.8% vs. 41.2%).

*Table 61 - **Level of obstacles in doing business abroad by bribe requested by private entities**. % on the total number of companies who had contact with a private entity. Years 2013-2015*

	Bribe requests by private entities in the last three years		Total
Level of obstacles	Not requested to pay a bribe	Requested to pay a bribe	
Low	43	12	55
	47.3%	33.3%	43.3%
High/Moderate	48	24	72
	52.7%	**66.7%**	56.7%

Chi-square= 2.036 DF=1 P=0.154
Phi = 0.127 P=0.154
Cramer V = 0.127 P=0.154
Odds ratio = 1.792 95% CI [0.800, 4.011]

The same is observed in Table 61, according to which, firms having experienced bribe requests from private entities also perceive the level of obstacles in business abroad as high. However, this association is not statistically significant.

Table 62 - ***Level of obstacles in doing business abroad by bribe requested either by public officials or private entities****. % on the total number of companies who had contact with either a public official or a private entity. Years 2013-2015*

	Bribe requests by public officials and private entities in the last three years		Total
Level of obstacles	Not requested to pay a bribe	Requested to pay a bribe	
Low	51	41	92
	53.1%	38.0%	45.1%
High/Moderate	45	67	112
	46.9%	**62.0%**	54.9%

Chi-square= 4.719 DF=1 P=0.030
Phi = 0.152P=0.030
Cramer V = 0.152P=0.030
Odds ratio = 1.852 95% CI [1.060, 3.237]

When the analysis considers all bribe requests either from public officials or private entities, there is a statistically significant relationship between being exposed to bribe requests and a higher perception of the obstacles abroad.

2.3.2.5 Anti-corruption measures

Table 63 - ***Level of obstacles in doing business abroad by investment in anti-corruption measures (****during the last 3 years). % on the total number of respondents. Years 2013-2015*

	Investment in anti-corruption measures		Total
Level of obstacles	**Yes**	**No**	
Low	46	128	174
	34.3%	57.1%	48.6%
High/Moderate	88	96	184
	65.7%	42.9%	51.4%

Chi-square= 17.470 DF=1 P=0.000
Phi = -0.221 P=0.000
Cramer V = 0.221 P=0.000
Odds ratio = 0.392 95% CI [0.251, 0.611]

Swiss companies who had invested in anti-corruption measures in the past three years are significantly more likely to perceive a high/moderate level of obstacles in doing business. This might be due to the fact that more cautious firms having decided to implement anti-corruption measures are also the ones fearing that obstacles abroad could have exposed them further to corruption issues.

*Table 64 - **Level of obstacles in doing business abroad** by **type of anti-corruption measures**. % on the total number of respondents. Years 2013-2015*

Type of anti-corruption measures	Level of obstacles		Total
	Low	High/Moderate	
Legal measure	31	67	98
	31.7%	**68.3%**	
Monitoring bodies	21	51	72
	29.5%	**70.5%**	
Codes of conduct	43	63	106
	40.4%b	59.6%	
Control systems	33	62	95
	34.7%	65.3%	
Training all employees	33	62	95
	34.7%	65.3%	
Training by role	20	35	55
	36.8%	63.2%	
Training by local office	12	19	31
	38.0%	62.0%	
Due diligence	20	57	77
	25.4%	**74.6%**	
Electronic tools	8	20	28
	28.6%	**71.4%**	
External intelligence	6	12	18
	33.7%	**66.3%**	
Reporting lines	11	14	25
	45.5%	54.5%	
Other	3	15	18
	17.4%	82.6%	

Chi-square= 22.619 DF=12 P=0.031

Following the above-mentioned reasoning, companies perceiving a high or moderate level of obstacles while doing business abroad are more likely to invest in some of the following anti-corruption measures such as due diligence (75%), electronic security tools (72%), specific monitoring bodies (71%) within the company (e.g. compliance officers, etc.), legal measures (e.g. specific contracts with partners abroad, etc.) and/or external intelligence (66%).

Summary of the bivariate analysis - perception of level of obstacles

At a bivariate level, the analyses show that a higher perception of the level of obstacles in business abroad are statistically and significantly associated with the following independent variables:

- ✓ **Average business turnover during the past three years**
- ✓ **Region/Country of the most frequent and regular business activity**
- ✓ **Percentage of annual revenues earned in the country of the most frequent and regular business activity**
- ✓ **Bribe requests by public officials and private entities**
- ✓ **Presence of anti-corruption measures in the past three years**

2.3.1 Multiple logistic regression

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss company to perceive a high or moderate level of obstacles in business abroad. This likelihood is estimated on the basis of the independent variables related to specific characteristics of the Swiss companies (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country), their activities, the region of the most frequent and regular business activity, the presence of anti-corruption measures, the frequency of contact with public officials and private entities and the frequency of bribe request by both public officials and private entities.
The dependent variable (DV) indicates whether a company perceive a high or moderate level of obstacles in the foreign country of the most frequent and regular business activities (1=Yes, 0=No). The independent variables included in the regression model are the following:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Percentage_Revenues_Abroad (categorical, More than 25%=1);
4. Number_Subsidiaries (categorical, None=1);
5. Region_Most-Regular_Frequent_Business (categorical, Africa=1);
6. Macro_Economic_Sector (categorical, Manufacturing and wholesale activity=1);
7. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
8. Activity Foreign Country_Construction (1=Yes, 0=No);
9. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
10. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
11. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);
12. Activity Foreign Country_Capital investments in local companies (minority and majority share) (1=Yes, 0=No);
13. ControlSystems_DueDiligence (1=Yes, 0=No);
14. AntiCorruption_Training (1=Yes, 0=No);
15. LegalMeasures (1=Yes, 0=No);
16. CodeConducts (1=Yes, 0=No);

17. ReportingLines (1=Yes, 0=No);
18. Contact_Private_Sector;
19. Contact_Public_Officials;
20. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

Table 65 - Main results of the binary logistic regression – ***Perception of obstacles while doing business abroad***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 3	Region_MostFrequent			18.886	4	**.001**			
	Region_MostFrequent (1)	.871	.512	2.888	1	.089	2.389	.875	6.521
	Region_MostFrequent (2)	1.566	.493	10.076	1	**.002**	4.787	1.820	12.588
	Region_MostFrequent (3)	2.136	.620	11.883	1	**.001**	8.463	2.513	28.505
	Region_MostFrequent (4)	1.388	.794	3.056	1	.080	4.007	.845	19.003
	Average_Annual Turnover			11.959	5	**.035**			
	Average_AnnualTurnover (1)	.347	.639	.295	1	.587	1.415	.404	4.954
	Average_AnnualTurnover (2)	-.897	.810	1.225	1	.268	.408	.083	1.996
	Average_AnnualTurnover (3)	1.440	.572	6.346	1	**.012**	4.222	1.377	12.945
	Average_AnnualTurnover (4)	.799	.699	1.308	1	.253	2.223	.565	8.744
	Average_AnnualTurnover (5)	.902	.460	3.848	1	**.050**	2.464	1.001	6.065
	Bribe_Requests_TOT_onContacts	1.127	.365	9.555	1	**.002**	3.087	1.511	6.309
	Constant	-1.445	.443	10.645	1	**.001**	.236		

N = 182; Model Chi-square= 48.802; p< .000; -2 Log-Likelihood= 199.018; Cox & Snell R-Square= 0.235, Nagelkerkes R-Square= 0.316

The sample of 182 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[43] "rule"[44].

The results of the regression model show that the major contribution to the prediction of perception of high and moderate level obstacles abroad comes from the variable "Region_Most Frequent" (Chi-square = 24.485), "Average Annual Turnover" (Chi-square = 13.546) and "Bribe_Request_TOT_onContacts" (Chi-square = 10.876). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood equal to 48.802, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at $p<0.001$, witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

[43] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379

[44] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=3 and p=0.42 (42%), the minimum N should be 72.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 32% (for further explanations on the coefficient see Annexes 2 and 3). This value is pretty high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the three predictors of the perception of obstacles while doing abroad (see table above), all of them have a relatively low standard error and the p-values < 0.05. Therefore, the region where Swiss companies have the most frequent and regular business activities, their overall turnover and the frequency they were asked to pay a bribe by both public officials and private entities in the past three years have an influence on the perception of obstacles in doing business abroad.

In particular, the Exp(B) of the variable "Region_Most Frequent" indicates that **the odds of perceiving a high or moderate level of obstacles while doing business abroad is almost five times higher for companies with the most regular business activity in the Americas and eight times higher for those dealing with Europe, than the ones with business in Asia,** when the other variables in the model are controlled.

The Exp(B) of the variable "Average_Annual Turnover" shows that **the odds of perceiving a high or moderate level of obstacles abroad is four times more important for firms with a turnover between 5 and 10 million than for those with an average annual turnover of more than 50 million**, when the other variables are controlled.

In addition, Swiss firms **victim of bribe requests either by a public official or by a private entity at least once in the past three years are three times more likely to perceive high level of obstacles while doing business abroad**.

SECTION 3

3 Perception of corruption while doing business abroad

This section describes how Swiss firms perceive corruption problems in daily business activities abroad.

Even if issues, such as burdensome and inefficient administrative regulations, labor regulations, political instability, cultural factors, health and safety regulations, are more frequently mentioned by Swiss firms as obstacles for the smooth running of their business abroad, 19% of Swiss firms still indicate corruption among the main issues in business activity in a foreign country.

3.1 Defining the dependent and independent variables

This section focuses on the identification of the main factors influencing the perception of corruption as obstacle in doing business among Swiss firms operating abroad.

Specific characteristics of the firm are defined as independent variables (e.g. specific business characteristics) and could explain variations in the distribution of perception of corruption as obstacle (dependent variable).

In particular, the aim of the analyses included in this section is to test the following hypothesis:

Does the perception of corruption relate to specific characteristics of Swiss businesses (e.g. size, turnover, economic sector, etc.)?

The chapter firstly tests the bivariate association between the dependent variable and the specific independent variables, through the analysis of cross-tabulations and association's coefficients such as the Chi-square, the Phi coefficient, Cramer V and Odds ratio (see Annex 2 for further explanations). The conventional levels of confidence taken into consideration for refusing the null hypothesis are $p<0.01$ and $p<0.05$[45].

The analyses will then allow identifying the relationship between the dependent variable and the selected independent variables and quantifies their effects, through a binary logistic regression (see Annex 3 for further explanations).

3.1.1 Dependent variable

Both analyses are carried out on the dependent variable (DV): **corruption as obstacle in doing business abroad** (1= Yes; 0= No);

3.1.2 Independent variables

The independent variables, selected on the basis of their availability in the SICS dataset, and statistical consistency, are related to:

- ✓ specific characteristics of Swiss companies (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country);
- ✓ types of activity abroad;
- ✓ region of the most frequent and regular business activity;
- ✓ presence of anti-corruption measures;
- ✓ contact with public officials and private entities in the past three years;
- ✓ types of operation with public officials involved[46];
- ✓ bribe requests by public officials and private entities

The specific variables included in these analyses are:

[45] The bivariate analysis will be carried out first considering all the categories of the independent variables, as described above, and then, in order to obtain more significant results and in order to focus on the most specific and relevant features of each variable, it will concentrate on only one specific modality. In order to consider the presence/absence of a specific feature related to each variable, the categories of the independent variables will be treated as single dummy-coded variables themselves (e.g. the category 1-9 employees of the variable size of the business will be treated as dummy-coded variable indicating the presence/absence of businesses with 1-9 employees. Its categories will be: 1. Yes, 0. No).

[46] It has to be considered that the question asking "during which business procedure Swiss companies got in contact with public officials" was optional. It might have happened that not all respondents specified the type of procedure during which they had contact with a public official. However, the answers to this question have been partially validated looking at the answers to a second question "Whether they have been requested to provide something during that procedure to a public official". Anyway, this issue should be considered when interpreting the results of the regression model.

1. **Macro-economic sector** of activity (1= Manufacturing and wholesale activity; 2= Electricity and water supply and transportation; 3= Construction and real estate; 4= Other services);
2. **Size** (1= 0-2 employees; 2= 3-9 employee; 3 = 10-40 employees; 4= 50-250 employees; 5=more than 250 employees);
3. **Average annual turnover** (last 3 years) (1 = Up to CHF 500 thousands; 2= CHF 500 thousands - CHF 1 million; 3= CHF 1 million – CHF 5 million; 4= CHF 5 million – CHF 10 million; 5 = CHF 10 million – CHF 50 million; 6= More than CHF 50 million);
4. **Number of subsidiaries** (1 = None; 2= 1 subsidiary; 3= 2-5 subsidiaries; 4= 6-10 subsidiaries; 5= More than 10 subsidiaries);
5. **Foreign region of most regular and frequent business activities** (1= Africa; 2= America; 3= Asia, 4= Europe, 5= Oceania);
6. **Type of business activity in the foreign country** where the company has the most frequent and regular business relationship (1= Local manufacturing; 2= Construction; 3= Sale to other countries of products locally manufactured; 4= Sale to other countries of imported products; 5= Local sale of products locally manufactured; 6= Local sale of imported products; 7=Providers of services to locals/foreigners/expatriates; 8= Capital investments in local companies (minority share); 9= Capital investments in local companies (majority share); 10=Other);
7. **Percentage of average annual revenues in the foreign country** where the company has the most frequent and regular business activity (1= Up to 10%; 2= From 10% to 25%; 3= From 25% to 50%; 4= More than 50%; 5= Other);
8. **Contact with public officials in the past three years** (1= Yes; 0= No);
9. **Contact with private entities in the past three years** (1= Yes; 0= No);
10. **Total bribe requests** (1= Yes; 0= No);
11. **Bribe requests by public officials** (1= Yes; 0= No);
12. **Bribe requests by private entities** (1= Yes; 0= No).

3.2 Bivariate analysis

3.2.1 Region of the most frequent and regular business

*Table 66 - **Perception of corruption** by **region of business**. % on the total number of respondents. Years 2013-2015*

	Region of business					Total
Corruption as obstacle	**Africa**	**Americas**	**Asia**	**Europe**	**Oceania**	
No	40	51	140	24	18	273
	81.6%	83.6%	85.9%	66.7%	64.3%	81.0%
Yes	9	10	23	12	10	64
	18.4%	16.4%	14.1%	**33.3%**	**35.7%**	19.0%

Chi-square= 12.707 DF=4 P=0.013
Phi = 0.194 P=0.013
Cramer V = 0.194 P=0.013

The bivariate association between the region of the most frequent and regular business activities and the perception of corruption as obstacle abroad is statistically significant and shows that the highest level of corruption perceived is found with companies operating in Europe and Oceania.

When disaggregating the distribution of perception of corruption by sub-regions, as shown in Table 67, the association coefficients (Chi-Square and Cramer V) increase. In particular, 36% of Swiss companies operating in Melanesia, Polynesia and Micronesia and 26.9% working in Eastern and Southern Europe and 25% having activities in Northern and Eastern Africa perceive corruption as a difficulty for business in these regions.

*Table 67 - **Perception of corruption as obstacle in doing business abroad** by **sub-region of activity** % on the total number of respondents. Years 2013-2015*

	Region of business									
Corruption as obstacle	**Centr-South. America & Caribb.**	**Nord. America**	**East. & West. Asia**	**South. & South East. Asia**	**Middle & West. Africa**	**North. & East. Africa**	**Melanes. Polynes. & Micrones.**	**East. & South. Europe**	**North. & West. Europe**	**Tot.**
No	46	5	140	0	35	6	18	19	5	274
	82.1%	100.0%	87.0%	0.0%	83.3%	75.0%	64.3%	73.1%	50.0%	81.3%
Yes	10	0	21	1	7	2	10	7	5	63
	17.9%	0.0%	13.0%	100.0%	16.7%	25.0%	**35.7%**	26.9%	**50.0%**	18.7%

Chi-square= 22.172 DF=8 P=0.005
Phi = 0.257 P=0.005
Cramer V = 0.257 P=0.005

3.2.2 Percentage of annual revenue abroad

*Table 68 - **Perception of corruption as obstacle in doing business abroad** by percentage of **annual revenue abroad**[47]. % on the total number of respondents. Years 2013-2015*

	Percentage annual revenue abroad		Total
Corruption as obstacle	Less than 50%	More than 50%	
No	207	63	270
	83.5%	72.4%	80.6%
Yes	41	24	65
	16.5%	**27.6%**	19.4%

Chi-square= 5.032 DF=1 P=0.025
Phi = 0.123 P=0.025
Cramer V = 0.123 P=0.025
Odds ratio = 1.923 95% CI [1.080; 3.426]

Swiss companies having more than 50% of their annual revenues earned abroad are almost twice more likely to perceive corruption as obstacle in doing business.

[47] Percentage of the turnover in the country where the company has the most frequent and regular business

3.2.3 Contact with public officials and private entities

*Table 69 - **Perception of corruption** by **frequency of contact with public officials abroad**. % on the total number of respondents. Years 2013-2015*

	Contact with a public official abroad in the past three years		Total
Corruption as obstacle	**No**	**Yes**	
No	167	106	273
	86.1%	73.6%	80.8%
Yes	27	38	65
	13.9%	**26.4%**	19.2%

Chi-square= 8.276 DF=1 P=0.004
Phi = 0.156 P=0.004
Cramer V = 0.156 P=0.004
Odds ratio = 2.217 95% CI [1.279, 3.844]

Contacts with a public official remain an indicator of how Swiss firms perceive corruption in a foreign country. Indeed, Swiss firms having contact with public officials abroad are twice more likely to perceive corruption as obstacle in doing business than the ones having no contact with public authorities. Moreover, this association is statistically significant. However, in the case of contacts with private entities, the association is not significant anymore (Table 70). Public officials are more likely to be perceived as risk of corruption than rather than private entities. As a matter of fact, negotiations between private entities could be seen as part of market rules and negotiations, while some business activities could never be completed without authorizations from public officials. To some extent, it is known that public authorities have more power than private entities in a foreign country.

*Table 70 - **Perception of corruption** by **frequency of contact with private entities abroad**. % on the total number of respondents. Years 2013-2015*

	Contact with a private entity abroad in the past three years		Total
Corruption as obstacle	**No**	**Yes**	
No	145	93	238
	81.0%	78.2%	79.9%
Yes	34	26	60
	19.0%	**21.8%**	20.1%

Chi-square= 0.362 DF=1 P=0.547
Phi = 0.035 P=0.547
Cramer V = 0.035 P=0.547
Odds ratio = 1.192 95% CI [0.672, 2.115]

3.2.4 Bribe request by public officials and private entities

*Table 71 - **Perception of corruption** by **bribe requested by public officials**. % on the total number of companies who had contact with a public official. Years 2013-2015*

	Bribe requests by public officials in the last three years		Total
Corruption as obstacle	Not requested to pay a bribe	Requested to pay a bribe	
No	45	62	107
	88.2%	66.0%	73.8%
Yes	6	32	38
	11.8%	**34.0%**	26.2%

Chi-square= 8.485 DF=1 P=0.004
Phi = 0.242 P=0.004
Cramer V = 0.242 P=0.004
Odds ratio = 3.871 95% CI [1.493, 10.036]

The perception of corruption increases following a bribe request from public officials. As a matter of fact and not surprisingly, as shown in Table 71, firms that had been requested to pay bribes in the past three years are four times more likely to perceive corruption as obstacle in doing business abroad, than those that had never been exposed to bribe requests. But this relationship became statistically insignificant when it comes to bribes requested by private third-parties (Table 72).

*Table 72 - **Perception of corruption** by **bribe requested by private entities**. % on the total number of companies who had contact with a private entity. Years 2013-2015*

	Bribe requests by private entities in the last three years		Total
Corruption as obstacle	Not requested to pay a bribe	Requested to pay a bribe	
No	72	22	94
	80.9%	68.8%	77.7%
Yes	17	10	27
	19.1%	**31.3%**	22.3%

Chi-square= 2.004 DF=1 P=0.157
Phi = 0.129 P=0.157
Cramer V = 0.129 P=0.157
Odds ratio = 1.925 95% CI [0.771; 4.809

*Table 73 - **Perception of corruption** by **bribe requested either by public officials or private entities**. % on the total number of companies who had contact with either a public official or a private entity. Years 2013-2015*

	Bribe requests by public officials and private entities in the last three		Total
Corruption as obstacle	Not requested to pay a bribe	Requested to pay a bribe	
No	85	71	156
	90.4%	68.3%	78.8%
Yes	9	33	42
	9.6%	**31.7%**	21.2%

Chi-square= 14.503 DF=1 P=0.000
Phi = 0.271 P=0.000
Cramer V = 0.271 P=0.000
Odds ratio = 4.390 95% CI [1.969, 9.785]

Table 73 shows the same observation as the one in Table 71: being requested a bribe either by a public official or a private entity does increase by more than four times the odds of perceiving corruption as an issue abroad.

3.2.5 Anti-corruption measures

*Table 74 - **Perception of corruption** by **presence of anti-corruption measures (**during the last 3 years). % on the total number of respondents. Years 2013-2015*

	Presence of anti-corruption measures		Total
Corruption as obstacle	**No**	**Yes**	
No	185	88	273
	87.7%	69.3%	80.8%
Yes	26	39	65
	12.3%	**30.7%**	19.2%

Chi-square= 17.255 DF=1 P=0.000
Phi = -0.226 P=0.000
Cramer V = 0.226 P=0.000
Odds ratio = 3.153 95% CI [1.806, 5.506]

Swiss firms which had invested in anti-corruption measures in the past three years are statistically and significantly more likely to perceive corruption as an issue in business abroad.

*Table 75 - **Perception of corruption** by **type of anti-corruption measures**. % on the total number of respondents. Years 2013-2015*

Type of anti-corruption	Corruption as obstacle		Total
	No	Yes	
Legal measure	69	25	94
	73.4%	26.6%	
Monitoring bodies	54	15	69
	78.6%	21.4%	
Codes of conduct	77	23	100
	76.9%	23.1%	
Control systems	65	26	91
	71.5%	28.5%	
Training all employees	65	26	91
	71.5%	**28.5%**	
Training by role	40	14	54
	74.6%	**25.4%**	
Training by local office	18	8	26
	68.7%	**31.3%**	
Due diligence	45	31	76
	59.6%	**40.4%**	
Electronic tools	20	8	28
	70.3%	29.7%	
External intelligence	11	6	17
	64.1%	**35.9%**	
Reporting lines	19	4	23
	83.4%	16.6%	
Other	12	6	18
	65.3%	34.7%	

Chi-square= 35.831 DF=12 P=0.000

Following the above mentioned reasoning, some anti-corruption measures are more likely to be implemented by firms perceiving corruption as an issue to their business abroad. These are the most quoted programs: anti-corruption training for all staff and for staff in local foreign offices (85.2%), due diligence (40.4%), using external intelligence (35.9%).

Summary of bivariate analysis – perception of corruption

At a bivariate level, the perception of corruption as obstacle in doing business abroad is significantly associated with the following independent variables:

- ✓ **Region of the most frequent and regular business activity**
- ✓ **Percentage of annual revenues earned in the foreign country where the company has the most frequent and regular business**
- ✓ **Contact with public officials during the past three years**
- ✓ **Bribe request by public officials and private entities**
- ✓ **Investments in anti-corruption measures in the past three years**

3.3 Multiple logistic regression

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood that Swiss companies perceive corruption as an obstacle in doing business abroad. This likelihood is estimated on the basis of the independent variables such as specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, presence of anti-corruption measures, frequency of contact with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not a Swiss company perceives corruption as an obstacle in the foreign country where it has the most frequent and regular business activities (1=Yes, 0=No). The independent variables are:

1. Size_Micro businesses (less than 10 employees) (1=Yes, 0=No);
2. Turnover_More than CHF 10 million (1=Yes, 0=No);
3. Percentage_Turnover_abroad
4. Bribe_Request (1= Yes, 0=No);
5. Investment_Anti-Corruption_Last 3 Years (1=Yes, 0=No),
6. Region_Most-Regular and Frequent Business_Asia (1=Yes, 0=No),
7. Region_Most-Regular and Frequent Business_Europe (1=Yes, 0=No);
8. Region_Most-Regular and Frequent Business_Americas (1=Yes, 0=No);
9. Region_Most-Regular and Frequent Business_Oceania (1=Yes, 0=No);
10. Sector_Electricity, water supply and transportation;
11. Sector_Manufacturing;
12. Sector_Construction;
13. Sector_Other service;
14. Bribe_Request_Public Officials (on contacts);
15. Bribe_Request_Private Entities (on contacts).

*Table 76 - Main results of the binary logistic regression – **Perception of corruption as obstacle in doing business abroad***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 3	MicroBusinesses	2.802	.848	10.912	1	.001	16.484	3.126	86.928
	Region_Business_Asia	-.826	.423	3.809	1	.051	.438	.191	1.004
	PO_Bribe_REQUEST_On_Contacts	2.662	.810	10.806	1	.001	14.327	2.930	70.065
	Constant	-3.323	.899	13.657	1	.000	.036		

N = 66; Model Chi-square= 27.402, p< .001. -2 Log-Likelihood= 56.589. Cox & Snell R-Square= 0.338, Nagelkerkes R-Square= 0.471

The sample of 66 cases is slightly lower than what it is supposed to be in order to avoid numerical problems, according to the Peduzzi et al. (1996). "rule"[48]. Despite this issue, this regression model is the most significant and parsimonious among the possible combinations. It misses only 25 cases to avoid numerical problems and its significance is good enough to justify this choice.

The results of the regression model show that the major contribution to the prediction of perception of corruption as an obstacle in doing business abroad comes from the variable "Microbusinesses" (Chi-square = 10.845), "PO_Bribe_Request _onContacts" (Chi-square = 10.830) and "Region_Business_Asia" (Chi-square = 6.178). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood equal to 27.402 indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at $p<0.001$, witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 47% (for further explanations on the coefficient see Annexes 2 and 3). This value is very high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the three covariates (see table above), all of them have a relatively low standard error and the p-values < 0.05, besides the variable "Region_Business_Asia". Therefore, the size of Swiss companies and the frequency they were asked to pay a bribe by public officials in the past three years have an influence on the perception of corruption as an obstacle in doing business abroad.

[48] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=3 and p=0.33 (33%), the minimum N should be 92.

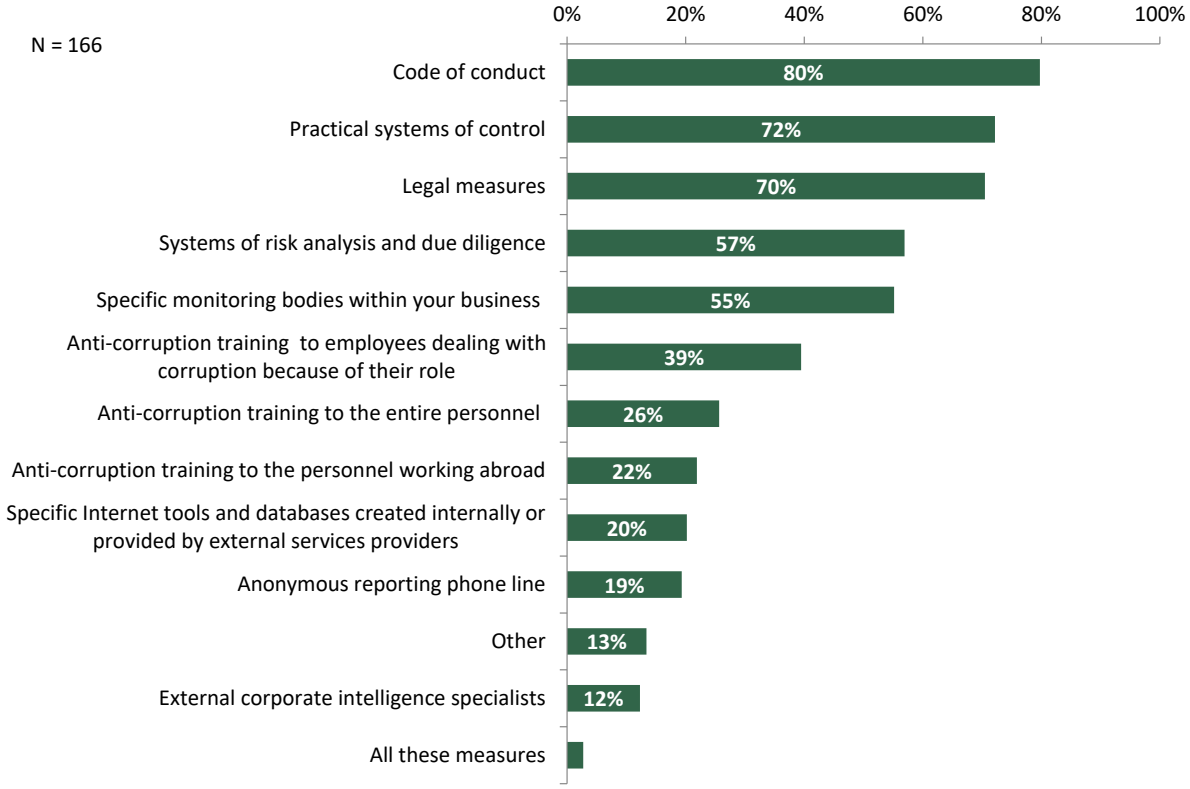
In particular, the Exp(B) of the variable "Microbusinesses" indicates that **the odds of perceiving corruption as an obstacle abroad is two times higher for companies who have less than 10 employees than for bigger companies,** when the other variables in the model are controlled. Smaller firms might be less equipped in anti-corruption interventions; therefore, they tend more to perceive corruption as an issue abroad. Larger firms are more likely to have invested in anti-corruption programs allowing facing this issue abroad.

The Exp(B) of the variable "PO_Bribe Request_onContacts" shows that **firms having experienced at least once a bribe request by public officials in the past three years are much more likely to perceive corruption as an issue abroad (14 times more as shown in the analysis).**

SECTION 4
4 Anti-corruption measures

4.1 Types of anti-corruption measures

Figure 55 - Type of anti-corruption measures adopted by Swiss companies operating abroad. % on the number of firms who had invested in anti-corruption measures between 2013-2015



Only 39% of the Swiss firms participating in the Swiss International Corruption Survey declared they have invested in anti-corruption measures in the past three years (2013-2015).

As shown in Figure 55, among those with such investments, 80% decided to introduce specific codes of conduct against corruption, 72% developed practical systems of control (e.g. auditing systems, periodical controls in specific countries/sectors, etc.), 70% adopted specific legal measures (e.g.

specific contracts with partners abroad). Some anti-corruption measures were less implemented than others, for instance only 12% have referred to external corporate intelligence specialist; Swiss companies less frequently decided to invest in external corporate intelligence specialists (12%); only 19% of Swiss firms have reporting lines and whistleblowing system; specific internet tools and database are used in 20% of the responding firms.

According to the responding firms, investments in anti-corruption programs could be costly: 34% consider specific monitoring bodies within the firm as the most costly, legal measures are also quote as cost-consuming (26%).

Figure 56 - Most costly anti-corruption measures according to Swiss companies operating abroad. % on the number of firms who had invested in anti-corruption measures between 2013-2015

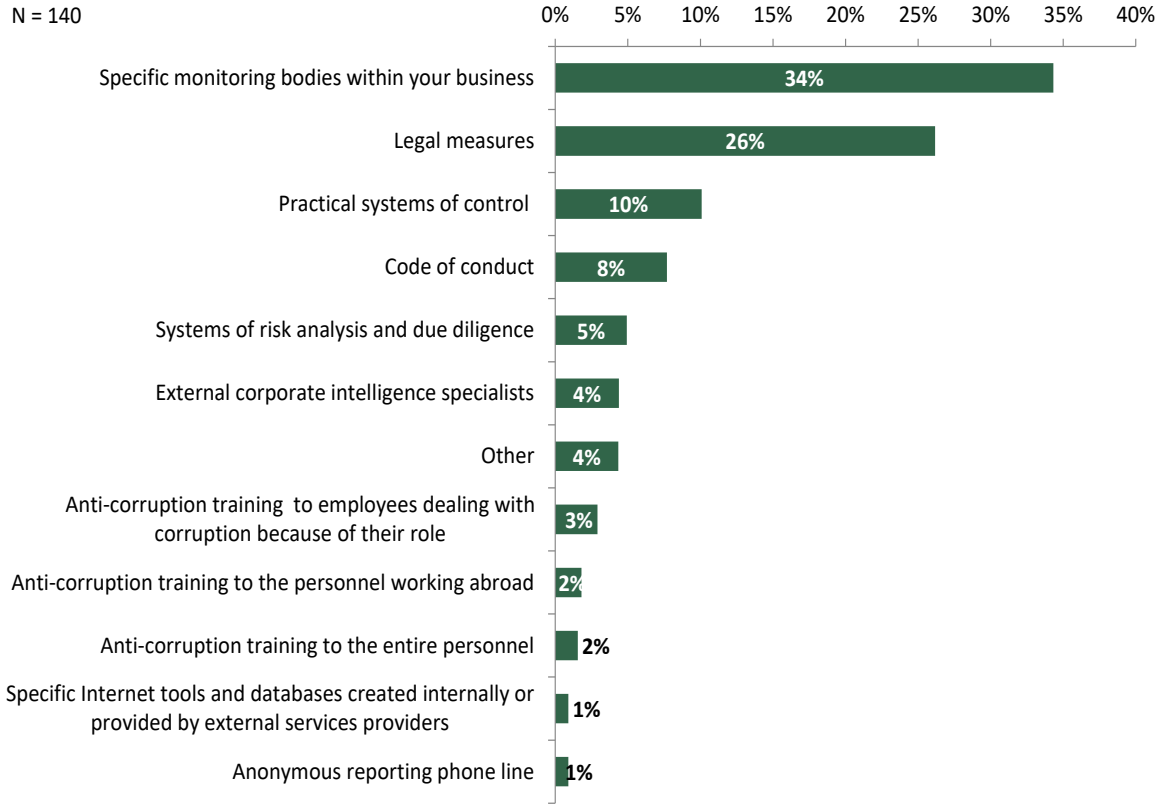
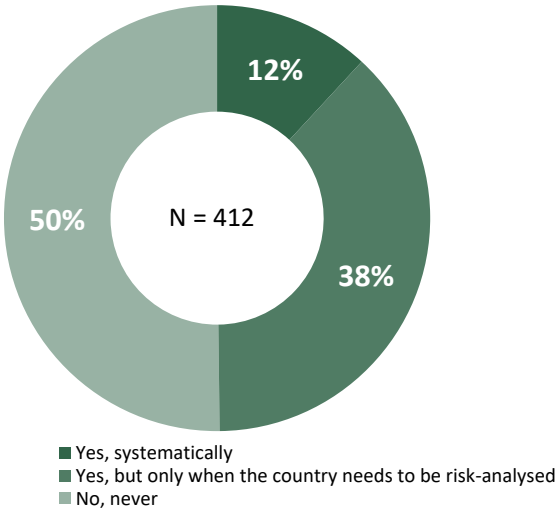
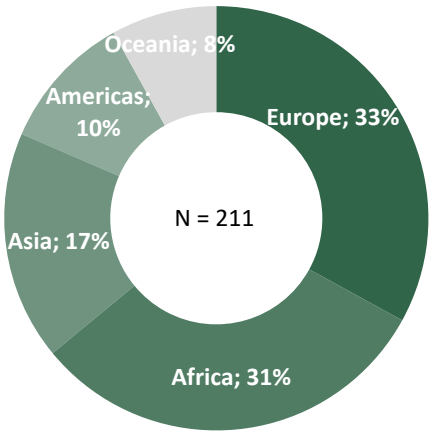


Figure 57 - Development of ad-hoc risk assessment. % on the number of firms who had invested in anti-corruption measures between 2013-2015



Among firms having invested in anti-corruption programs, half of them run a risk assessment before starting business with a foreign country or a foreign company. 38% of the responding firms only risk-analyze the country when they think it is necessary and the country might represent some risks. Only 12% run a risk assessment systematically.

Figure 58 - Region where Swiss firms developed the last risk assessment. % on the number of firms who had invested in anti-corruption measures between 2013-2015



When asked which regions have been risk assessed before entering in business, 33% of the Swiss firms have indicated in the first place Europe, following by Africa (31%), Asia (17%), Americas (10%) and Oceania (8%).

Figure 59 - Reasons why Swiss firms operating abroad did not invest in anti-corruption measures. % on the number of firms who had invested in anti-corruption measures between 2013-2015

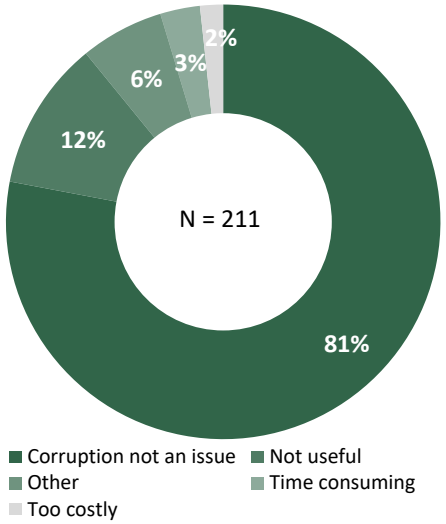


Figure 59 shows the reasons why Swiss firms did not invest in anti-corruption measures. The majority of them think that corruption is not really an issue for their firm (81%), 12% mentioned that it was not useful to have such measures. The cost and the time wasted are also some of the reasons quotes by responding firms.

4.2 Investments in anti-corruption measures

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss company operating abroad to invest in anti-corruption measures in the past three years. This likelihood is estimated on the basis of the following independent variables such as specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contact with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not the firm had invested any resource to prevent and/or fight against bribery and corruption, in the past three years (1=Yes, 0=No). The independent variables are:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Percentage_Revenues_Abroad (categorical, More than 25%=1);
4. Number_Subsidiaries (categorical, None=1);
5. Region_Most-Regular_Frequent_Business (categorical, Asia=1);
6. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
7. Activity Foreign Country_Construction (1=Yes, 0=No);
8. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
9. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
10. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);
11. Activity Foreign Country_Capital investments in local companies (minority and majority share) (1=Yes, 0=No);
12. Perception_Corruption_Obstacle Doing Business
13. Contact_Private_Sector;
14. Contact_Public_Officials;
15. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

*Table 77 - Main results of the binary logistic regression – **Investment in anti-corruption measures***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 5	Perception_Corrupt_Obstacle	.978	.500	3.823	1	.051	2.659	.998	7.090
	N_Subsidiaries			29.521	4	**.000**			
	N_Subsidiaries(1)	-.417	1.22	.117	1	.733	.659	.060	7.203
	N_Subsidiaries(2)	.728	1.11	.423	1	.515	2.070	.231	18.540
	N_Subsidiaries(3)	2.132	1.27	2.808	1	.094	8.430	.697	102.00
	N_Subsidiaries(4)	3.566	1.23	8.372	1	**.004**	35.366	3.159	395.89
	Sale_Abroad_LocalorImportedProducts	1.169	.440	7.057	1	**.008**	3.217	1.359	7.619
	Capital_Investments	2.628	1.22	4.642	1	**.031**	13.844	1.268	151.16
	Bribe_Requests_TOT_onContacts	.885	.448	3.898	1	**.048**	2.423	1.007	5.832
	Constant	-2.751	1.08	6.419	1	**.011**	.064		

N = 176; Model Chi-square= 85.909, p< .001. -2 Log-Likelihood= 151.655. Cox & Snell R-Square= 0.386, Nagelkerkes R-Square= 0.521

The sample of 176 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[49] "rule"[50].

The results of the regression model show that the major contribution to the prediction of investment in anti-corruption measures comes from the variable "N_Subsidiaries" (Chi-square = 62.180), "Bribe_Request_Tot_onContacts" (Chi-square = 8.231), "Capital_Investment" (Chi-square = 6.005), "Sale_Abroad_LocalorImportedProducts" (Chi-square = 5.613) and "Perception_Corruption_Obstacle" (Chi-square = 3.880). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 85.909, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at $p<0.001$ witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 52% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

[49] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379.

[50] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=5 and p=0.40 (40%), the minimum N should be 125.

Considering the B coefficients of the five covariates (see Table 77), all of them have a relatively low standard error and the p-values < 0.05, besides the variable "Perception_Corrupt_Obstacle" (p=0.051). Following are the variables influencing the decision of investment in anti-corruption measures: number of subsidiaries abroad, type of activity in the foreign country, perception of corruption as an obstacle and experience of at least one bribe request either by public officials or private entities in the past three years.

In particular, the Exp(B) of the variable "N_Subsidiaries" indicates that **the odds of investing in anti-corruption measures is almost 35 times higher for firms with more than ten subsidiaries than for those with none,** when the other variables in the model are controlled.

The Exp(B) of the variable "Sale_Abroad_LocalorImportedProducts" and "Capital_Investments" shows that **the odds of investing in anti-corruption measures is three times more important for firms specializing in sale of local or imported products abroad. The same is observed for firms with capital investments abroad (either minority or majority share): these firms are 13 times more likely to have implemented anti-corruption programs.**

In addition**, those having been requested for bribes in the past three years are also 2.4 more likely to have resorted to anti-corruption measures,** when the other variables are controlled.

This finding confirms that having experienced bribe requests in the past influences the willingness of investing in anti-corruption measures.

4.3 Legal measures as a tool to fight corruption

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss firm to invest in legal measures (e.g. specific contracts with partners abroad) to prevent and fight against bribery and corruption. This likelihood is estimated on the basis of the following independent variables such as specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contact with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not a firm had invested in any legal measures to prevent corruption, in the past three years (1=Yes, 0=No). The independent variables are:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Percentage_Revenues_Abroad (categorical, More than 25%=1);
4. Number_Subsidiaries (categorical, None=1);
5. Region_Most-Regular_Frequent_Business (categorical, Asia=1);
6. Activity Foreign Country_Local Manufacturing (1=Yes, 0=No);
7. Activity Foreign Country_Construction (1=Yes, 0=No);
8. Activity Foreign Country_Sale locally or abroad of products locally manufactured (1=Yes, 0=No);
9. Activity Foreign Country_Sale locally or abroad of imported products (1=Yes, 0=No);
10. Activity Foreign Country_Providers of services to locals and foreigners/expatriates (1=Yes, 0=No);

11. Activity Foreign Country_Capital investments in local companies (minority and majority share) (1=Yes, 0=No);
12. Perception_Corruption_Obstacle Doing Business
13. Contact_Private_Sector;
14. Contact_Public_Officials;
15. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

*Table 78 - Main results of the binary logistic regression – **Investment in legal measures***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 5	N_Subsidiaries			24.691	4	**.000**			
	N_Subsidiaries(1)	2.360	2.402	.965	1	.326	10.592	.096	1174.2
	N_Subsidiaries(2)	3.090	2.342	1.741	1	.187	21.980	.223	2166.3
	N_Subsidiaries(3)	5.703	2.441	5.458	1	**.019**	299.877	2.506	35884.
	N_Subsidiaries(4)	5.746	2.393	5.763	1	**.016**	312.870	2.871	34090.
	Capital_Investments	3.682	1.309	7.908	1	**.005**	39.709	3.052	516.71
	ProviderServices_Abroad	-1.898	.729	6.788	1	**.009**	.150	.036	.625
	Contact_Private_Sector	2.653	.740	12.855	1	**.000**	14.198	3.329	60.547
	Contact Public Officials	1.234	.583	4.484	1	**.034**	3.435	1.096	10.764
	Constant	-7.063	2.490	8.042	1	**.005**	.001		

N = 176; Model Chi-square= 93.661, p< .001. -2 Log-Likelihood= 130.902. Cox & Snell R-Square= 0.412, Nagelkerkes R-Square= 0.572

The sample of 176 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[51] "rule"[52].

The results of the regression model show that the major contribution to the prediction of investments in legal measures comes from the variable "N_Subsidiaries" (Chi-square = 53.271), "Contact_Private Sector" (Chi-square = 16.544), "Capital_Investment" (Chi-square = 10.650), "Providers_Service_Abroad" (Chi-square = 8.359) and "Contact_Public_Officials" (Chi-square = 4.836). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 93.661, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.001 witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

[51] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379

[52] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=5 and p=0.33 (33%), the minimum N should be 150.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 57% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the five covariates (see Table 78), all of them have a relatively low standard error and the p-values < 0.05. Following are the independent variables influencing the decision of having legal measures as a tool to fight corruption: number of subsidiaries abroad, type of activity in countries of the most frequent and regular business activities, contacts with public officials and private entities in the past three years.

In particular, the Exp(B) of the variable "N_Subsidiaries" indicates that **the odds of resorting to legal measures to prevent corruption is much higher for companies with more than six subsidiaries than for those with none,** when the other variables in the model are controlled.

The Exp(B) of the variable "Capital_Investments" shows that **firms with capital investments abroad are 40 times more likely to have resorted to legal measures to prevent bribery than for other companies.**

Table 78 also shows that **companies acted as providers of services abroad are less likely to have adopted legal measures in the prevention of bribery.**

Moreover, firms having had **contacts with a private third-party are 14 times more likely to have developed some legal measures to prevent bribery rather than firms that have not been contacts with private entities,** when the other variables are controlled.

Similarly, **companies getting in contacts with public officials are also more likely to invest in legal measures than other firms.**

4.4 Codes of conduct to prevent and fight corruption

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss firm to adopt codes of conduct to prevent corruption. This likelihood is estimated on the basis of specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contact with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not a firm had invested in the development of new codes of conduct to prevent corruption, in the past three years (1=Yes, 0=No). The independent variables are:

1. Size (categorical, More than 250 employees=1);
2. Percentage_Revenues_Abroad (categorical, More than 25%=1);
3. Sub_Region_Most-Regular_Frequent_Business (categorical, Norther and Western Europe=1);
4. Perception_Corruption_Obstacle Doing Business
5. Contact_Private_Sector;
6. Contact_Public_Officials;
7. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

*Table 79 - Main results of the binary logistic regression – **Investment in codes of conduct***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 2	N_Employees			52.619	4	**.000**			
	N_Employees (1)	-4.522	.963	22.038	1	**.000**	.011	.002	.072
	N_Employees (2)	-7.672	3.893	3.884	1	**.049**	.000	.000	.959
	N_Employees (3)	-2.269	.387	34.456	1	**.000**	.103	.048	.221
	N_Employees (4)	-1.876	.389	23.262	1	**.000**	.153	.071	.328
	Perception Corruption Obstacle Doing Business	.979	.407	5.790	1	**.016**	2.663	1.199	5.913
	Constant	.804	.258	9.736	1	**.002**	2.235		

N = 293; Model Chi-square= 111.620, p< .001. -2 Log-Likelihood= 112.034. Cox & Snell R-Square= 0.439, Nagelkerkes R-Square= 0.445

The sample of 293 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[53] "rule"[54].

The results of the regression model show that the major contribution to the prediction of adopting codes of conduct comes from the variable "N_Employees" (Chi-square = 105.748) and "Perception Corruption Obstacle Doing Business" (Chi-square = 5.872). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 111.620, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.001 witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 45% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the two covariates (see table above), all of them have a relatively low standard error and the p-values < 0.05. Following are the independent variables having an influence

[53] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379.

[54] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=2 and p=0.44 (44%), the minimum N should be 45.

on the decision of adopting codes of conduct within the firm: size of the firm and perception of corruption as obstacle.
In particular, the Exp(B) of the variable "N_Employees" indicates that **the odds of investing in codes of conduct is much higher for medium-sized companies with less than 250 employees,** when the other variables in the model are controlled. So far, smaller or medium-sized firms seem to be less concerned by the issue of corruption than larger firms, this might explain the absence of codes of conduct. Once aware of this disadvantage, smaller firms have started to develop codes of conduct within the firm as a tool to prevent briberies and corruption.
The Exp(B) of the variable "Perception Corruption Obstacle Doing Business" shows that **the perception of corruption as an issue abroad also influence the decision to adopt codes of conduct as firms perceiving corruption as a threat to their business are three times more likely to have introduced codes of conducts**. Those not seeing corruption as an issue still do not resort to this type of intervention.

4.5 Monitoring bodies (both internal and external) as a tool to fight corruption

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss company to develop monitoring bodies to prevent corruption. This likelihood is estimated on the basis of specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contacts with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether Swiss companies had invested in specific monitoring bodies to prevent and/or fight against bribery and corruption, in the past three years (1=Yes, 0=No). The independent variables are:

1. Size (categorical, More than 250 employees=1);
2. Percentage_Revenues_Abroad (categorical, More than 25%=1);
3. Sub_Region_Most-Regular_Frequent_Business (categorical, Norther and Western Europe=1);
4. Perception_Corruption_Obstacle Doing Business
5. Contact_Private_Sector;
6. Contact_Public_Officials;
7. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

*Table 80 - Main results of the binary logistic regression – **Investment in monitory bodies***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 2	N_Employees			52.619	4	**.000**			
	N_Employees (1)	-4.522	.963	22.038	1	**.000**	.011	.002	.072
	N_Employees (2)	-7.672	3.89	3.884	1	**.049**	.000	.000	.959
	N_Employees (3)	-2.269	.387	34.456	1	**.000**	.103	.048	.221
	N_Employees (4)	-1.876	.389	23.262	1	**.000**	.153	.071	.328
	Perception Corruption Obstacle Doing Business	.979	.407	5.790	1	**.016**	2.663	1.199	5.913
	Constant	.804	.258	9.736	1	**.002**	2.235		

N = 293; Model Chi-square= 111.620, p< .001. -2 Log-Likelihood= 112.034. Cox & Snell R-Square= 0.439, Nagelkerkes R-Square= 0.445

The sample of 293 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[55] "rule"[56].

The results of the regression model show that the major contribution to the prediction of perception of high and moderate level obstacles while doing business abroad comes from the variable "N_Employees" (Chi-square = 105.748) and "Perception Corruption Obstacle Doing Business" (Chi-square = 5.872). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 111.620, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.001 witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 45% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the two covariates (see table above), all of them have a relatively low standard error and the p-values < 0.05. Two independent variables influence the decision of implementing anti-corruption monitoring bodies: size of the business and perception of corruption as obstacle abroad.

[55] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379

[56] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=2 and p=0.44 (44%), the minimum N should be 45.

In particular, the Exp(B) of the variable "N_Employees" indicates that **the odds of adopting anti-corruption monitoring bodies is much higher for medium-sized companies with less than 250 employees,** when the other variables in the model are controlled.
The Exp(B) of the variable "Perception Corruption Obstacle Doing Business" shows that **firms perceiving corruption as an issue in business abroad are three times more likely to have implemented anti-corruption monitoring bodies than the ones whose business activities are not affected by corruption.**

4.6 Control systems and due diligence to prevent corruption

This section analyses the result of a binary logistic regression (see Annex 3 for further details) estimating the likelihood for a Swiss company to invest in practical systems of control (e.g. auditing systems, periodical controls in specific countries/sectors, etc.), risk analysis and due diligence and/or specific internet tools and databases created internally or provided by external service providers, in order to prevent corruption. This likelihood is estimated on the basis of specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contacts with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not a firm had implemented control systems and/or due diligence approaches to prevent corruption, in the past three years (1=Yes, 0=No). The independent variables are:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Number_Subsidiaries (categorical, None=1);
4. Region_Most-Regular_Frequent_Business (categorical, Africa=1);
5. Macro_Economic_Sector (categorical, Manufacturing and wholesale activity=1);
6. Perception_Corruption_Obstacle Doing Business
7. Contact_Private_Sector;
8. Contact_Public_Officials;
9. Bribe_Requests_TOT_onContacts (by both public officials and private entities).

*Table 81 - Main results of the binary logistic regression – **Control systems and due diligence***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step 3	Region_MostFrequent			14.432	4	**.006**			
	Region_MostFrequent(1)	-.965	.709	1.852	1	.174	.381	.095	1.529
	Region_MostFrequent(2)	-1.502	.612	6.024	1	**.014**	.223	.067	.739
	Region_MostFrequent(3)	.189	.680	.077	1	.781	1.208	.319	4.579
	Region_MostFrequent(4)	1.277	.924	1.909	1	.167	3.586	.586	21.944
	Q.1.7_N_Subsidiaries			39.501	4	**.000**			
	Q.1.7_N_Subsidiaries(1)	2.478	3.394	.533	1	.465	11.918	.015	9222.9
	Q.1.7_N_Subsidiaries(2)	3.485	3.346	1.085	1	.298	32.630	.046	22998.
	Q.1.7_N_Subsidiaries(3)	5.873	3.384	3.013	1	.083	355.289	.468	269604
	Q.1.7_N_Subsidiaries(4)	6.519	3.374	3.733	1	.053	677.620	.911	504285
	Perception_Corruption_Obstacl Doing Business	1.179	.492	5.733	1	**.017**	3.251	1.238	8.534
	Constant	-4.441	3.364	1.743	1	.187	.012		

N = 181; Model Chi-square= 82.660, p< .001. -2 Log-Likelihood= 144.133. Cox & Snell R-Square= 0.374, Nagelkerkes R-Square= 0.517

The sample of 181 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[57] "rule"[58].

The results of the regression model show that the major contribution to the prediction of developing control systems and due diligence comes from the variable "N_Subsidiaries" (Chi-square = 57.955), "Region_Most-Regular_Frequent_Business" (Chi-square = 18.789) and "Perception Corruption Obstacle Doing Business" (Chi-square = 5.922). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 144.133, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a statistical significance at p<0.001 witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.

The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 52% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors'

[57] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379.

[58] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=3 and p=0.66 (66%), the minimum N should be 45.

coefficients analyzed below because they could be influenced by latent variables not included in the model.

Considering the B coefficients of the two covariates (see Table 81), all of them have a relatively low standard error and the p-values < 0.05. The region where the firm operates regularly and the perception of corruption as obstacle abroad influence the decision on adopting due diligence and systems of control in order to prevent corruption.

In particular, the Exp(B) of the variable "Region_Most-Regular_Frequent_Business" indicates that **firms operating in Africa are more likely to have resorted to systems of control and due diligence to prevent corruption than the ones having frequent business in the Americas**, when other variables in the model are controlled. This finding concurs with the corruption index of countries in Africa classified by Transparency International.

The Exp(B) of the variable "Perception Corruption Obstacle Doing Business" shows that **the odds of adopting specific codes of conduct to prevent corruption is three times more important for companies perceiving corruption as an issue in business abroad than for those for which corruption did not represent in particular an obstacle.**

The Exp(B) of the other independent variables are not solid enough to be correctly interpreted (see confidence intervals).

4.7 Investments in anti-corruption training

This section analyses the result of a binary logistic regression estimating the likelihood of having developed anti-corruption training for the staff in Swiss firms, in order to prevent corruption. This likelihood is estimated on the basis of specific characteristics of the firm (e.g. size, turnover, number of subsidiaries, percentage of turnover in a foreign country, etc.), its activities, region of the most frequent and regular business activity, perception of obstacles abroad, frequency of contacts with public officials and private entities and frequency of bribe requests. The dependent variable (DV) indicates whether or not a firm had adopted some anti-corruption training to prevent corruption, in the past three years (1=Yes, 0=No). The independent variables included in this model are:

1. Size (categorical, More than 250 employees=1);
2. Average Annual_Turnover_Last 3 years (categorical, More than 50 mil=1);
3. Number_Subsidiaries (categorical, None=1);
4. Region_Most-Regular_Frequent_Business (categorical, Africa=1);
5. Local sale of local or imported products (1=Yes);
6. Sale abroad of local or imported products (1=Yes);
7. Local manufacturing (1=Yes);
8. Construction (1=Yes);
9. Capital Investments (1=Yes);
10. Provider Services Abroad (1=Yes):
11. Percentage_Revenues_Abroad (categorical, More than 25%=1);
12. Perception_Corruption_Obstacle Doing Business (1=Yes);
13. Contact_Private_Sector (1=Yes);
14. Contact_Public_Officials (1=Yes);
15. Bribe_Requests_TOT_onContacts (by both public officials and private entities) (1=Yes).

*Table 82 - Main results of the binary logistic regression – **Anti-corruption training***

	Variables in the equation	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. EXP(B)	
								Lower limit	Upper limit
Step4 4	Region_MostFrequent3			8.868	4	.064			
	Region_MostFrequent3(1)	1.547	.890	3.024	1	.082	4.700	.822	26.882
	Region_MostFrequent3(2)	2.584	.956	7.299	1	**.007**	13.247	2.033	86.340
	Region_MostFrequent3(3)	-.239	1.146	.043	1	.835	.788	.083	7.448
	Region_MostFrequent3(4)	.692	1.010	.470	1	.493	1.998	.276	14.469
	AnnualTurnover3years			5.075	5	.407			
	AnnualTurnover3years(1)	-6.109	6.298	.941	1	.332	.002	.000	510.443
	AnnualTurnover3years(2)	-19.904	9297.139	.000	1	.998	.000	.000	.
	AnnualTurnover3years(3)	-5.222	3.633	2.066	1	.151	.005	.000	6.675
	AnnualTurnover3years(4)	-1.144	1.430	.640	1	.424	.318	.019	5.253
	AnnualTurnover3years(5)	-1.479	.884	2.799	1	.094	.228	.040	1.289
	N_Subsidiaries			12.403	4	**.015**			
	N_Subsidiaries(1)	-4.654	6.318	.543	1	.461	.010	.000	2272.356
	N_Subsidiaries(2)	-.344	1.410	.059	1	.808	.709	.045	11.255
	N_Subsidiaries(3)	1.967	1.629	1.458	1	.227	7.150	.293	174.221
	N_Subsidiaries(4)	2.507	1.665	2.268	1	.132	12.270	.470	320.539
	Contact_Private_Sector	2.078	.826	6.327	1	**.012**	7.988	1.582	40.329
	Constant	-3.429	1.884	3.313	1	.069	.032		

N = 176; Model Chi-square= 102.172, p< .000. -2 Log-Likelihood= 72.524. Cox & Snell R-Square= 0.440, Nagelkerkes R-Square= 0.700

The sample of 176 cases is sufficiently wide to avoid numerical problems, according to the Peduzzi et al. (1996)[59] "rule"[60].

The results of the regression model show that the major contribution to the prediction of using anti-corruption training for staff as tool of prevention comes from the variable "N_Subsidiaries" (Chi-square = 68.048), "AnnualTurnover3years "(Chi-square = 16.255); "Region_Most-Regular_Frequent_Business" (Chi-square = 11.261) and "Contact Private Sector" (Chi-square = 6.608). The other independent variables do not significantly contribute to the model.

The value of the Chi-square coefficient, showing a reduced value of the -2 log-likelihood, equal to 102.172, indicates an improvement in the model in comparison to the one including only the constant (for further explanation on the coefficients see Annexes 2 and 3). The Chi-square coefficient presents a

[59] Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR (1996) 'A simulation study of the number of events per variable in logistic regression analysis'. *Journal of Clinical Epidemiology* 49:1373-1379

[60] The minimum number of cases to include in the analysis is: N = 10 k / p, where **p** is the smallest of the proportions of negative or positive cases in the population and **k** the number of covariates (the number of independent variables). In this case, where k=4 and p=0.80 (80%), the minimum N should be 49.

statistical significance at $p<0.001$ witnessing the presence of a statistical relationship between the dependent variable and the combination of the independent variables.
The Nagelkerkes R-Square coefficient indicates that the proportion of variance accounted for the dependent variable based on the predictive power of the independent variables included in the model is around 70% (for further explanations on the coefficient see Annexes 2 and 3). This value is high considering the nature of the data (survey data) and indicates a good predictive power of the regression model. However, it is suggested to interpret with caution the values of the predictors' coefficients analyzed below because they could be influenced by latent variables not included in the model.
Considering the B coefficients, all of them have a relatively low standard error and a p-value lower than 0.005, besides the "Annual Turnover" (see table above). Following are the independent variables influencing the decision of investment in anti-corruption staff training: region of the most regular business, number of subsidiaries and contacts with a private entity in the past three years.
In particular, the Exp(B) of the variable "Region_Most-Regular_Frequent_Business" indicates that **companies operating in Asia are 13 times more likely to develop anti-corruption staff training than the ones having business activities in Africa,** when the other variables in the model are controlled.
The Exp(B) of the variable "Contact Private Sector" shows that **the odds of investing in anti-corruption staff training is eight times more significant for companies having been at least once in contact with a private party in the past three years than for companies having no interactions with private entities.**
The Ext(B) of the other independent variables are not solid enough to be correctly interpreted (see confidence intervals).

Summary of factors influencing the decision of investments in anti-corruption measures

Not all responding firms perceive corruption as an obstacle and not all firms have felt the need to invest in anti-corruption measures. However, as shown in the above analyses, some factors did trigger a firm to adopt certain types of measures of prevention.

	Anti-corruption measures in general	Legal measures	Codes of conduct	Monitoring bodies	Control systems and due diligence	Anti-corruption staff training
Nr. employees (less than 250)			+	+		
Nr. Subsidiaries (more than 6)		+				
Nr. Subsidiaries (more than 10)	+ **(35 times)**					
Sale local/imported products	+ **(3 times)**					
Capital investments (minority/majority)	+ **(13 times)**	+ **(4 times)**				
Providers of service		+				
Experience of bribe request (yes)	+ **(2.4 times)**					
Contacts Public officials		+				
Contacts Private parties						+ **(8 times)**
Corruption = obstacle (yes)			+	+ **(3 times)**	+ **(3 times)**	
Region Africa					+	+ (13 times)

5 Qualitative survey

The Swiss International Corruption Survey as a quantitative survey was also complemented by 32[61] qualitative face-to-face interviews with the CEOs of some companies and managers/representatives of the Cantonal Chambers of Commerce in order to further investigate the answers obtained from the quantitative survey.
Prior to the interview, a letter of introduction was sent to CEOs of the 100 biggest Swiss firms. Once the interview was accepted, it could be conducted either by phone or face-to-face and lasted between 30 to 45 minutes. Some specific research questions were included in the interview in order to get new insights into the issues of corruption for Swiss firms with business activity abroad.

The interview was articulated around the following structure and questions:

I - Introducing questions

- ✓ Could you tell us as much as possible about the type of business and activities abroad of your company?
- ✓ Has your company experienced any difficulties or obstacles while doing business abroad?
- ✓ How frequent does this happen?

II-Basic descriptive questions

Part 1: Incident of corruption

- ✓ Can you describe to us about the incident of corruption?
- ✓ Please tell us about what happened? Could you please describe to us the situation/incident?
- ✓ How did it happen?
- ✓ In which country?
- ✓ During which kind of operation/context?
- ✓ What was requested?
- ✓ Was it a serious incident?
- ✓ How do you feel about that?

Part 2: Measures of prevention of the company

- ✓ What kind of measures of prevention or anti-corruption program already existed in your firm?
- ✓ How did your firm do to prevent such incident?
- ✓ According to your opinion, what kind of anti-corruption measures could be considered as efficient?
- ✓ According to your opinion what should be done in order to curb corruption?
- ✓ Please share with us your opinions about the anti-corruption international law?

[61] Regarding the minimum requirements for sample size in qualitative studies, Warren (Qualitative Interviewing, in J.F. Holstein (eds), Handbook of Interview Research: Context and Method. Thousand Oaks, CA: Sage, 2002) suggests that the minimum number of interviews needs to be between twenty and thirty for a qualitative study to be published.

III-Follow-up questions

- ✓ You mentioned that some of these measures of prevention are important for your firm. Can you tell us how they are used in your firm and how efficient they are.

IV-Structural/paradigmatic questions

- ✓ You mentioned that such and such operations could be problematic while doing business abroad. Could you please tell us what could be the cause of this problematic?

V-Comparison questions

- ✓ You mentioned that there is a big difference between „country A" and „country B" in doing business. Could you develop more about these differences in daily business?

VI-Conclusion

- ✓ According to you, what should be done if we want to eradicate corruption?
- ✓ What kind of actions or measures should be undertaken to prevent and fight corruption?
- ✓ Do you think that your firm is on the right path in the fight against corruption? If yes, why? If no, why?

Illustrating cases

Case 1

Firm with more than 30'000 employees worldwide, globally organized and is present in almost all countries in the world. The Compliance Department is separated from the Legal one and includes only 4 persons in Switzerland. There are four Regional Compliance officers and 80 local compliance officers.

Areas of risk:

Hot areas seen as countries in which there are the most frequent obstacles while doing business is Brazil, Thailand and Indonesia.

Corruption issue:

Corruption related with the business can be seen more as fraud from employees who try to generate more revenues or cash together with outsiders and local intermediaries. Usually when a request for payment happens, it usually comes from a local third party.

In some regions the firm does need to deal with public authorities and governments. The company could be very exposed in some regions but so far there have been no incidents with governments. The issue of bribery and corruption is more related to private companies acting as local intermediaries.

Measures of prevention:

Before getting into business with a new private company, a due diligence is processed as well as a neat contract which needs to be signed. Each local intermediary has a formal contract with the company and is paid on commission.

The Compliance management of the company follows the IDW (the audit standard from Germany) with due diligence and training but is still not very developed comparing to other big Swiss companies. A hotline and a whistleblowing system exist worldwide. Employees can report by phone

or online. This system works well except for Portugal and Spain where employees have to reveal their name when they report.

Incidents of corruption:

Incidents of corruption happen everywhere with some serious affairs in Russia, Mexico, Columbia and Thailand. Most of the incidents concern the raising costs of the supply.

How to fight corruption:

In order to fight and prevent corruption there needs to be transparency and a reform of some governments' structure and mentality in developing countries.

There needs to be a change of cultural awareness regarding corruption. Developing countries should not think that Western countries should pay.

Regulation and rules are good to support daily tasks but also are very restrictive and difficult to comply. Big companies can be less flexible and can resist a request to pay but smaller firms are more obliged to pay. But the only solution is that no one should pay. There should be a special support for small firms.

Case 2

Main activity of the firm: exportation and sales outside of Switzerland, the majority of the exportation is in small countries. Most of the recipients are distributors/importers/independent third parties.

The firm covers the business activities in more than 100 countries, highly concentrated in Africa, some Eastern European countries (Ukraine, Kazakhstan, Balkan countries), Asian countries (mainly India, now Myanmar and Vietnam), Middle East countries (Qatar, Iraq, Syria), Latin America (Paraguay, Bolivia), with 30 representatives offices which all belong to one same legal entity. All the distribution and commercial contracts are elaborated and drafted in Switzerland. The production network is worldwide with some high technologic plants in Switzerland.

Role of compliance:

Five Swiss lawyers based in Switzerland are responsible for each region, Africa, Asia, Middle East, etc. The approach of contracts and trade is standardized.

There are main differences between the role of Legal and the one of Compliance. The Legal Department embraces a broader perspective and a risk-based approach. The responsibility of the Legal is to assure the right application of the regulatory law abroad (Is the firm allowed selling products in this country and how this sale is regulated at each supply and distribution chain). Meanwhile, the Compliance Department promotes rules and guidelines which include the anti-bribery policy.

Measures of prevention:

Measures to prevent bribery are structured around the distribution contract. Mainly one of the ways to prevent corruption is to avoid deals with margins and avoid being too dependent to the partners. Commission fees are also avoided. All commission fees should be described in details in the contract. The most important and efficient way to avoid corruption is to avoid all credit notes. Credit notes are the trickiest one and the blind spot for controls. The contract has to clarify all details related to any discount, invoices, targets, markets, etc. The contract basis is always defined. There are 15 different standardized templates of contract.

Before starting new business, each new distributor has to go through a screening process, especially those are owned by governments. New distributors are checked thoroughly. The role of the

Compliance Department is predominant as this process carries a dense network of regulations. Due diligence anti-bribery is mandatory.
There is a hotline for whistle-blowers. In case of delicate investigations, an extra lawyer outside of the firm could be asked to work with the case.

Areas of risk:

Contracts in distribution in delicate African countries (Nigeria) are more carefully checked, even if the majority of the partners are private companies. Payments to distributors are the most delicate operation. No triangle set-up is allowed (one case: the distribution should be in Vietnam but the distributors asked for it to go through Singapore as Singapore is tax-free haven, in this case, with strong suspicions, this distribution route was refused).
Eastern countries which are not part of the EU are the most difficult to deal with as there are a lot of rules (they try to follow the Western standards) but the application of the rules in these countries are most of the times blurry. For instance, Kazakhstan has a very unstable legal landscape; it is difficult to know how the law is enforced and when.
The pharmaceutical company is easy target for anti-trust and anti-corruption fines as it is viewed as a profitable industry.

Illustration of an ongoing case in Vietnam:

The firm is trying to open a representative office in Hanoi. The police came and asked for a payment, without which the office could not be opened as it was not supposedly conformed to the Vietnamese regulations and laws. The firm's lawyer asked the police to provide the company with an official administrative act where the wrongful act and the amount of fine should be mentioned. The Swiss Embassy was informed. The firm asked for as official meeting with the Hanoi police and the Embassy. The police got nervous and at the moment they did not hear back from the police but the opening of the office is delayed. The Head of Legal was already travelling three times to Hanoi for this matter. The firm refused to pay and drew very clearly the line.

Case 3

The firm interviewed is one of the most global companies in the world. Its global turnover reaches 92 billion of CHF. The firm operates in almost all countries in the world, covers 80 markets, with more than 500 factories and more than 300'000 employees.
The firm has a very good reputation in the business world and the companies doing business or dealing with this firm respect this image so there has NEVER been any corruption or bribe requests or payments.
This situation is however believed to be exceptional and does not represent the general situation of Swiss firms in international business activities. This is mainly due to the fact that foreign business partners or foreign public authorities know that it would be useless to ask this firm to pay any extra money.
This firm NEVER pays and WILL NEVER pay.

Corruption issues:

Only one time in an Eastern country, there had been a lack of transparency and a potential request of payment, the firm withdrew immediately from this market and has never worked with this country again. The position of this firm in the business world contributes to this fact. However, it is believed that medium-size and small Swiss firms would never experience the same situation, simply because

they cannot afford to walk away from a deal or contract. Another advantage of the firm facing the phenomena of corruption is thanks to the diversity of the consumer good products and a large range of the products which value even less than 1 CHF. This is for instance not the case for an oil company, or firms whose services and products not only are less diversified but also depend much more on the authorizations for implementations, distributions, etc. in the foreign countries.

Even in the case of facilitation payments, in 2008 when in some countries these payments are still not illegal, the firm already said no to all facilitation payments. It is believed that the issues of corruption mainly come from two risky areas, one is when the company needs licenses from the government and the second vulnerable area is the request of facilitation payments and the refusal of which generates delays and complications for the firm. But only good compliance in the long run benefits every firm. It is no doubt that all firms should refuse systematically to pay even if in the short-term it costs some deals or contracts but in the medium, long term it is the only way to fight against corruption.

Role of compliance:

Compliance risk assessment is carried out annually in all countries with which Nestlé has business. A Group Compliance Quality Program is formed and each year one global forum is organized at the Headquarter, reuniting all the Heads of Compliance of all countries. In the local countries, sessions between different departments and product groups are also organized regularly in order to discuss if there is any issue related to corruption or briberies. At the Headquarter level, discussion forums with retired managers and the current ones are also organized so that the retired ones can share their experiences with the new managers. At any level, regional or local, compliance officers have to inform the group if anything happens.

Regular training for specific staff and for all staff with specific scenarios of corruption and in-market training in local countries are also part of the anti-corruption prevention.

Measures of prevention:

Very strong compliance and prevention programs are implemented in this firm.

The key message of Nestlé is Compliance and Compliance.

Areas of risk:

Regarding the countries and the obstacles in certain countries, the ranking of TI is accurate according to the manager interviewed. South America especially Argentina is a difficult country to deal with. China in spite of its bad reputation does not have many negative effects in daily business but according to the interviewed, this is due to the fact that the Chinese government lately has been pulling out very strong campaign against corruption and has tried to make examples by prosecuting corruption cases much more than in the previous years.

Opinions on international regulations against corruption:

Concerning the international and Swiss law against corruption, the interviewed finds them largely enough and largely strict enough. The regulations are exaggerated and over protected. Big fines are exaggerated. He believes that the UK Bribery Act is not a very good development and the Swiss perspective to be in line with the US Corrupt Act and UK Bribery Act is not convincing and only to be a "good student". He thinks that making the private corruption a public offence is a step too far. In his opinion, private corruption should not be investigated as a public offence. He prefers the German approach in this case.

Case 4

The firm has subsidiaries in almost all the countries worldwide, with the exception of Africa.

In the last couple of years the firm has enforced the fight against corruption with the result that there have been no more incidents.

Opinions on corruption issues:

The main problem in the fight against corruption is seen in public incidents of corruption (e.g. FIFA) which weakens ethical conduct ("Other high-paid managers take money, so it is ok for me to do it as well"). This could lead to the appearance that larger companies or institutions are allowed more than smaller ones, which are more rigorously controlled.

It is believed that the state (government) should crack down hard on cases of public corruption because such cases will have an even worse effect on ethical prevention ("even the government does it…"). In addition, the current legal situation makes it difficult to prosecute in cases of public corruption.

Larger companies will probably have a more systematic approach to the fight against corruption than smaller companies.

Areas of risk:

Most problems are situated in Asia, specifically in India. Local employees were employed in India with delegates from Switzerland staying for 3-5 years. While local management had certain liberties and can make a certain level of strategic and financial decisions, there is a final control and regulation from the Headquarter in Switzerland.

The textile branch is/was more vulnerable, because it is located in Asia. This was especially the case 10-20 years ago. Now there is a stricter regulation. About 10 years ago the fight against corruption was intensified in this sector.

Incidents of corruption:

The last incident occurred in India, in a textile branch with a local manager responsible for government contacts. The plan was to get kickbacks to relatives. Financially the damage was on a lower scale (approx. $ 200'000, 7% of total sum of deal of $ 3'000'000). The manager was fired, the damage was written off.

The second incident related to the surface covering operation for special appliances. In one corporation plutonium and uranium pellets are pressed together to form nuclear fuel rods. This corporation is under strict control of USA, F, IAEA etc. This corporation has been approached from anonymous sources to produce weapons-grade atomic material. However, because of strict control, no further incidents occurred besides the approach itself.

Compliance and anti-corruption programs:

About 90% of all employees with external contacts are automatically registered for an online course to fight awareness of corruption and what to do against it. Employees get a certificate for this course, which is monitored by the HR. Apart from this, there is an internal code of ethics/conduct as well as a compliance hotline which is also open to external callers.

The aim for the management is to lead by example, to demonstrate correct behavior, i.e. the approach is top-down. Employees should be able to suppress temptation when the opportunity for corruption arises.

Case 5

The firm has 150'000 employees, with an estimation of 15000 layoffs after a recent merger at the moment of the interview.

Corruption issues:

The particularity of the company is that it does not use intermediaries in sales channel so there is less risk to corruption. The company does not need third parties as it deals with equipment suppliers.

Areas of risk:

Some risks are higher in developing countries such as India and Indonesia where the government is decentralized.

Role of compliance:

Before the merger the Legal and Compliance Department counts 23 employees, now 35. The compliance program of the firm is now separated from the legal program.

Anti-corruption program:

The local compliance program includes a reporting line which helps employees to report and raise concerns. The platform is web-based and also by phone. The integrity line also exists as a global compliance program since last year in 240 countries in the firm operates. So far 292 cases were reported through this platform, 190 cases concern the codes of conducts. The rest of the cases is still under investigation. Overall around 600 cases were reported but not only related to corruption.

How to fight corruption:

For the prevention, the interviewed manager thinks there should be increased enforcement for countries outside USA and more severe prosecution of individuals involved in corruption. It is believed that the prosecution should go for smaller issues in corruption, smaller amounts and bribes instead of always focusing on catching "big fish", big companies. Local offices should resist more and not to pay.

It could be helpful that small firms connect to other big firms locally to share their experiences and to reach out to their compliance, to share knowledge and help each other. Local offices should use each other's network in developing countries to help resist corruption.

The interviewed manager was not willing to reveal any cases because of confidentiality. First this person said that there were no cases of corruption but after a while, it seems like there was quite a few but he was not willing to talk about them.

Case 6

The firm is specialized in intermediary products in the domain of biotech and chemical. The company was founded 20 years ago and is quoted in the stock exchange in ZH. Its manufacturing sites are based in the UK, USA, Brazil, China, Singapore and Spain. The sales subsidiaries are however in countries over the world. In Switzerland, the firm employs 3000 employees.

Corruption issues:

The company is less prone to the issue of corruption and bribery mainly because of its activities, unlike the sector of construction. The company does not have customers as governments or public authorities. There are no sales to governments. Basically customers are private businesses.

So far there have been no incidents of corruption except one time in China. As soon as irregularities were detected in the three manufacturing sites in China, the people concerned were immediately fired and the board of management was immediately changed.

The company accepts no kickbacks and only gets into clean business.

Compliance and anti-corruption programs:

Codes of conducts and anti-corruption guidelines are present in all countries. Anti-corruption training modules are mandatory for all employees, with an addition of a regular internal audit.

There is no Compliance Department but a Legal Department which plays the same role. The Legal Department is well-staffed with lawyers visiting the countries with which the company has business every two years. The company applies the zero-tolerance to corruption. Employees with involvements in payments or suspected of bribes are fired immediately. No whistleblowing system has been implemented so far.

How to fight corruption:

Companies should NEVER pay and only do clean business. In the long run, those who pay will have to pay systematically and will not necessarily keep the business. But the tone needs to come from the top management who needs to be very categorical and merciless to not yield to facilitation payments or kickback schemes.

It is believed that the role of NGOs and Transparency International is important as these organizations help to bring "spider webs" into public limelight. Media transparency and anti-corruption activists are also important. Each company must consider its reputation as the most important asset. In the long run, no sector activity can afford to pay bribes.

Case 7

The company specializes in the production of environmental filters for power plants, waste incinerations plants and smelters. The company has about 75 employees in Switzerland, none abroad, no subsidiaries.

However, 95% of turnover is generated abroad.

The firm has business in Russia (CIS-states), Greece, Italy, Spain, Portugal, Benelux-countries.

The turnover has sunk from CHF 80 Mio to CHF 15 Mio in the last years.

Problem: Euro strength, as well as waste disposal being heavily in hands of mafia / organized crime.

Corruption issues:

Industry norms and standards are non-transparent in other countries. These countries send engineers/experts to Switzerland to explain technicalities, these have to be treated well, hosted, expenses paid etc.

Representatives going to other countries to procure contracts take the proverbial "suitcase full of money" with them to get contract. In rarer cases, mechanics are sent abroad with money for bribery. If the money is not paid, the contract is usually lost. On the other hand, if money is paid, the contract is usually awarded. The system is therefore quite transparent. It is clear, what is expected and what needs to be paid to get the contract.

This is a "transparent corruption". Payments are seen more as investments than bribery. Payments are usually taken into account when planning the budget. The payments are declared to tax authorities. Usually there are no local agents in other countries, but a prime contractor who works with the parts constructed in Switzerland. Payments may go to prime contractor or directly to buyer. Thus, there are not a lot of contacts with local authorities.

Incidents of corruption:

The firm sold printing machines to Romania. Price for machine was CHF 1.8 Mio, officially sold for CHF 1.5 Mio. The rest was paid as kickback. Once, a fire engine was bought for a manager who is in the fire brigade in his hometown in Romania. This is also seen as an investment.

Opinions of the interviewed owner:

Open and transparent corruption as part of business is preferred and can be taken into consideration and therefore helps to secure jobs. Corruption against public administration on the other hand is seen as detrimental and often bad for business.

Usually owners of small firms take the decision of paying or not paying as he is owner and CEO. Only two or three other people usually know of the payments, it is never considered company culture. Usually the accounting officers also know of the payments because they have to book the payments properly.

Smaller companies can react more flexible to such demands, whereas larger companies have to obey compliance rules. It is believed that larger firms still pay and to do so they have to channel the payments through another company or a front or from another country.

How to fight corruption:

International anti-corruption legislation in business is not perceived as sensible. As long as the system is transparent and there is more or less of a guarantee that payments lead to contracts, the system is clear and works for everyone. On the other hand, if private people have to bribe public officials to get help / documents / services, to which they are entitled to anyway, this presents a problem.

Case 8

The company is involved in the design, development and management of intermodal platforms for both road and rail trade in Switzerland and abroad. In particular, it deals with the design, development and management of systems for rail trade, logistic infrastructures for the management of transported merchandise (warehouse), supervision of construction sites, the purchase of goods located in Switzerland and abroad and international trade in merchandise.

Areas of risk:

Corruption incidents are spread during bidding processes in public procurement procedures related to the construction of systems for rail trade and logistic infrastructures; however the firm has never been personally involved in such incidents.

The firm has been mainly working as customs brokers and truck drivers. Incidents experienced were usually while clearing goods through customs.

Corruption issues:

The interviewed person deals with companies involves in international trade. He was responsible for the merchandise distribution in Italy and in other countries. As a truck driver he reported incidents of corruption especially while clearing goods through the custom between Switzerland and Italy.

Corruption, providing gift or money to custom officers to speed up the process of clearing goods is considered “normal”, especially when a big amount of merchandise is expected.

There is a lot of collusion and connivance among custom officers at one custom and also among different customs. It is not unusual that custom officers refusing to ask for gifts or extra-payments are transferred to a different office.

In general the situation has gone far worse than the last three past years.

According to their experience, in the South of Italy some trades are clearly in the hands of criminal organizations, which manage all the procedures, from the clearing of customs to the management of trucks, as a sort of monopoly.

Incidents of corruption:

One of the most serious incidents happened at the custom at the border between Switzerland and Italy. It was serious because the Head of Customs was involved and because the request was very difficult to satisfy. The director requested a moped for her daughter to speed up the custom procedures of a big cargo from Switzerland to Italy. The specific type of moped he requested was out of production since many years. The company lost a lot of time to find this moped but complied as it fears important delay in products delivery.

If the gift was not delivered, it is believed that the cargo would have been cleared anyway but it would have taken much more time due to exaggerated paperwork and the firm could have loast clients because of delay.

How to fight corruption:

In order to reduce the risk of corrupt behaviours at customs, wages for custom officers in Italy should be increased, to get closer to those of their colleagues in Switzerland.

Moreover, dedicated offices to support companies in clearing goods could help to reduce the "need" for these unofficial payments.

A positive example comes from the introduction of "case di spedizione", where customs brokers (spedizionieri) act as intermediaries between companies and custom officers. There were approximately 123 case di spedizione in Montechiasso, but their number drastically reduced to 49 during the past few years.

Companies could have their internal customs brokers or hire external ones. External customs brokers are usually much cheaper and more aware about customs procedures and mechanisms.

Usually big companies have internal customs brokers, while smaller companies hire external ones.

Doing business through customs brokers does not prevent corruption behaviours but this process is less dangerous for companies because they are not directly involved. In this case it is believed that the company pays a salary to custom brokers and pretends not to know anything about bribes.

Also the introduction of informatics systems for clearing goods through customs could help in preventing bribes' requests. A system like that already exists "Dogana 90", but it should be improved and cover the whole process.

Cooperation with embassies could be an option to prevent corruption, as well as an increased support from police forces (both in the importing and exporting country).

Case 9

The firm interviewed is a global multination company with export activities to almost every country in the world. The trading office in Geneva counts 700 employees, the one in Lausanne 300 employees.

Compliance and anti-corruption programs:

The firm has a very strict code of ethics and conduct when it comes to corruption and bribery. No solicitations or requests of payments are accepted. No facilitation payments are paid. The company prefers to lose a deal or not to enter into business with a country rather than to pay. But the company has few business and contacts with local governments except during a bidding process and when a

new license is needed. Furthermore, before entering into business with a new country, a complete risk assessment is processed.

The measures of anti-corruption are taken very seriously. Each year all employees have to pass an ethics exam and sign a statement acknowledging that no bribery and payment would ever be tolerated by the company.

Corruption issues:

Interestingly, the firm does not work with local intermediaries; the company does not use local private party to get around rules and regulations. The company's reputation is its main asset. There is no grey zone, no space for any kind of "immoral" activities.

Areas of risk:

Argentina is considered as the most difficult and corrupt country the company has to deal with. Ukraine and Russian as well as Nigeria and Indonesia are also among the most corrupt countries. Nearly all emerging markets represent risky business and risk of corruption.

How to fight corruption:

Good ethics means good business and therefore, companies should refrain from paying bribes. It is the only way to fight corruption. Good ethics will pay off in the long term even though there will be some loss of business opportunities. Even for a big firm, it still costs the company to lose a contract but it is the only way to do clean business.

Case 10

The company has 300 employees in Geneva. All the production is Swiss made. The firm exports to 90 countries with only a few subsidiaries abroad (France, Germany, Austria, Japan). The commercial and distribution in subsidiaries employ 25 employees.

The firm is familiar with agreements and contracts with local agents of distribution for different points of sales abroad.

Corruption issues:

There have been no incidents of corruption so far but it is certainly due to the kind of products fabricated and sold and also the price of the products distributed (usually under CHF 200).

The third parties with whom the company work always have a contract in which a price of margin was fixed. The distributions channels are different from one country to another, hence a detailed agreement.

Areas of risk:

With France there has always been a recurrent issue related to the "transfer price". The French partners usually accuse the company to put higher prices on purpose in order to not pay taxes in France.

Recently the company opens a new market in Iran and has difficulties in finding a partner abroad for the payments as no direct transfer could be processed from Iran. But this problem should hopefully be resolved with the end of the embargo.

Compliance and anti-corruption programs:

The company has no compliance program as the company considers itself as a family business and deals with small amounts of money and same local people.

How to fight corruption:

There should be a right balance concerning the application of rules and the proliferation of new regulations, for instance in the banking sector. New regulations and laws can be such a waste of time and there is no guarantee that the effects of the law are positive. Every firm should play at the same level, even smaller firms have to resist even though they might lose some business opportunities. This is more important to fight corruption than having more and more new laws.

Case 11

The firm is a multinational group with 137 production sites worldwide (in more than 100 countries except North Korea). Two main corporate products are grain and food. The main activity is grain milling which covers seven business areas with a turnover of 500 million CHF. The turnover of the group is 2.5 billion CHF, 98% of it is exportation of products, machinery and storage services. The group has 15 branches/local offices outside of Switzerland and employs more than 200 independent local agents.

Role of Compliance:

The Compliance Department is separated from the Legal, Tax and Audit Department and employs ten persons, not all are full time. The Compliance plays only the role of supporting and is in charge of staff training. Investigations and authorizations before entering into business with a new partner are under the responsibility of the Audit Department.

The Compliance Board meets on a quarterly basis. The areas of concern include mainly financial crime issues, mobbing and discrimination, health and safety issues.

Anti-corruption measures and programs:

The Group implemented a Hotline – anonymous reporting line two years ago with one person in charge of collecting the regional cases and reporting them to the Headquarter. At the moment there are 30 sensitive ongoing cases from all regions which need supervision.

A new process has been recently implemented and is called the "*application process*". Before each contract/deal there needs to be an application process verified and approved first by the regional compliance office. The first level of support belongs to the commercial agents who need to be aware and stay alert to red flags before starting a new contract. Some of the red flags areas are for instance suspicious and disproportional commissions, the identity of the agents (black-list checks) and the identity between agents and bank accounts. No off-shore payments are possible. The local agent should be the owner of the bank account where the payments should be transferred.

In case of doubts, the case should be transferred back to the regional office then to the Headquarter to be checked and approved by the CFO. All transactions should be monitored by the local internal audit and then the Headquarter Audit. The principle of trust could be applied but is sure not enough.

A standard contract between local agents and the Group is mandatory. No transaction before the signature of a formal contract.

Corruption issues:

Before the implementation of the UK Bribery Act, some facilitations payments (if small amounts) were accepted. Since the UK Act, all facilitation payments are forbidden. In terms of gifts, dinners, flight tickets to Switzerland, gifts are accepted up to 300 CHF (except UK). All flights, hotels, dinners related to business are accepted but any huge deviation or abuse would be categorically refused (once

a Middle Eastern customer asked the company to pay for a trip of 20 persons in his family, hotel included).

Cases of bribery requested usually concern the Middle East for delivering work permits or for suggesting a special tax bill from the tax officer/public authorities. The firm always refused to pay and stopped the contract. As a multinational group, the company could not afford to damage the reputation even if they can theoretically afford to pay a heavy fine.

Areas of risk:

In Pakistan and Bangladesh, it is clearly known that the company could easily get 30 % more of businesses in these countries if they agree to pay.

India, however, in spite of its reputation, has good local agents, as well as China. In Nigeria, Soudan, South America, the situation is critical and challenging.

How to fight corruption:

Although small and medium-sized businesses could not act the same way as big firms as they do not have enough resources to not to pay and lose a deal, the idea is still to resist and not to pay.

It is strongly believed that Compliance needs to play a supporting role only and not only acting as the "police" of the firm. All firms need to have a strong implemented Code of conducts and an audit Department to check all deals and contracts. The Compliance does not have the power to reject a contract, only the Audit can. The fight against corruption is believed to be successful relying on Compliance and Audit.

Case 12

The firm deals with winter road-maintenance machinery.

Russia is the foreign country where the company has the highest annual revenue (more than 20% of the total company's revenue), followed by China and Canada. Ethiopia is an emerging market.

The interviewee was in charge of public relations with Russian clients/institutions.

Corruption issues:

A favor/gift/or extra-payment was asked for any kind of operation performed with public officials in Russia, starting from "clearing goods through customs" to "processing tax declarations" or "Bidding processes in public procurement procedures".

Corruption is part of the Russian business. Public officials are used to ask for extra-payment and to share these extra-payments with the higher hierarchies of governmental institutions. Since few years ago, retired servicepersons are employed within public administration. They are extremely loyal and easily controllable.

The company experienced from six to ten requests/offers of favor/gift/extra-payment and sometimes the company offers first gifts (mainly trips) or extra-payment (usually a percentage of the amount of money offered in a bid for example) in order to be sure to enter a specific market, or to get a specific bid.

A promise to share a certain amount of money to public or private officials during a bid is considered "normal". Usually 2% of the total amount requested for a specific bid is requested.

Incidents of corruption:

The most serious request was related to a bidding process in a private procurement procedure. The most serious case the company experienced was related to a bid in the private sector for which they were not able to bribe the officials. The situation was considered serious because the officials did not

accept their bribe and the company did not obtain the bid. The counterpart was an airport in Russia, managed by a private company which pays very high salaries and gives also high bonus to its employees. Therefore, the employees did not see any advantage in accepting a bribe and run the risk to lose their job.

Anti-corruption measures:

To prevent corruption the company is equipped with many different measures, besides codes of ethics and information campaign. It is also equipped with anti-corruption training and online simulations. According to these simulations, they are not allowed to accept or offer gifts for a value higher than €100. This simulation is considered by the interviewee as useless and inefficient because the answer does not reflect the reality. Employees would pay and accept gifts that cost more than €100.

How to fight corruption:

A good way of preventing corruption is to act on the public official side. Increasing the wages for public officials is also a good measure of prevention. In Russia also the increase of public official esteem and consideration was a good incentive for not accepting bribe. Publish shame and punishment work also well.

Another practical way to limit corruption is related the type of intermediary used to interact with public administration in Russia. It seems that it would be better not to rely only on Russian people because they would always favor their country and their advantages.

Case 13

The firm has a strong market presence in selected countries in Europe and offers comprehensive services for all aspects associated with energy. The firm operates and maintains strong partnerships throughout Europe.

Role of Compliance:

The Compliance Department has to authorize each new operation/contract/deal. Though considered as understaffed, the Compliance desk counts 12 local compliance partners, 8 specialist compliance partners (with tax know-how, risk and commercial know-how).

Areas of risk:

The company has experienced difficulties so far in two countries: Romania and Italy. The firm is in trade business with Romania and in merge-acquisition business with Italy.

Business activities with Romania started in 2004/2005 and cover less than 5% in terms of annual revenues of the company. By the time the firm entered into business with Romania without a complete and thorough check. This failure had put the company into a situation of arbitration between the Romanian government and the firm for years and the total amount at stake summed up at more than 100 million of CHF. In Italy, the firm was convinced to have business in green energy with another company. It turned out that the latter was bribed so that the company could get the contract.

Anti-corruption measures:

After such incidents, the firm has developed a KYC process (Know Your Customer/Counterpart) before each new business activity involving local agents or agencies. The company uses systematically software called BVD Compliance to verify all acquisition contracts. However the big

exposure usually goes together with the competition law infringement (as in the case of price-fixing by cartel in Germany in which the firm was exposed).

Corruption scenarios:

Brokerage contract with intermediaries: the company is familiar with brokerage contracts written between an agent/intermediary and the company. The broker receives a commission under the brokerage contract. Since he receives his share only in case of successful conclusion of a contract, he may pay bribes although this is usually and routinely excluded in the brokerage agreement. However, if the broker had to pay someone else to get a deal, the company might not be aware of this. The company has encountered no particular problems of corruption with these brokerage contracts.

Extortion by foreign public officials: A company could have met some possible corruption risks in the international business environment. It could have happened that a foreign public official asked for a bribe. One of the risks is that the company might have paid and run the risk of being extorted. As the foreign public official is usually "untouchable" and cannot be prosecuted in some countries, not only he took the bribe but also he asked to be paid a second time to avoid the risk of being reported. The company then has to pay to keep the foreign public official silent. This seems to have happened in some cases in Eastern Europe countries but since the gathering of evidence is a difficult process and there was usually no proof to back up such cases, it would not be cautious to advance such scenario in scientific research.

Bribery during the bidding process: It happened that a person (either public official or private party) who has the power to decide which company to choose for a specific contract asked for bribes. This can happen even in Switzerland. To get a deal, sometimes the manager or employee accepts to pay. Once he crossed the line, the tendency is that he will accept to pay again. The pressure of getting a deal/market has its part of responsibility in this issue.

Case 14

***Areas of risk*:** Russia and Nigeria are the most difficult countries to deal with. So far, LA does not have any knowledge of cases in which ABB had lost a deal because they had refused to pay bribes but he thinks that it is also because ABB operates in markets where there are no other competitors (in Africa mainly).

***Incidents of corruption experienced by the US branch*:** A few years ago, the US firm has been implicated in a conspiracy to pay bribes to Mexican government officials to secure $81 million of contracts from the Mexican state electricity monopoly). Since then the company could not afford to make any further mistakes or errors in business activities in terms of briberies and that is also the reason the firm has put a lot of efforts in a full program of anti-corruption and bribery. In 2005 the firm pled guilty to one count of conspiracy to violate the anti-bribery provisions of the US Foreign Corrupt Practices and paid a fine of 58.3 million USD to the Department of Justice (DOJ) and the US Securities and Exchange Commission. Since 2010 the company has regained the "reputation" and the DOJ recognized its "extraordinary cooperation". The disclosure program to the US authority was a long process. The company has important exposure and high risk of corruption as the company is dealing with countries with high index of corruption. Furthermore, it provides energy so a significant number of customers are owned by governments.

Compliance and anti-corruption programs:

The firm has developed a full program of compliance and codes of conduct in matters of anti-corruption policy since 2008. The firm only allows business that is conducted with the highest standards of integrity and does not tolerate any unethical behaviour.
Each employee has to sign a form yearly declaring that he/she is fully aware of the anti-bribery policy. Briberies are prohibited in all forms, whether direct or indirect, no matter what the amount. Paying facilitation payments is absolutely prohibited. The company employs a zero-tolerance policy against any involvement in bribery and corruption abroad.
Furthermore, the firm has very strict policies on gifts, entertainment and expenses, contributions in charity. Very clear directive on gifts either receiving or giving is written. In order to determine whether gifts, entertainment or expenses are appropriate, each employee should consider the following criteria:
Made for the right reason: the gift and entertainment should be given as an act of appreciation, friendship or hospitality; **No obligation:** the gift, entertainment or reimbursement of expense does not place the recipient under any obligation; **Made openly:** if made secretly then the purpose will be suspect; **No misuse of expenses:** payment or reimbursement of expenses shall not be misused to hide inappropriate gifts or entertainment; **Appropriate:** the nature of the gift, entertainment or expense is appropriate and is in line with both general business practice as well as local cultural and ethical standards; **Legality:** it conforms to the laws of the country where it is made and any other applicable laws; **Conforms to the recipient's rules:** the gift, entertainment or reimbursement of expenses meets the rules or code of conduct of the company or organization where the receiving person is employed; and **Infrequent:** such giving or receiving is not a regular happening between the giver and the recipient.
A reporting line and a whistleblowing hotline and phone 24/7 have been implemented as well as a very well-developed training process including face to face training every two years for employees and an e-learning program. The firm checks thoroughly the third parties before hiring them. Special approval and due diligence are needed for intermediaries of high-risk countries before any business relationship could start. The commission of the intermediaries must be reasonable. In high-risk countries, the firm also checks the partners and customers. Furthermore, additional controls have been developed for public officials. Employees of government owned or controlled companies are subject to even more controls.
Since 2005 the Legal and Compliance of ABB has been working on an **Integrity program**:

- ✓ Mainly all the business leaders are held responsible for their markets and clients. The zero-tolerance to corruption is the way to do business.
- ✓ It is not only about “looking good” but also “being good”.
- ✓ The Integrity program consists of a value-based approach (is this business acceptable? Can we live with this deal? How do we feel about this contract?), more than a rules-based approach (“You are not allowed to do this”).
- ✓ No more offering of lavished entertainments. The amount for gift is fixed at CHF 250. Prior to each gift, the manager has to log in a database and describes the nature of the gift as well as the destination and why.
- ✓ Visible trainings on Intranet (standby screens are programmed with Codes of Conduct highlights). Additional face-to face training is required for risk and manager-level employees together with face-to-face training for all staff on the Code of Conduct and Anti-bribery.

- ✓ Third-parties are checked thoroughly through a due diligence and approval process
- ✓ No facilitation payments are accepted.
- ✓ There is an ombudsperson program (which does not seem to work well, according to the interviewee).
- ✓ There is a Business Ethics Hotline which works very well in the US.
- ✓ 17 ex-law enforcement officers work as investigators for ABB.
- ✓ The Legal and Compliance Department employs 150 persons full-time worldwide.
- ✓ Severe disciplinary measures are applied if an employee commits a bribe (immediate resign).

How to fight against corruption:

Since the adoption of the Integrity program, the interviewee affirms that there are no more cases of bribery. The company never pays a bribe again after the fine in 2005. But according to the interviewee, the firm employs 140000 employees and is almost like a small city so there will always be some "rotten apple". However, the efforts of the firm in terms of anti-corruption are tremendous and it works. It is believed that big firms can afford to resist more than medium-sized and small firms and unfortunately, some regions in the world should be left out as no business could be done without paying.

Case 15

Activities of the company interviewed: trading company of steel and steel products, trading of nickel, minerals and metals. The company is active in Eastern European countries (Russia), Asia (India, China) and Africa (Congo mainly) and has offices in the US. In the office of Ticino, there are 50 employees. The annual turnover of the firm is half a billion (considered as a small company in the field of metal trading).

Compliance and anti-corruption programs:

The company has no compliance program. The interviewee is also the owner of the firm. He decides and has his own guidelines of how and when to get into business with certain countries.

Gifts and payments are considered as common in daily business.

The company uses local private agents/intermediaries in order to get into business. Local private agents work on commission and they deal with public officials for the company. The company avoids having anything to do with governments or public authorities, all of the transactions and deals are operated through local agents.

How the business works:

There are no "most serious" incidents to be mentioned as all transactions with Africa (Congo) and India are dealt with payments, there are no exceptions.

In India, the company works with local intermediaries. In the past, they had to close a company specialized in rails and trains. Businesses related to trains are owned by the Indian government so there is no other way to do business without paying. In India, it is simply not possible to do business without extra payments. What the company does is that they give their local agents higher commissions, for instance 4% of the deal instead of the usual 1% so the local agents can pay other people involved (public official mostly). Once, for one operation the local agent had to pay seven different public officials during the process. Officially the amount paid is considered as expenses or

commissions and salaries of the local agents. The largest amount paid was once sum up more than 400'000 CHF for a 10 million deal.
In Congo, although the system and country are less organized, the company still has to operate the same way. Local agents are hired and paid with a higher commission that they can use to pay other authorities.
In Russia, deals for nickel are clean. Some private parties still ask for extra payment when it comes to deals for steel. In China as well, there are much less corruption than before. The government in China has made a lot of efforts to fight against corruption. This is, however, not the case in India where the government has no will to curb or prevent corruption.
How to fight against corruption:
According to the interviewee, there have been good efforts in regulations and anti-corruption law from all the organizations. Switzerland at some point had even overdone in this fight. But unlike big firms such as Nestlé, Novartis, it is strongly believed that small-medium sized firms cannot afford to not pay and to lose business. Even in the US, with a very repressive compliance system, firms still pay bribes to get business.

DISCUSSION

On victimization of bribe requests/corruption

The victimization rate of bribe requests for Swiss participant firms of the survey is 31%, it means that between 2013 and 2015, 31% of the responding firms have been requested by a public official to pay a bribe while doing business abroad, whether they have had contacts with public officials or not. Almost half of the responding firms had at least one contact with public officials and, among those almost 70% were requested to pay bribes. With regards to bribes requested by a private third-party, 11% of the firms participating in the survey have been asked to pay bribes, 40% of them have had contacts with some private parties and among those firms, almost 30% were asked for bribes.
The study reveals that not only firms in contact with public officials or private third-parties are more likely to be asked for bribes, but also shows that multi-victimization is common: more than half of the firms being requested for payment have been asked more than once. The likelihood of repetitive bribe requests is higher with a previous victimization.

On risk factors

Of all risk factors, contacts with public officials are one of the riskiest factors. Considering the risk factors of the firm facing this phenomenon, we have looked at several variables related to the firm's characteristics and checked whether the types of firms could influence the likelihood of being exposed to corruption abroad. At the bivariate analysis, the findings reveal that larger Swiss firms are more vulnerable to bribe requests from both public officials and private third-parties in international business activities. Although firms specializing in manufacturing, wholesale activities seem to have been experienced more incidents of bribe requests, this assertion is not significant statistically speaking. Furthermore, the study finds that the more subsidiary the firm owns abraod, the more it is

exposed to bribe requests since an expanded presence abroad could be a risk factor. When a firm operates in an area perceived as moderate to high level of obstacles for business activities, this also constitutes a significant factor of risk for corruption. In particular, when corruption is perceived as the main obstacle for the smooth running of business abroad, usually this is an indicator of high risk for bribes and corruption in that particular country. Another observation made is the positive association between the presence of anti-corruption programs and the victimization of bribe requests. Firms with anti-corruption measures seem to have experienced a higher level of requests for extra-payments. This finding should however be interpreted with caution and not as the inefficiency of having anti-corruption measures in general. It could be that firms victims of bribe requests have decided to develop anti-corruption strategies after some bribe incidents to prevent potential new ones and without these strategies or measures the victimization rate of corruption could be even higher. Anti-corruption measures of prevention related to staff seems to have more effects on the likelihood of being requested for extra-payments since it is revealed in this study that firms with anti-corruption staff training, compliance monitoring bodies as well as codes of conducts are less exposed to bribe requests. Other systems of due diligence control are less likely to have affected the rate of bribe incidents. On the other hand, having a reporting line for corruption incidents seems to protect the firm from bribe requests.
Risk factors detected when it comes to distinguish bribe requests from public officials and the ones of private third-parties indicate some slight differences. Apparently, the risk of bribe requests depends on the region of the most frequent and regular business activity for the firm. It is true that some regions and countries seem to expose firms to higher risk of corruption than others. Moreover, bribe requests from private parties are more likely to aim larger firms with an important annual turnover (more than ten millions) and firms with a low percentage of revenue abroad.
At the multivariate level, the findings show that the risks of experiencing bribe requests also depend on the type of operations and activities in which the firm engage. For instance, during a bidding process, or during safety/health inspections by public officials, the likelihood for firms to be asked for extra-payments is higher.

On anti-corruption measures

In this study, it is observed that Swiss firms are not very keen on investments of anti-corruption programs. Only 39% of the firm participants declared having invested in anti-corruption in the past three years (2013-2015). Specific codes of conduct are the most adopted by firms (80%) as well as auditing system of control within specific regions and sectors and enhanced legal measures for specific contracts. In Switzerland, whistleblowing and the reporting line are not yet popular as well as the use of external corporate intelligence specialists in order to prevent and solve cases of corruption. Swiss firms interviewed think that corruption is not an issue. This probably explains why few firms (12%) run a risk assessment systematically before starting business in a foreign country.

When we analyze the decision of investments in anti-corruption measures, we take into consideration variables related to specific characteristics of the firm. The results show that some characteristics did influence the decision of the firm for implementing anti-corruption preventive measures or not. Firms with more than ten subsidiaries and with capital investments abroad are more likely to resort to anti-

corruption programs. Likewise, firm victims of bribe requests as well as those selling local or imported products abroad also invest more in anti-corruption measures. When corruption is perceived as obstacle impeding the smooth running of the firm's business, investments in anti-corruption seem to become a priority for the firm.

On perception of corruption

The perception of corruption as obstacle for business abroad varies according to various factors identified such as the region where the firm has the most frequent and regular business activity, the percentage annual revenue earned in the foreign country of the most frequent and regular business, contacts with public officials or the presence of anti-corruption measures in the firm.

The perception of corruption is also influenced by the experience of being asked for bribes. Firms having been requested for extra-payment tend to view corruption as major obstacle to their business abroad.

In this study, findings show that difficulties in some regions and contacts with public officials that turn out to be bribe requests are elements that influence the most the perception of corruption.

Furthermore, small firms with less than ten employees perceive more corruption as an obstacle as compared to larger firms better equipped with anti-corruption preventive programs.

On how to fight corruption

No solution to any problem could just be brought up without a previous and serious assessment of the situation that might harbor and perpetuate the problem itself.

The Swiss International Corruption Survey does not pretend to offer the solutions for eradicating corruption. The survey, however, reveals the continued risks of corruption for the Swiss firms. In this aspect, its contribution should be seen as an objective examination on how the Swiss firms are exposed to corrupt practices in some countries in the world, and on how they comply with Western standards as defined by numerous international law and regulations. Indeed, the strong presence of Swiss firms on the world economy and international markets do not alleviate this dilemma.

The Swiss International Corruption Survey narrates the experiences of Swiss firms while doing business in foreign countries and brings to light one clear observation: the current approach in the fight against corruption does not eradicate the problem.

Two decades of new regulations, guidelines and compliance programs that were regularly debated within countless seminars and workshops have obviously not succeeded in eradicating corruption in international trade. At this point, practitioners, policymakers might have to realize and admit that implementations of new laws and regulations are not necessarily the answer and solution to the problem of corruption. Outlawing a situation without due consideration to other factors is an

incomplete approach. Our survey points out some factors that would have played a significant role in bribe payments. For instance, how do small firms position in such demands of bribe? Could they survive and afford losing a contract in the same way as big firms? This is an example of one aspect that anti-corruption law had not considered as, before the law, all firms are equal and the size of the business has not been taken into consideration. A further result suggests that payments are often made in order to speed up operations, or rather to avoid inacceptable delays or bureaucratic hassles.

One conclusion seems to be that looking for the solution only at the level of companies that pay bribes, either as individuals or as companies, is not the answer to the problem. For some reasons, it seems that the law has completely left out the parties that ask for bribes and request the payment. Public officials abroad or a local intermediary who ask for bribes should be prosecuted as such in their countries or before an international court if they could not be prosecuted in their countries. The sanctions should be given for both bribers and the recipients of bribery, with no exceptions. It is more than just equity that calls for such an approach – it's finally the efficiency of anti-corruption programs that depend on such a rule.

Some countries and some regions in the world have a long tradition of corruption. There should be an elaboration of a "blacklist" of countries in which companies should avoid to do business because their governments do not comply with requirements to prosecute corrupt officials.

Another less radical way to be envisaged is to allow the Western companies to pay a fixed amount of official fees when starting business or dealing with public authorities in some countries. The payment should not be seen as a bribe but as an official anticipation of the smooth running for the business operations. This official fee is known by the authorities and companies involved in the transactions. It should be declared officially so that the transparency is guaranteed. There should be an equal treatment and the amount to pay is equal for all types of firms, independently of their size and their sector of activity.

To conclude, fighting corruption efforts should be deployed not only in Western countries but also in countries where corrupt practices are common. An excessive deployment of law and regulations from the Western side without effective measurements of its efficiency is a practice that needs seriously to be reviewed to better improve the current situation.

ANNEX 1 – Methodology for prevalence, incidence and reporting rates

Contact rate

Three years contact rate represents the percentage of businesses who had at least one contact with a public official or private entity in order to perform specific business procedures in a foreign country, at least once between 2012 and 2014 ($C_{12\text{-}14}$), out of the total number of businesses answering the survey (respondents, R).

$$\frac{C_{12\text{-}14}}{R} * 100$$

Bribery prevalence rates

Three years bribery prevalence rate on respondents represents the percentage of businesses expected/requested to provide some gift, a favor or extra payment to a public official or to a private entity in a foreign country, at least once between 2012 and 2014 ($B_{12\text{-}14}$), out of the total number of businesses answering the survey (respondents, R).

Three years bribery prevalence rate on respondents = $\frac{B_{12\text{-}14}}{R} * 100$

Three years bribery prevalence rate on contacts represents the percentage of businesses expected/requested to provide some gift, a favor or extra payment to a public official or to a private entity in a foreign country, at least once between 2012 and 2014 ($BC_{12\text{-}14}$), out of those businesses who had at least one contact with a public official or a private entity in a foreign country between 2012 and 2014 ($C_{12\text{-}14}$).

Three years bribery prevalence rate on contacts = $\frac{B_{12\text{-}14}}{C_{12\text{-}14}} * 100$

Three years bribery prevalence rate by business procedure *i* represents the percentage of businesses requested to pay a bribe at least once between 2012 and 2014 in order to perform a specific business operation *i* ($B_{i12\text{-}14}$) in foreign country, out of the total number of businesses who had a contact with a public official or a private entity to perform that specific business operation *i* (C_i) in a foreign country.

Three years bribery prevalence rate by business procedure = $\frac{B_{i12\text{-}14}}{C_{i\ 12\text{-}14}} * 100$

Three years bribery prevalence rate by foreign region where the firm has the most frequent and regular business activity *z* represents the percentage of businesses requested to pay a bribe at least once between 2012 and 2014 in a specific foreign region *z* ($B_{z12\text{-}14}$), out of the total number of respondent businesses who had activities in that specific foreign region *z* (R_z).

Three years bribery prevalence rate by foreign region of activity = $\frac{B_{z12\text{-}14}}{R_z} * 100$

Three years bribery prevalence rate by type of public official *j* represents the percentage of businesses requested to pay a bribe by a specific public official *j* at least once between 2012 and 2014 ($B_{j12\text{-}14}$) in a foreign country, out of the total number of businesses who had at least one contact with a specific public official between 2012 and 2014 (C_j) in a foreign country.

$$\textbf{Three years bribery prevalence rate by public official} = \frac{B_{j12\text{-}14}}{C_{j12\text{-}14}} * 100$$

Bribery incidence rate

The crime incidence rate usually represents the number of crime incidents occurred on average on the total number of respondents to the survey. However, with regard to the data of this survey, it was not possible to calculate the exact number of crimes per respondent, because the variable "How many times a gift/favor or extra-payment was expected/required while doing business abroad" is not cardinal but categorical (including four categories: Once, Twice, 3-5 times, 6-10 times, 11-20 times and more than 20 times).
Therefore, the **incidence rate of bribery** is represented by the ratio between the number of businesses requested to pay a bribe only "once" or "more than once" between 2012 and 2014 (frequency of bribery $FB_{12\text{-}14}$) and the total number of companies which had at least one contact with a public official or private entity between 2012 and 2014 ($C_{12\text{-}14}$).

$$\textbf{Three years bribery incidence rate} = \frac{FB_{12\text{-}14}}{C_{12\text{-}14}} * 100$$

Bribery concentration rate

The concentration of victimization is represented by the ratio between the number of businesses requested to pay a bribe only "once" or "more than once" and the total number of victims. This measure also represents the level of multi-victimization for a given type of crime

The crime concentration rate usually represents the number of crime incidents occurred on average on the total number of victims. However, with regard to the data of this survey, it was not possible to calculate the exact number of crimes per victim, because the variable "How many times a gift/favor or extra-payment was expected/required while doing business abroad" is not cardinal but categorical (including four categories: Once, Twice, 3-5 times, 6-10 times, 11-20 times and more than 20 times).
Therefore, the **concentration rate of bribery** is represented by the ratio between the number of businesses requested to pay a bribe only "once" or "more than once" between 2012 and 2014 (frequency of bribery $FB_{12\text{-}14}$) and the total number of companies requested to pay a bribe at least once between 2012 and 2014 .

$$\textbf{Three years bribery concentration rate} = \frac{FC_{12\text{-}14}}{B_{12\text{-}14}} * 100$$

Concentration rates represent also the **multi-victimization** level, as far as it indicates the percentage of "victims" of bribery which experienced a bribery request more than once in a given period of time.

ANNEX 2 – Statistical coefficients

This annex lists in alphabetical order the statistical coefficients used in this report, divided according to the type of analysis, and briefly describes them.

Bivariate analysis (cross-tabulations)

Chi-square of Pearson and Sig. (as test of statistical association between two different variables in the cross-tabulations): Non-parametric statistical test for testing the statistical association between the categories of two or more categorical variables.
Cramer V and Sig.: A 'chi-square based' measure of association, scoring between 0 and +1, with 0 indicating no association between the rows and columns variables while values close to 1 indicating a high association between the two variables.
Odds ratio and C.I.: allow identifying the level of association between the modalities of two categorical variables.
Phi coefficient and Sig.: A 'chi-square based' measure of association; scoring between -1 and +1, where -1 and +1 indicate, respectively, a positive or negative perfect association between the two variables, while 0 indicates statistical independence between the two variables.

Multivariate analysis (binary logistic regression)

B-coefficient and S.E.: the b-coefficient indicates the amount of increase (or decrease) in the predicted log odds of the dependent variable that would be predicted by a 1 unit increase (or decrease) in the independent variable, holding all other predictors constant. The standard error is a measure of how stable the estimated value of the b-coefficient is. It is used for testing whether the b-coefficient is significantly different from 0. A low standard error related to the b-coefficient indicates that the coefficient has been fairly precise estimated. Moreover, the standard error for the b-coefficient detects multicollinearity in the logistic regression. A standard error larger than 2.0 indicates numerical problems, such as multicollinearity among the independent variables and zero cells for a dummy-coded independent variable because all of the subjects have the same value for the variable.
Chi-square of Pearson and Sig. (in the binary logistic regression): in the binary logistic regression the value of the Chi-square coefficient is the difference between the log-likelihood at block 0 (the null model including only the constant) and the log-likelihood at block 1 (full model). It is a measure of how well the independent variables affect the outcome or dependent variable. If the P-value for the overall model fit statistic is less than the conventional level of 0.05, then there is evidence that at least one of the independent variables contributes to the prediction of the outcome[62].

[62] Meyer LS, Gamst G and Guarino A.J., 2006, *Applied multivariate research: design and interpretation*, Sage Publications; London

Cos & Snell's R^2_{CS} and Nagelkerke's R^2_N: they provide a gauge of the substantive significance of the model of binary logistic regression they are considered "pseudo-R" or "Multiple R-squared Analogs" statistics as they are designed to indicate something similar to what R-squared indicates in ordinary least-squares regression: the proportion of variance accounted for in the dependent variable based on the predictive power of the independent variables in the model. However, they should not be interpreted exactly as R-squared in OLS (ordinary least-squares) regression. The Nagelkerke R-square is an adjustment of the Cox & Snell, for which the maximum value it can attain is equal to 1.0. The maximum value for the Cox & Snell is 0.75[63].

Exp b: is an indicator of the change in odds of the dependent variable resulting from a unit change in the predictor. It gives the relative amount by which the odds of the outcome increase (O.R. greater than 1) or decrease (O.R. less than 1) when the value of the independent variable is increased by 1 units[64].

Log-Likelihood (in the binary logistic regression): is based on summing the probabilities associated with the predicted and actual outcomes[65]. The value of the -2 Log-Likelihood represents the overall measure of how well the model fits. A model that fits the data well will have a small likelihood value. A perfect model would have a likelihood value of zero[66]. If the selected independent variables actually have predictive value, the -2 Log-Likelihood should then drop in comparison to the one related to the null model including only the constant. The null model -2 Log Likelihood is given by -2 * ln(L0) where L0 is the likelihood of obtaining the observations if the independent variables had no effect on the outcome. The full model -2 Log Likelihood is given by -2 * ln(L) where L is the likelihood of obtaining the observations with all independent variables incorporated in the model.

Wald statistics: The Wald statistic and associated probabilities provide an index of the significance of each predictor in the equation. It is a test of the null hypothesis that the B coefficient is equal to 0. If its significance values is less than .05 the null hypothesis can be rejected because the variable does make a significant contribution to the explanation of the dependent variable[67].

[63] Cohen, J., Cohen, P, West, S.G., Aiken, L.S., 2003, *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences (3rd edition),* L. Erlbaum Associates, pp. 502-504

[64] Burns, R., Burns, R., 2008, *Business research methods and statistics using SPSS*, Sage Publication Ltd, Chapter 24

[65] Tabachnick, B.G. & Fidell, L.S., 2001, *Using multivariate statistics* (4th edition). Boston: Allyn & Bacon

[66] Meyer LS, Gamst G and Guarino A.J., 2006, *Applied multivariate research: design and interpretation*, Sage Publications; London

[67] Burns, R., Burns, R., 2008, *Business research methods and statistics using SPSS*, Sage Publication Ltd, Chapter 24

ANNEX 3 – Binary logistic regression

Different binary logistic regressions are performed in this report to analyze the relationship between specific dummy-coded dependent variables:

- ✓ **bribery prevalence rate** (whether a company has been requested to pay a bribe, either by both public officials or private entities, during a specific business operation, in the last three years; 1=Yes, 0=No),
- ✓ **presence of specific anti-corruption measures** within the businesses (whether a company has invested in at least one anti-corruption measure in the last three years; 1=Yes, 0=No),
- ✓ **perception of obstacles in doing business abroad** (whether a company perceive a high or moderate level of obstacle in doing business abroad; 1=Yes, 0=No),
- ✓ **perception of corruption as obstacle in doing business abroad** (whether a company perceive corruption as obstacle in doing business abroad; 1=Yes, 0=No).

and specific dummy-coded independent variables related to the characteristics of the business and its business procedures:

- ✓ **Size of the business**. Indicates the number of both full-time and part-time employees working within the business at the time of the interview and presents seven categories:
  1. 1-2 employees
  2. 3-5 employees
  3. 6-9 employees
  4. 10-49 employees
  5. 50-250 employees
  6. More than 250 employees
  7. Other
- ✓ **Three years annual turnover**. Indicates the average annual turnover of the companies in the past three years and presents six categories:
  1. Up to CHF 500'000
  2. More than CHF 500'000 and up to 1 million
  3. More than CHF 1 million and up to 5 million
  4. More than CHF 5 million and up to 10 million
  5. More than CHF 10 million and up to 50 million
  6. More than CHF 50 million
- ✓ **Number of subsidiaries**. Indicates the number of subsidiaries (bot in Switzerland and abroad) of the company and it has five categories:
  1. None
  2. One subsidiary
  3. Two to five subsidiaries
  4. Six to ten subsidiaries
  5. More than ten subsidiaries
- ✓ **Region of business**. Indicates the continent where the Swiss firms have the most frequent and regular business activity:
  1. Africa

2. Americas
3. Asia
4. Europe
5. Oceania

- ✓ **Type of activity abroad**. Indicates the type of business activity that the Swiss firms perform in the country where they have the most frequent and regular business activity:
  1 Local manufacturing of products
  2. Construction
  3. Sale to other countries of products locally manufactured
  4. Sale to other countries of imported products
  5. Local sale of products locally manufactured
  6. Local sale of imported products
  7. Providers of services to locals/foreigners/expatriates
  8. Capital investments in local companies (minority share)
  9. Capital investments in local companies (majority share)
  10. Other
- ✓ **Percentage annual revenues abroad**. Indicates the percentage of the Swiss firms' annual revenues in the country where they have the most frequent and regular business activity:
  1. Up to 10%
  2. From 10% to 25%
  3. From 25% to 50%
  4. More than 50%
  5. Other
- ✓ **Obstacles doing business abroad**. Indicates the level of obstacles perceived by Swiss firms in the country where they have the most frequent and regular business activity:
  1. High
  2. Moderate
  3. Low
- ✓ **Anti-corruption measures**. Indicates the type/s of anti-corruption measure/s where Swiss firms have been investing in the past three years:
  1. Legal measures (e.g. specific contracts with partners abroad, etc.)
  2. Specific monitoring bodies within your business (e.g. compliance officers, risk control officers, reporting lines)
  3. Code of conduct
  4. Practical systems of control (e.g. auditing systems, periodical controls in specific countries/sectors, etc.)
  5. Specific anti-corruption training to the entire personnel working within your business
  6. Specific anti-corruption training to those employees who might deal with corruption because of their role
  7. Specific anti-corruption training to the personnel working in the local offices of the foreign countries where your firm operates
  8. Systems of risk analysis and due diligence

9. Specific Internet tools and databases created internally or provided by external services providers
10. External corporate intelligence specialists
11. Anonymous reporting phone line
12. Other
13. All of the above

- ✓ **Contact with public officials**. Indicates whether Swiss firms have had at least one contact with a public official in the past three years to perform a specific business operation:
  1. Yes
  2. No
- ✓ **Contact with private entities**. Indicates whether Swiss firms have had at least one contact with a private entity in the past three years to perform a specific business operation:
  1. Yes
  2. No

The above-mentioned independent variables have been selected on the basis of their statistical consistency and association with the dependent variable and also in order to avoid collinearity problems.

The binary logistic regression method combines the independent variables to estimate the probability that a specific event will happens (in this case the bribe request, the perception of obstacles in doing business abroad, the use of specific anti-corruption measures).
The method used in this report for running the logistic regression is the stepwise method[68]. This method is here preferred to other methods given the exploratory value of this study and because it is useful when no, or few, previous research has been conducted on which predictors to base hypotheses for testing[69]. Following this method the independent variables are selected and included in the model according to the maximum contribution to the increase of the statistically significance of the regression model.
When necessary, outliers identified through the analysis of Cook's distance, standardized residuals and leverage value[70], have been taken out from the analysis or included in the regression model to take their effects under control and obtain more significant analysis.
More specific information on the coefficients analyzed for interpreting the results of the binary logistic regressions are reported in Annex 2 above and in the different sections of the report related to *Multivariate analysis*.
It has to be highlighted that, even if the majority of the regression models analyzed in this report presents a limited predictive power (measured through the Log-Likelihood statistics, the Cox & Snell R^2 and the Nagelkerke R^2), this problem is recurrent when analyzing sociological data, in general and data collected through questionnaires, in particular. It suggests that other independent variables would be needed to better predict and explain the phenomena under investigation. However, the

[68] Forward conditional in SPSS

[69] Field, A., 2005, Discovering statistics using SPSS, SAGE Publications

[70] *Ibidem*

results of the analyzed regression models always indicated statistical significant improvements in the prediction of the dependent variable (measured through the analysis of the model Chi-square statistics, the Log-Likelihood statistics and the cases' classification table) in comparison to the models including only the constant[71]. Given that, the contributions of the predictors to the explanation of the dependent variables have been analyzed and commented. This allows obtaining a rough idea about the influences of specific independent variables on bribery levels, on the perception of obstacles in doing business abroad and on the anti-corruption measures adopted by Swiss companies. It is, however, suggested to interpret with caution the values of the predictors' coefficients because they could be influenced by latent variables not included in the models under consideration.

[71] Regression models presenting a very low predictive power (Nagelkerke R^2 lower than 0.100) were not included in the report