Commercial Military Actors Database (CMAD)

Codebook

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1.) Commercial Military Actors (CMA)

Financial compensation: There is broad agreement in the literature that receiving a financial compensation is a *necessary condition* for being categorized as a CMA (Scahill, 2007, xix, Shearer, 1998, Carmola, 2010, 12-16, Dunigan, 2011, 14-19). However, it is not a sufficient element. Other military actors receive remuneration as well. Soldiers receive a salary, and even volunteers may receive some form of financial support. More fine-grained arguments seek to differentiate based on pay-differentials. James Pattison considers a predominant intent for financial gain to be necessary (Pattison, 2014). 'Predominance' provides a criterion to differentiate between CMAs and volunteers, as the latter might rather be driven by ideological reasons. However, it is extremely difficult to determine the individual motivations of CMAs, their preference order, and potential shifts within such an order over time. Another approach is that CMAs are deemed to be able to extract higher fees than soldiers and militias for military services (Musah and Fayemi, 2000, 5, Scahill, 2007, xix). However, it is unclear what higher pay exactly means. Pay differentials exist in the private as well as in the public sector, and depending on task, qualification and nationality CMAs receive higher or lower pay (Chisholm, 2015, 96). Lastly, a differentiating criterion between soldiers and CMAs might be that the latter only get paid when providing a service, while the former receive pay regardless of whether they are deployed or not (Lynch and Walsh, 2000, 142). Still, this does not amount to a sufficient criterion as, at times, soldiers in weak states do not receive payment. Likewise, volunteers would also not receive compensation beyond their time of service.[1] In sum, financial compensation is a necessary but not a sufficient criterion for CMAs.

Military/Security service provisions: The literature on the market for force has varied at times in scope. Some have differentiated between security actors, providing armed protection as well as unarmed watch guard services, while other have focused rather on military service provision (Kinsey, 2006, Cotton et al., 2010). However, the boundaries between the two

[1] If volunteers receiving pay they are treated as a CMA in this dataset.

categories are contentious. For instance, many industry representatives have worked hard to disassociate their 'defensive security' services in conflict zones from military services and 'offensive military' tasks (Petersohn, 2014b, Percy, 2007, 227-232, Petersohn, 2021). However, when CMAs operate in a conflict zone and one seeks to categorize their services as 'defensive' security or 'offensive' military categories, these terms disguise more than they clarify. Independent as to whether CMAs provide security or offensive services, in a conflict zone these amount to military services. The CMA employs military tactics, training and equipment to provide their service, and also works frequently in direct support of military personnel. Moreover, the term 'military services' is not limited to armed and potentially armed services, but also comprises unarmed services in support of a military operation (Singer, 2003, 91, Petersohn, 2008). In short, the category of CMA is not limited to a certain service category. CMAs provide all kinds of services, ranging from combat functions, combat support function, such as intelligence, communication, logistics, training, or maintenance, as well as protective services, security consultancy or training (Petersohn, 2017).

Integration into armed forces: Another criterion often discussed is the relationship between the state, and the CMA (Percy, 2007, 57-58). Some authors do not put much emphasis on whether an actor is integrated into the state's armed forces. To be specific, foreign actors (not a national of the party to the conflict) participating in hostilities are considered mercenaries, although integrated in the armed forces, they are categorized as a CMA, specifically a mercenary (Thomson, 1994, 27, Dunigan, 2011, 150). However, most of the literature deems the level of integration into regular armed forces as crucial to differentiate between CMAs and soldiers. The term CMA is therefore limited to actors who operate independent or outside the command structure of the armed forces (Kinsey, 2006, 18-21, Singer, 2003, 43). In other words, a defining criterion of CMAs is that they 'lie outside legitimate control', i.e. they are not integrated into the organizational structure of the state (Percy, 2007, 49), they are not staffed by active military personnel, and they are outside the chain of command. However, to apply this criterion mechanically could be misleading. At times, there is a grey area. CMAs have been given honorable ranks in order to be formally integrated into the armed forces (Singer, 2003, 194). Two criteria are useful to differentiate between structural and formal incorporation. CMAs are not structurally integrated as they are not 'regular members of the armed forces of a state' (Steinhoff, 2008, 20), and they are not integrated 'for the long term' and 'only bound by contractual ties of a limited' employment (Singer, 2003, 43). However, they can be, at times, given ranks which makes them formally part of the armed forces. Although the non-integration is necessary for being categorized as a CMA it is not sufficient to identify CMAs; as non-integration is not unique to these private actors. Other violent non-state actors, e.g. rebel forces and militias, are equally outside the armed forces structure, yet they are not CMAs.

Foreignness or corporate structure: Another criterion widely discussed in the literature to identify CMAs is their foreignness (Mockler, 1985, Chesterman and Lehnardt, 2007). The criterion is criticized for being historically incorrect as foreign soldiers were common before the 19th century and their current illegitimacy is tied to the modern state system (Percy, 2007, 52, Ettinger, 2014). However, the historical dimension can be neglected here as the dataset will not collect data before 1980. However, conceptualizations of foreignness vary from an actor not having a stake in the conflict, not being employed by their home state, or the most common understanding, not being a national to a party to the conflict (Ettinger, 2014, 177-179, Singer, 2003, 43, Kinsey, 2006, 19). During the 1960/70s when the sector consisted mainly of ad-hoc groups, the foreignness criterion was helpful to differentiate individual CMAs from domestic actors, such as militias and warlords. However, with the development

and corporatization of the industry, and many states turning to foreign and domestic companies to their military operations, the criterion does not capture the complexity of the phenomenon (Singer, 2003, 45, Krahmann, 2010, chapter 7, Spearin, 2014). The difference is now less whether a CMA is foreign, but rather whether the actor is corporate (Chesterman and Lehnardt, 2007, 1, Krahmann, 2010, 6, Akcinaroglu and Radziszewski, 2013, 796, Branovic, 2011, Singer, 2003, 40, Petersohn, 2014a). However, although less relevant today, non-corporate CMAs still exist alongside corporate CMAs. To account for the entirety of the phenomenon, the dataset will employ both criteria – foreignness and corporate structure. To be categorized as a CMA an actor necessarily needs to be either organized in a corporate manner, or being an individual/ group not being national to a party of the conflict (foreign). Hence, any actor selling military services, domestic or foreign, organized in a corporate manner is considered a CMA. If a corporate structure is absent, it is necessary for an individual or group selling military services to be foreign to qualify as a CMA.

CMA conceptualization: Neither of the elements discussed above is sufficient in identifying CMAs. However, a combination of the above discussed criteria makes for a precise conceptualization with a high degree of discriminating power. In short, a CMA is not permanently integrated into the armed forces, is an individual, group of foreigners or a corporation delivering military services to a client for financial compensation (see table 1).

Table 1: Conceptualization of CMA

	Criterion
CMA	1. Financial compensation, 2. **AND** provision of military and security related services, 3. **AND** not permanently integrated into the armed forces, 4. **AND** individual/ group, not national to the party of the conflict, **OR** a corporate actor.

2.) Armed conflict/ Civil Wars 1980-2016

Datasets on civil wars/ armed conflicts between 1946 and 2016 are already available. The project will draw on the datasets developed by the Uppsala Conflict Data Program (UCDP) & Centre for the Study of Civil Wars at International Peace Research Institute, Oslo (PRIO). UCDP/ PRIO offers a wide range of different datasets. The dataset on armed conflict will be the UCDP/ PRIO armed conflict database: 1946-2015. While many other datasets employ the high civil war threshold of 1000 battle-related deaths, UCDP has a lower threshold. UCDP defines conflict as: "a contested incompatibility that concerns government and/or territory where the use of armed force between two parties, of which at least one is the government of a state, results in at least 25 battle-related deaths."[2] The lower threshold is beneficial for the project at hand as it avoids truncating conflict severity at the lower end, and includes more comprehensively cases of violent conflict.

The CMA dataset (CMAD) includes all armed conflicts from 1980 to 2016 across all world regions, with the exception of Europe. The latter was not included due to workload considerations and as Europe had the fewest number of civil wars it was the easiest to remove. Despite the best efforts there was very little information on Indonesia available. The

[2] Gleditsch et. al. (2016): 'UCDP/PRIO Armed Conflict Dataset Codebook version 4.0', Department of Peace and Conflict Research, Uppsala University.

reason may either be the absence of CMA's in the conflicts of the country or a reporting issue. Lastly, China is not included in the dataset. There was very little information on CMA's in China available, yet the Chinese market and the deployment of Chinese security companies abroad is certainly growing. However, the private security was not made legal before 2010, and hence the overlap with the period of investigation of the dataset is minimal (Clover, 2017).

3.) Unit of analysis: commercial exchange event

The CMA database surveys events in which actors in a civil war or armed conflict hire CMAs in at least one year between 1980 and 2016.

At first sight, it seems obvious to use legal contracts between a client and a contractor as the unit of analysis. However, information gathering based on legal contracts is hampered by the limited access to such documents, and the complexity of contracting. A single legal contract may comprise numerous services, or a prime contractor might be in charge of the overall contract while subcontracting certain tasks. Thus, the CMAD chooses a different unit of analysis: the aim is to capture exchange events instead of legal contracts, although presumably most exchange events are based on a contract. Generally speaking, an exchange event is composed of different elements, i.e. the year, location, information on the client, information on the CMA, and information on the service exchanged. As a minimum for an exchange event to be coded; location, year and presence of a client or presence of a provider is required. A new exchange event is coded if either client, consumer, agent task, or year change.

3.1,) Information on the year

Determining when an exchange event takes place turned out to be difficult at times. First, at times, the source did not provide any information on the start/ end date. If the source made clear that it did not refer to a current (ongoing) event, we did not include the exchange event as the minimum requirement for recording an exchange event was not met. However, if it was clear that the source referred to a current event, we included the exchange event inserting the year the source was published. Second, at times, sources provided vague information on start/ end dates in reference to a specific decade. Vaguely defined time periods were coded as outlined in table 2:

Table 2: Coding of vaguely defined time periods.

Evidence in source	Coding	Example
Early in the decade	First, second, third year in the decade	1991, 1992, 1993
Mid of the decade	Fourth, fifth, six year in the decade	1994, 1995, 1996
End of the decade	Seventh, eighth and ninth year of the decade	1997, 1998, 1999
Before/after a certain date	One year before/ after the specific date named in the source	e.g. before 1995 is named in the source; then coding starts/ ends in 1994; after 1995 is named in the source then coding starts/ends in 1996

Third, if we could not determine the duration of an exchange event based on a source, yet another source, referring to the same exchange, contained such information, we combined the information from both sources. For instance, if one source provided evidence for the presence of an exchange event in a specific year, e.g. 2003, and additional sources suggested that the same exchange event was present two years later, e.g. 2004, we could code with certainty the presence in 2003 and 2004. Fourth, in some instances we were able to determine from different sources that an exchange event was present at two points in time, e.g., 2003 and 2005, yet lack evidence as to whether it was present in 2004 as well. In such cases, we assumed the presence of the exchange event in 2004 (this is indicated by a reliability coding of 0). Similarly, in one case (German diplomatic service) we had specific evidence about the contracting practices of a client, yet the information on a specific exchange event ended in 2012. However, the contracting pattern did not suggest that the client suddenly stopped contracting for diplomatic security, yet that it was rather a data problem. We then extended the contract to 2016 (indicated by a reliability coding of 0).

3.2.) Information on Client

Multiple different actors are consuming CMA services, e.g. private actors, such as individuals, corporations, and non-governmental organizations, as well as public actors, mainly the different state organizations and international governmental organizations (Kinsey, 2006, 11-12, Avant, 2005, 22-26). Gathering systematic data on domestic business and private individuals contracting with CMAs appears too ambitious. For one, such contracts are frequent, yet are infrequently reported on in the included sources. For practical and data access reasons, the CMAD therefore limits the client category to public clients, international governmental organizations, TNCs, NGOs and opposition groups. Table 3 specifies the scope that result from this limitation

Table 3: Client categories

	Included	Comment
Public client (Government)	Yes	• Government may be shareholder in a company -> coded as government client (any share suffices) • If president, or government official is named as client, it is coded as government • If one member of government contracted, yet without knowledge of head of government -> other
Opposition (Rebels)	Yes	• If opposition leader or opposition official is named as client, it is coded as opposition • Opposition group may sell its services; if there is evidence of monetary exchange for military services (domestic or abroad) then meets the requirement of a contract
IO, TNC, NGO	Yes	Most of the TNC coded in the dataset are part of the extraction industry. Independent where the company's HQ is, corporations engaging in extraction are always coded TNC.
Client not known	Yes	The contract may be private individual or a local business, or any other client. Unknown clients are included.
Local commercial actors	No	Contracts where the client is a private individual or local business are excluded
Private individuals	No	

A second, more specific, client category for public actors was added to provide a more detailed picture of institutional contracting. The categories in table 4 reflect the most frequent contracting entities, such as the defense, foreign and development aid ministries, NATO, EU, and UN (Cusumano and Kinsey, 2015, østensen, 2013, Krahmann, 2016).

Table 4: Specific Client

Contracting unit	Coding rule
Defense Ministry	When defense ministry, specific branch of armed forces is named
Ministry of Foreign Affairs	When foreign service officials or embassy is named
Development Aid	
Other ministry	
NATO	When the organization, NATO officials or departments are named
European Union (EU)	When the organization, EU officials or departments are named
United Nations (UN)	When the organization, UN officials or departments are named
Organization of African Unity (OAU)	When the organization, OAU officials or departments are named
Other	Any entity that is being named, but does not fit into the above categories.

Moreover, in addition to the client category we include information on the consumer. While in many cases the client (the actor paying for the service) and the consumer (the actor enjoying the services) are the same, they may be different at times (Branovic, 2011, 7). For instance, in the nation building operations in Afghanistan and Iraq the USA financed training and consultancy tasks for the local security forces. The CMA dataset will therefore introduce the category of consumer. Moreover, the specific consumer, e.g. government, opposition, or organization is recoded.

3.3.) Information on CMAs

The literature often refers to the corporate structure as an important element to differentiate modern CMAs from the old breed mercenaries (Singer, 2003). The assumption is that corporatization makes a difference in the behavior of the actors. For instance, legally registered firms are argued to be under tighter state control and are more accountable for their actions (Percy, 2007); they are less likely to cheat because they have long term business interests (Singer, 2003); they have an interest in maintaining their 'reputation' (Akcinaroglu and Radziszewski, 2013, 801-802); and they exert more restraint due to norms of professionalism (Avant, 2007). The dataset will differentiate between two types of CMA-actors: companies and individual/ groups of mercenaries. While the former is legally registered, and has a formal organizational and administrative structure, the latter is neither legally registered formal, nor is it characterized by a formal organizational or administrative structure.

However, the CMA dataset will further differentiate between two different company structures. Corporations can vary according to their organizational structure, i.e. they can be publicly traded and non-traded companies. (Singer, 2003, 43, Sadat Hadjer, 2013). Publicly traded companies are under additional pressure as they also have to satisfy their shareholders and the stock market. This is considered to have consequences for the ability to control their actions and performance (Sadat Hadjer, 2013).

Table 5: Ownership structure

Structure	Description
Non-traded company	• HQ locally or abroad • Not traded on the stock market.
Publicly traded company	• HQ locally or abroad • Traded on the stock market.

Going further than merely recording actor categories, the CMA dataset will attempt to identify the specific company providing a service. Each company will be assigned a unique agent-ID. Companies will be assigned IDs based on the first letter of their company name (see table 5). Each letter is assigned a range of a 1000 possible IDs. For instance, if a company's name starts with an 'A' it is assigned the number A-1000, any previous company in the category 'A' will receive the next higher number, e.g. A-10001. If a company starts with the letter 'B' it follows the same logic.

The additional specificity that comes with the recording of individual companies allows to provide further depth to the agent category: the CMAD will record the region/ country of origin of the company and the operators, as well as the size of the deployment. However, recording information at this level of detail inevitably leads to coding challenges.

First, determining the name of a company and where it is located is not straightforward. Companies merge; change their names, are subsidiaries of larger holdings or corporations, and at times have their headquarter (where the business is coordinated and management is located) in a country, but are registered in another. Table 5 presents the guidance for difficult cases.

Table 6: Company name & company's country of origin

	Name	Company's country of origin	Justification
Subsidiary (company controlled by a holding)	Name of subsidiary	HQ of parent company	Ownership relationship needs to be reduced in complexity to be reflected in the dataset
Subcontracts	Name of subcontractor	HQ of subcontractor	Complexity of subcontracts, e.g. several layers is not reflected in dataset; most often detailed information is not available

Second, if companies are registered in a country that is different to where they conduct their business, we ignored this fact. In other words, we did not pay any attention to where companies are registered yet coded the country where the executives of the company were located and where they conducted their business as it's origin. We also did not code for potential regional headquarters.

Third, if companies merged, we sought to include the information about mergers/ subsidiaries in the dataset (see: notes). However, the coding of the subsidiary did not change in most of the cases. For instance, Olive, Aacdemi and Triple Canopy are all part of the same holding (Constellis Holding). Despite being part of a holding, the operational business remains unaffected by this. We kept these companies therefore as separate entities in our dataset and did not change the coding. There are two exceptions to this. If the new parent company was traded on the stock market, the subsidiary was then coded as publicly traded as well. If the name changed or the company name was discontinued due to the merger (e.g. DSL and Armor group), or companies change their name without being bought up (e.g. Blackwater to XE to Academi), we generate a different agent ID, yet we add a note to the previous company code.

Lastly, we differentiate between company origin and operator origin. It is important to note, that it seems plausible that many companies also recruit operators from their country of origin. However, while this is a plausible assumption, we did not code this by default, as we were unsure whether we could assume this as a general rule. For instance, Unity Resource Group operated out of the UAE, yet contracted mainly operators from Australia, Europe and North America, and to our knowledge did not employ UAE operators. Furthermore, while we made every effort to be as precise and comprehensive as possible, data on operator origin is difficult to obtain. The information recorded on the origins of operators is therefore only the minimal information available. It is possible (even highly likely) that operators of a different nationality are working on the same contract as well, yet we were unable to obtain the relevant information.

3.4.) Deployment size:

The CMA dataset seeks to determine the size of the deployment in terms of personnel. This is of particular importance when armed contractors are deployed. However, the actual number of deployed personnel is difficult to determine. This can be due to non-disclosures, rotations, or fluctuating numbers depending on availability of personnel and needs of the client.

The CMA dataset applies similar procedures in estimating the size of the deployed contingent as UCDP's dataset on battle related deaths version 18.1. Accordingly, the main rule is moderation and verification. Due to the uncertainty of the numbers, the CMAD records three estimates: the lowest (sizelow), and highest (sizehigh) best and the best estimate (sizebest).

- Low and high estimate: These are the lowest and highest numbers of deployed CMA personnel in a given contract year recorded in the sources.
- Best estimate: This number which is considered most reliable. It is based on the most frequent number recorded in the sources. If no such distinction can be made based on frequency, the lower number is reported as the best estimate.
- Single number in sources: In some instances, only a single number on deployment size was identified in the sources. In such cases, no differentiation between low, best or high estimates were made, and all three categories contained the same number.
- Two numbers in sources: If the sources permitted identification of only two different numbers, the numbers were recorded as 'low' and 'high', and the category 'best' remained empty.

There is a specific problem in translating imprecise estimates in the sources, such as dozens, hundreds, thousands, and tens of thousands, into numbers. The three categories allow to cover different estimates to be associated with a certain verbal statement.

Table 7: Verbal estimates into numbers

Verbal Estimates	**Number**		
	Low	**High**	**Best**
Few, many, several	10	10	10
Dozen	12	12	12
Dozens	24	96	60
Hundred	100	100	100
Hundreds	200	900	500
Thousand	1000	1000	1000
Thousands	2000	9000	5000
Ten thousand	10,000	10,000	10,000
Tens of thousands	20,000	30,000	40,000

3.4.) Information on the service provided

'Service' is a crucial variable in the CMA dataset as it captures the tasks a CMA is performing. Services can broadly be differentiated according to their distance to the 'tip of the spear', i.e. their closeness to the actual fighting (Singer, 2003, 91). The CMAD covers the entire spectrum from combat functions, combat support function, such as intelligence, force protection, and communication and services to sustain the fighting force, e.g. logistics, training, or maintenance (Petersohn, 2008, 10). For the purpose of the dataset, the services are organized in nine categories that reflect broadly the tip of the spear logic (see table 6).

Table 6: Services

Service	Description
Combat and military operations	CMAs are directly tasked and engaged in combat operations; contains tasks such as assassination, prop up (if civil war present), coup Coup (overthrow or oust government) and failed coups where perpetrators carried out action were coded as combat, as long as case specific knowledge does not contradict conclusion; attempted coups where perpetrators got arrested before engaging in activity were not coded.
Military consultancy	CMAs provide military consulting; broad interpretation also to include consultancy during peacetime, e.g. military reform or audits
Military training	CMAs provide military training
Military operational support	CMAs operate and/or maintain military equipment (e.g. weaponry, translation service, communication support)
Military Logistics	CMAs provide transport of goods and military personnel
Intelligence	CMAs provide services such as risk assessments, reconnaissance, information gathering and planning
Security	CMAs provide protective services for nouns (individuals, convoys, facilities); prop up during peace times
Security Consultancy	CMA provides security consultancy, reform advice or audits (closer to routine police tasks)
Security Training	CMA provides security training (closer to routine police tasks)
Security Logistics	CMA provides security logistics (closer to routine police tasks, e.g. money transport), or airport management
Reconstruction	CMA provides reconstruction services such as demining or retraining of former combatants, poppy eradication, ammunition disposal

4.) Data reliability and validity

Any data collection on military operations and contracting is challenging as actors usually treat related information as sensitive. A crucial step towards generating the CMAD is therefore identifying the sources containing the information of interest, and to evaluate the validity and reliability of the gathered data (Gerring, 2012, 82). Inevitably the reliability of the data will vary (Lable: Rly). The CMAD assess reliability based on frequency, i.e. if a piece of information is found in different sources, then it is considered reliable. The CMAD differentiates between four different categories (see table 7). Please note, that there may be a variance in the individual categories as the quality of the source is not part of the reliability assessment. For instance, an exchange event evidenced by an in-depth case study based on years of field research counts equally as a newspaper report. Independent of the quality of the source, an exchange event supported by one source only receives a 'low' reliability score.

Table 7: Reliability coding

CMA categorization	Number of Sources
Assumed (code: 0)	Exchange event is not directly recoded in a source, yet evidence strongly suggests presence or can be inferred from multiple sources.
Low (code: 1)	Single source
Moderate (code: 2)	Two sources
High (Code: 3)	Three or more sources

5.) Overview over variables and coding

Name	Acronym	Coding	Description
Country ID	COWState	String	Unique ID number of the conflict based on the Correlates of War (COW)
Country ID	COWCode	Numerical	Unique ID number of the conflict based on the COW
Exchange Event ID	ExID		Unique identifier for exchange event
Year	Year		Year of observation (1980-2016)
Commercial Military Actor Presence	CMA	0 1 2	Absent Present Exterritorial
Exterritorial Country Code	ExTCode	String	
Client	Clnt	1 2 3 4 5 6 7 8 9 999	Government Local government Opposition International organizations Foreign government Exterritorial Opposition Other NGO TNC Unknown
Specific Client	SpCl	1 2 3 4 5 6 7 8 9 998 999	Defense Ministry Ministry of Foreign Affairs Development Aid Other Ministry NATO EU UN AU (OAU) Other Not applicable Unknown
Client Name	ClNa	String	
For Client/ For Third	ForT	0 1 999	For Client For Third (Consumer is different from client) Unknown
Consumer	Cons	1 2 3 4 5 6 7 8 9	Government Local government Opposition International organizations Foreign government Exterritorial Opposition Other NGO TNC

		999	Unknown
Consumer Name	ConNa	String	
Company Origin/ Region	CoOrR	1 2 3 4 5 6 999	Europe Middle East Asia Africa North America South America Unknown
Company Origin Code	CoOrCo	String	
Agent-ID	AgID	Numerical	Unique identifier for each CMA
Operator Origin/ Region	OpOrR	1 2 3 4 5 6 999	Europe Middle East Asia Africa North America South America Unknown
Operator Origin Code	OpOrCo	String	
Service	Serv	1 2 3 4 5 6 7 8 9 10 11 999	Combat operations Military consultancy Military training Military operational support Logistics Intelligence Security Security consultancy Security training Security Logistics Reconstruction Unknown
Agent structure	AgSt	1 2 3 4 998 999	Individual/ Group Local Company International Company Company unknown (international or local) Not applicable Unknown
Ownership structure	OwSt	1 2 998 999	Non-traded company Publicly traded company Not applicable Unknown
Size Best	Size Best	Best estimate for size of the CMA deployment	
Size Low	Size Low	Lowest estimate for size of the CMA deployment	
Size High	Size High	Highest estimate for size of the CMA deployment	

Reliability	Rly	0	No direct source, but indirect evidence
		1	Low (one source)
		2	moderate (two sources)
		3	high (three or more sources)

6.) Data gathering & coding process

Step 1: Identifying individual cases

The proper identification of individual exchange events is crucial for building the dataset. In order to filter out the relevant reports out of news repositories, keywords searches were used in order to identify the relevant articles. The keyword list contained terms such as 'military contractors', 'security contractors', 'military firm', 'security firm', 'military company, 'security company', 'military outsourcing', 'mercenary', 'mercenaries', 'dogs of war' + (respective country).

Step 2: Documenting individual sources

In the second step information about exchange relationships contained in individual sources were collected. The bibliographic details of each source were documented and saved in an electronic word docx-file. The original document received a unique document-ID and was generated accordingly: Year + month + date + acronym of the source + acronym of location, e.g. 2012_12_1_AP_Iraq. If another document was published by the same news agency at the same date about the same conflict, a second source document with a different code was generated: 2012a_12_1 AP_IRAQ; 2012b_12_1_AP_IRAQ etc. The source document summarizing the information of original source received an equally unique ID (table 8).

Table 8: Guidance Source Document (SD)

Source-ID: Year.Month. Day_Source_Country

Label		Information
Location/ Conflict		Please be as specific as possible: insert any locational data, e.g. country, district, city. Also report any information about what conflict the report pertains to as in some countries different conflicts are ongoing.
Year		If a period/ specific date is mentioned, please insert the period/ specific date. Be as precise as possible.
Client		• The party which is entering into the contact with the agent and *paying* for the service. This may be the government (if multiple actors claim to be the governments, we decide based on international recognition), opposition (rebels, insurgence tec.), International Organizations, Transnational Corporations, or Nongovernmental Organizations. Be as precise as possible. • Make sure not to include domestic business or private individuals.
Consumer		The party which is *consuming* the service. The client and consumer might be different parties, e.g. the U.S. government (client) is hiring company ABC (agent) to provide training services (task) to the Iraqi military (consumer).
Agent	**Label of agent in news source**	This may be a mercenary, a company name or any other details about the identity of the client.
	Financial compensation	Anything that suggests a commercial transaction e.g. mentioning of salary, payments, contract.
	Any additional Information on actor	Any additional information on the agent.
Task		This may not be directly stated, but may become clear from the context, e.g. 'mercenaries and soldiers engaged in battle'; 'PMSC participated in a raid'. Please do not put down your interpretation, but just the information.
OrgSt	**Level of integration in armed forces**	Actor would be considered integrated if they are military units, receive ranks, or integration in command structure or similar; this is evidence that they are not a CMA; Evidence of an actor being a CMA indicates non-integration, e.g. term such as 'accompanying', descriptions of them being outside the chain of command.
	Group or corporate actor	Does the report specify what kind of actor it is? Does it speak about a company, organization, individuals, groups, units, etc.? Is there any information mentioned whether the company is traded on the stock market or in private hands?
Size		Mentioning of any deployment size. Please be as precise as possible who the source is, e.g. military headquarter, eyewitness, company official etc. If several accounts are mentioned, report all numbers.
Other information		Any other relevant information on the case.

Step 3: Individual exchange relations

In this step individual exchange relations are identified, and the information of multiple sources on specific exchange relationships are merged in a single document, the 'Exchange Event Sheet' (table 9). The information is still referenced using the source ID. Coding decisions are not taken in this step.

Table 9: Exchange Event Sheet

Label	Sources	Information	Code
Conflict-ID		KEEP BLANK (see step 4)	NOT YET FILLED OUT (see step 4)
Dyad-ID			
Year			
Event-ID		KEEP BLANK (see step 4)	
Client			
PClient			
For Client			
For Third			
Agent-ID		FILL IN JUST AGENT NAME	
Task			
OrgSt			
CopSt			
Size			SizeBest
			SizeLow
			Size High

Step 4: Coding

The fourth step is coding the information about the individual exchange relations based on the coding schedule (see Table 2 for codes). The coder will use the Exchange Event Information Sheet (Table 9) and fill out the column 'Code', and enter the Conflict-ID, the Event-ID, and Agent-ID.

Step 5: Entry process

The final step is merely the transfer of the codes into an excel file. To avoid entry errors coding and data entry were conducted separately. Furthermore, the individual cells in the excel file were pre-defined. The coder had therefore only a limited amount of choice what could be entered in the individual cell.

7.) Bibliography

AKCINAROGLU, S. & RADZISZEWSKI, E. 2013. Private Military Companies, Opportunities, and Termination of Civil Wars in Africa. *Journal of Conflict Resolution,* 57**,** 795-821.

AVANT, D. 2005. *The market for force: the consequences of privatizing security,* Cambridge, UK ; New York, Cambridge University Press.

AVANT, D. 2007. The emerging market for private military services and the problems of regulation. *In:* CHESTERMAN, D. & LENHARDT, C. (eds.) *From Mercenaries to Markets.* Oxford and New York: Oxford University Press.

BRANOVIC, Z. 2011. *PSD User Manual and Coding Scheme*, University of Berlin.

CARMOLA, K. 2010. *Private security contractors and new wars : risk, law, and ethics,* London ; New York, Routledge.

CHESTERMAN, D. & LEHNARDT, C. 2007. Introduction. *In:* CHESTERMAN, D. & LEHNARDT, C. (eds.) *From Mercenaries to Market.* Oxford & New York: Oxford University Press.

CHISHOLM, A. 2015. From Warriors of Empire to Martial Contractors: Reimagining Gurkhas in Private Security. *In:* EICHLER, M. (ed.) *Gender and Private Security in Global Politics.* Oxford: Oxford University Press.

CLOVER, C. 2017. Chinese private security companies go global. *Financial Times.* February 26 ed.

COTTON, S. K., PETERSOHN, U., DUNIGAN, M., BURKHART, Q., ZANDER-COTUGNO, M., O'CONNELL, E. & WEBBER, M. 2010. *Hired Guns: The Roles And Implications of Armed Contractors in Operation Iraqi Freedom,* Santa Monica and Arlington, RAND Corporation.

CUSUMANO, E. & KINSEY, C. 2015. Bureaucratic Interests and the Outsourcing of Security. *Armed Forces & Society,* 41**,** 591-615.

DUNIGAN, M. 2011. *Victory for Hire: Private Security Companies' Impact on Military Effectiveness,* Stanford, CA, Stanford University Press.

ETTINGER, A. 2014. The mercenary moniker: Condemnations, contradictions and the politics of definition. *Security Dialogue,* 45**,** 174-191.

GERRING, J. 2012. *Social science methodology : a unified framework,* Cambridge, Cambridge University Press.

KINSEY, C. 2006. *Corporate soldiers and international security : the rise of private military companies,* New York, NY, Routledge.

KRAHMANN, E. 2010. *States, citizens, and the privatisation of security,* Cambridge ; New York, Cambridge University Press.

KRAHMANN, E. 2016. NATO contracting in Afghanistan: the problem of principal–agent networks. *International Affairs,* 92**,** 1401-1426.

LYNCH, T. & WALSH, A. J. 2000. The Good Mercenary? *The Journal of Political Philosophy,* 8**,** 133-153.

MOCKLER, A. 1985. *The new mercenaries,* London, Sidgwick & Jackson.

MUSAH, A.-F. & FAYEMI, J. K. 2000. Introduction. *In:* MUSAH, A.-F. & FAYEMI, J. K. (eds.) *Mercenaries. An African Security Dilemma.* London: Pluto Press.

ØSTENSEN, Å. G. 2013. In the Business of Peace: The Political Influence of Private Military and Security Companies on UN Peacekeeping. *International Peacekeeping,* 20**,** 33-47.

PATTISON, J. 2014. *The morality of private war : the challenge of private military and security companies,* Oxford, Oxford University Press.

PERCY, S. 2007. *Mercenaries: The history of a norm in international relations,* Oxford ; New York, Oxford University Press.

PETERSOHN, U. 2008. Outsourcing the Big Stick - The Consequences of Using Private Military Companies. *Weatherhead Working Paper.* Cambridge.

PETERSOHN, U. 2014a. The Impact of Mercenaries and Private Military and Security Companies (PMSCs) on Civil War Severity between 1946 and 2002. *International Interactions,* 40**,** 191-215.

PETERSOHN, U. 2014b. Reframing the anti-mercenary norm: Private military and security companies and mercenarism. *International Journal: Canada's Journal of Global Policy Analysis,* 69**,** 475–493.

PETERSOHN, U. 2017. Private Military and Security Companies (PMSCs), Military Effectiveness, and Conflict Severity in Weak States, 1990–2007. *Journal of Conflict Resolution,* 61**,** 1046-1072.

PETERSOHN, U. 2021. The anti-mercenary norm and the market for combat force. *International Journal,* 0**,** 0020702021994519.

SADAT HADJER, T. 2013. *Spoiler or Stabilizer.* PhD, University of Konstanz.

SCAHILL, J. 2007. *Blackwater: the rise of the world's most powerful mercenary army,* New York, NY, Nation Books.

SHEARER, D. 1998. *Private armies and military intervention,* Oxford and New York, Oxford University Press for the International Institute for Strategic Studies.

SINGER, P. W. 2003. *Corporate warriors: The rise of the privatized military industry,* Ithaca, Cornell University Press.

SPEARIN, C. 2014. Canada and contracted war: Afghanistan and beyond. *International Journal,* 69**,** 525-541.

STEINHOFF, U. 2008. What are mercenaries? *In:* ALEXANDRA, A., BAKER, D.-P. & CAPARINI, M. (eds.) *Private Military and Security Companies. Ethics, policies and civil-military relations.* London and New York: Routledge.

THOMSON, J. 1994. *Mercenaries, Pirates, & Sovereigns,* Princeton, Princeton University Press.