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Competition Versus Sole Sourcing in Defence Procurement: What Are the Factors that Determine Tendering Methods in Government Contracting for Delivering “Value for Money”?

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Abstract

Competitive tendering has been the gold standard for government procurement contracts. Nevertheless, this is not the case for the defence sector. Globally, the number of sole source contracts has been exponential. Some argue that sole source procurement is much more effective for the defence sector compared to competitive tender. Yet, there is a lack of publicly available data to prove this claim. Further, there is minimal empirical evidence to substantiate this argument on whether sole source is a better method for procurement in defence compared to competitive tendering. This paper defines public procurement and critically evaluates government contracting methods in defence. The paper discusses the key features of defence contracts and compares the costs and benefits of competitive tendering versus sole sourcing for delivering “value for money” in defence procurement. The paper offers a framework that highlights the factors that could be used to determine the choice of tendering in defence procurement. This is exploratory research and uses the pragmatist philosophical approach.

Keywords: Defence procurement, competitive tender, value for money; sole sourcing.

Introduction

Competition is set as the optimal choice for delivering “value for money” through lowest costs, superior quality, best performance and greater innovation (OECD, 2011). The UK Government’s preferred method of procuring defence equipment for the Armed Forces is by open competition (Ministry of Defence, 2017). The prevailing belief in the procurement community is that government procurement should rely on competitive tendering as it is seen as the most optimal option for any procurement contract. This is because competitive bidding is believed to provide the best value for money, with its focus on lowest costs, superior quality, and greater innovation. However, some argue that competitive tendering is not always the best choice for defence procurement due to the risk of transactional activity, which could hinder the development of indigenous critical technologies and result in the use of inferior materials. Furthermore, the process can be extremely slow.

In the defence sector, sole sourcing and restricted tendering have become increasingly important in defence contracting. Sole source procurement refers to the non-competitive purchase of goods and services after negotiating with only one supplier. In 2015, a joint study by Transparency International Defence and Security Programme UK (TI-DSP) and the International Defence Acquisition Resource Management program of the U.S. Naval Postgraduate School (IDARM) reported that the UK had the highest non-competitive tendering rate at 55%, followed by Poland at 49%, and the United States at 40% (Mustafa, 2014).



The National Audit Office UK reported that during COVID 19, out of the £17.3 billion new contracts awarded to suppliers, £10.5 billion were awarded without competitive tender process. The NAO also found various evidence where departments had failed to disclose key decisions as to why they chose a particular supplier, used emergency procurement and failed to document considerations of risks especially how the supplier was identified, and conflict management (National Audit Office, 2020). Similarly, the 2020 House of Commons Briefing highlighted that the UK MOD had spent £8.6 billion or 35% on non-competitive or single source contract between 2018 and 2019 (UK Ministry of Defence, 2017).

The House of Common report justified single sourcing on the pretext of national security and that there is only one specialist for that specific product or services (House of Commons, 2020). However, there is a lack of publicly available data to empirically validate whether a specific government procurement contract should opt for competitive tendering versus restricted tender or sole sourcing. There is continuous debate within procurement agencies and stakeholders on what should be the standard reliable and trustworthy criteria in determining the correct process for tendering.

To achieve this objective, this paper reviews the relevant literature on defence procurement and tendering processes. The literature critically compares the costs and benefits of sole sourcing versus competitive tendering. By analysing this information, we develop a comprehensive understanding of the factors that influence the effectiveness of different procurement methods and the criteria that should be used to determine the most appropriate procurement strategy for a given contract. This analysis uses the literature to develop a policy framework for determining the factors that contribute to determining tender method for delivering “value for money” in defence procurement contracting. The framework is a work in progress and is expected to become a policy tool that could be used by procurement officials as a guidance in deciding the type of tender to opt for when making a contract bid decision.

The research question is “What are the factors that determine the most appropriate method of tendering that delivers the best value for money in defence procurement?”

The research objectives are as follows:

- To define the features of defence procurement and government contracts.
- To critically evaluate the costs and benefits of the different government contracting methods
- To analyse the challenges for the current process in determining defence contracting processes.
- To develop a framework that could be used to determine the choice of tendering for defence procurement contracting.

Research Design

This research design uses a pragmatic inductive approach to address a real-world problem. The research takes a mono method approach and will focus on qualitative data. The research involves data collection from literature review to develop the framework. In the next stage in the research is to be able to develop a semi-structured questionnaire as the data collection method, which can be distributed to defence procurement stakeholders in the government and industry to obtain primary data. The data will be analysed using content and thematic analysis to substantiate and validate the arguments on the variables that determine the tender process choice. The unit of analysis will comprise defence procurement officials from government and industry in the UK engaged with the UK MOD in the tender processes. The key stakeholders are those based in the Defence and Equipment



Support Organisation in Abbey Wood (DE&S). The data will be analysed using thematic and content analysis. The structured interview questions will be distributed to 50 participants based on random sampling and another 10 questionnaires will be distributed to key procurement officials to obtain in-depth data to substantiate the quantitative data. The challenge is to compare the secondary literature argument and primary data to compare the findings to validate the reliability of the framework. The research will adhere to ethical standards and compliance to research ethics for non-disclosure of participants identity in line with UK GDPR.

Literature Review

There are some academic works on public procurement that addresses wider issues and the impact on business, economy, and society to support and lead broader government policy implementation, stimulate innovation, encourage small business entrepreneurship, deliver better social outcome, sustainability, and promote competitiveness (AdjeiBamfo et al., 2019; Glas et al., 2017; Grandia & Meehan, 2017; Harland et al., 2019). However, there is a lack of discussion and academic work that debates on the topic of defence procurement and choice of contracting methods except several published government reports on procurement in the United States, UK, and Europe (Duddy et al., 2020).

Defining Public Procurement Feature

Organisation for Economic Cooperation and Development (OECD) defines public procurement as the process of purchasing goods or services by the public sector with the aim of securing best value for public money (OECD, 2011). Public procurement involves the expenditure of huge sums of public money and the magnitude of this outflow can have an impact on the structure and functioning of competition in a market more generally (OECD, 2011). By the virtue of protecting taxpayers' money, the public service promotes economic efficiency and effectiveness in public procurement, contracting, and selection of suppliers. Hence, competitive bidding becomes the preferred method used in public sector procurement. Public procurement has specific inherent features which are unique. First, the custodian of the funding is taxpayers as opposed to shareholders in the private sector. Hence, the objective of the purchase is to benefit the citizens who will enjoy the social dividends from the outcome of the procurement, be it investment in defence for safety and security, healthcare for better hospitals and equipment, or in network rail or road building for better infrastructure and ease of travel. Next, public procurement is bound by legislation and detailed administrative regulations and procedures. Often, the regulations and processes can be construed as bureaucratic and creating layers of red tape. From the public service perspective, this practise avoids abuse of power and discretionary values by arbitrary uses. Third, the large volume, high value of projects and multiple stakeholders makes monitoring more difficult. The financial procedures and payment systems in public procurement is also complex and often the need to manage the layers of approval (Marvel & Marvel, 2008). Defence procurement relates to the public process of contracting with a provider to buy a good or services. The activity relates to buying and selling of goods or services. The procurement activity is often transactional and can be one-off.

It is also worthwhile to not the difference between procurement and acquisition from the perspective of the defence industry. Acquisition is more complex and relates to the entire process of defining, expressing, and translating requirement into technical specification, to programme implementation and monitoring, risks management, and performance input until acceptance prior to entry into force (Keating, 1999). Defence acquisition specifically is a much more complex process that involves the process of purchasing military equipment, technology, and services locally or from foreign countries or



international suppliers. This can range from the procurement of weapons systems and vehicles to the development of innovative technologies and training programs. Defence acquisitions are critical for maintaining a country's military readiness and capability, and they play a significant role in national security and defence strategy.

In this paper, we refer to defence procurement as the activity of buying and selling of equipment and services between the government and the contractor. To successfully acquire the necessary equipment and services, governments must employ effective procurement strategies and tendering processes that deliver value for money while upholding ethical standards. Defence procurement can be challenging due to a range of factors, including political considerations, cost, technology, supplier selection, access to quality suppliers, and long-term sustainment. The UK Government's approach to defence procurement is encapsulated in the 2012 White Paper *National Security Through Technology* where UK's defence and security requirements through open competition in the domestic and global market, buying off-the-shelf where appropriate, with national security considerations for operational advantage where appropriate in accordance with the policies set out in the White paper (2012). The procurement strategy was further reaffirmed in the 2015 Strategic Defence and Security Review (SDSR) and the 2017 Defence Industrial Policy.

Defence Procurement Approaches for Contracting

There are several defence procurement approaches. The question that is often raised by procurement agencies is whether to buy the product off-the-shelf, collaborate with other partners in-country or internationally, or make the whole product in-country. A national procurement decision making on whether to make or buy is not as simple as it seems for many states. Often, states with limited defence industrial capabilities are willing to bear a higher cost of procurement due to national aspiration to retain and expand Indigenous technological and industrial capability in strategic sectors deemed as important for national security. Hence, in such instances, the make decision becomes important. Kluth refers to the structural, institutional and actor level theories to explain the complexity of procurement decision making and he used the case study of Denmark and Norway. According to Kluth, Norway that has a much stronger and more capable defence industrial base went with a buy decision, as opposed to Denmark with a smaller and comparatively limited capable industrial base but decided to go with a make decision. Kluth argues that Denmark's decision to make is based on the absence of urgency since it ceased to be a frontline state against the Russian threat, while for Norway the decision to buy was made based on the urgency to acquire for reasons of imminent threat, the need to source systems from a key ally whose future is committed to Norway and Western European security, and also the question of commonality and interoperability with other allies who are using similar systems (Kluth, 2022).

Further, Figure 1 illustrates how security of supply and aspiration for indigenisation can motivate a nation to move from a buy decision to a make decision. Dorman, et al. (2015) technological dependence model explains how a nation's defence policy defines the aspiration of a country to move away from total dependence and off-the-shelf procurement of imported equipment for military capability to collaboration and eventually developing a defence industrial base that has the capability to make the product in-country. The major considerations are based on the defence industrial strategy, potential risks and economic of affordability and opportunity costs of investing in a defence industrial base as opposed to investing in other industrial sectors in-country. This would also mean investing into building human capital development and infrastructure for the defence industrial sector.



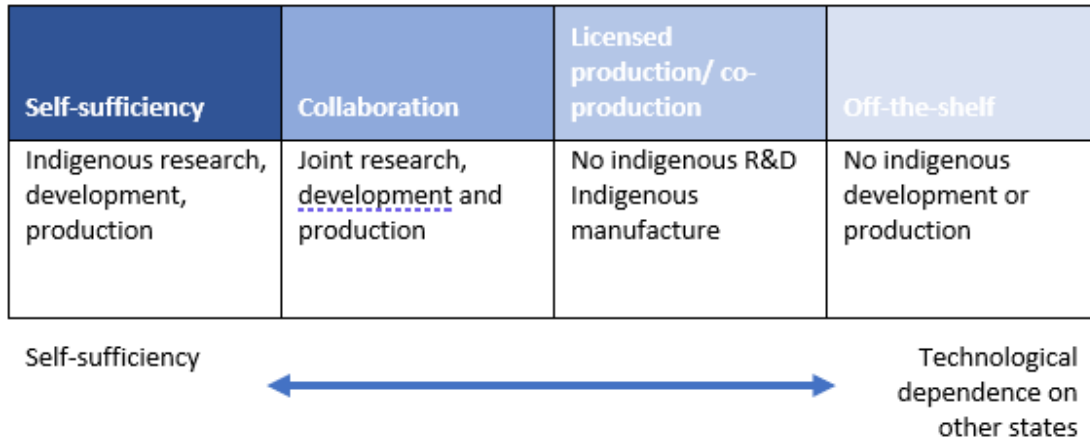


Figure 1. Technological Dependence of States.
(Dorman et al., 2015).

Another crucial factor in public procurement decision making is the focus on whether to make or buy which is dictated by transaction costs economics (TCE). Transactional costs are the costs involved in the transaction activity that occurs between buyers and sellers. The costs can be higher when there is a higher level of risks, when the selling is much riskier and there is lack of history or experience dealing with the seller. Other factors also include lack of information about the product, price, and technicality. Hence, the TCE will be higher in economies and markets where there is information asymmetry and less transparency (Patterson et.al, 2021).

Value for Money (VFM) in Defence Procurement and Contracting Activities

There is a dearth of literature that discusses the context of VFM. The arguments often anchor on the challenges in obtaining products at the best VFM and in measuring VFM especially for procurement organisations (Dimitri, 2013). Nevertheless, VFM is a compulsory component of procurement policy and is often used to describe the balance between quality and cost (Single Source Regulation Office, 2016). According to the Asian Development Bank, VFM refers to the overall effectiveness and efficiency of a procurement process in terms of the goods or services acquired, their quality, and their cost (Figure 2). Value for money is said to be achieved through a procurement process is transparent, competitive, and fair, and that the goods or services acquired meet the user’s requirements. Procurement professionals are entrusted to evaluate the total cost of ownership of the goods or services being acquired, including the initial cost, ongoing maintenance, and disposal costs. This practise is suggested to support them to make informed decisions about which supplier to select and which product to choose, based on the best value for money (Balakrishnan, 2021). To achieve value for money, procurement professionals are expected to obtain goods or services that are fit for purpose, reliable, and of high quality. This means that the goods or services must meet the user’s requirements, be easy to use, and perform to the required standards. They must also be available when needed, and any issues or defects must be quickly and efficiently resolved. By achieving value for money, procurement professionals can maximize the benefits of their procurement process and ensure that the goods or services acquired provide the best possible value to the organization. In government contracting, VFM is a key determinant in the selection of suppliers. Often the issue is setting the criteria as to what is VFM for each product or services in the context of the specific contracting activities.

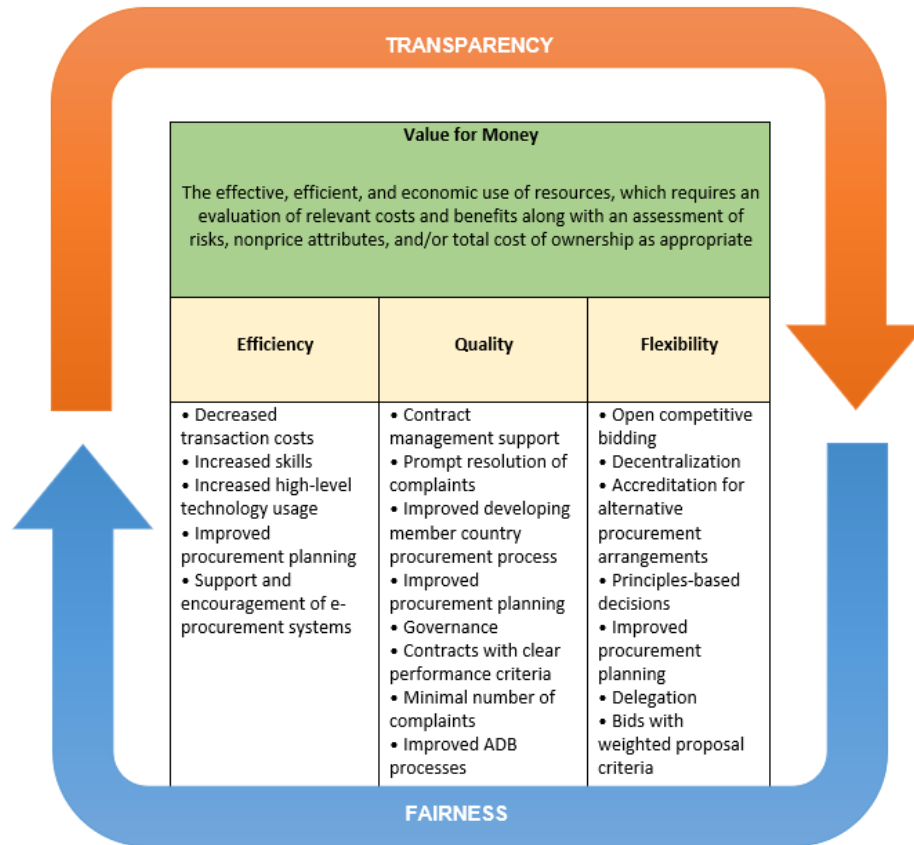


Figure 2. Value for Money.
(Asian Development Bank [ADB], 2021).

Tendering Options in Defence Contracting

Contracting is an essential element in procurement management. Contracts are explicitly written, often detailed, formal documents that specify the legally binding obligations and roles of both buyers and sellers in the business relationship. Contracts are meant to reduce uncertainty (transaction costs rationale) and provide clear specification of what is and what is not allowed within a relationship and minimise the risk of opportunism through enforcement of legal rules, standards, and other remedies implied in law (Peterson et al., 2021). There are many types of contracts (such as long term or short term), and the type of contract is usually categorised according to the type of payment. Buyers are bound by specific conditions to achieve effective control of a contract. These include codification where a formal contract needs to be defined with up-front measurable outcomes. Second, formal contracts require monitoring to determine supplier behaviour with regards to the rules set out in the contract. Finally, to safeguard the contract, the need to put in place structures to enforce the contract.

Although in theory, every buyer and seller would expect to have a full proof contract but in practise this is rarely the case as parties entering a contractual exchange face information asymmetry—that is, imperfect and incomplete information about their suppliers’ preferences and characteristics (Keating, 1999). This reinforces the tendency to incur additional contract-related costs, such as up-front supplier search and selection costs (adverse selection risk) and ongoing monitoring and enforcement costs (moral hazard and hold-up risks).

Culture plays a dominant role in how buyers and sellers view contracts. In some cultures, it is vital to hold and strictly adhere to the contract and deliver according to the contract specifications. This is a common practise in the west especially in the United States, UK, and Europe. However, in some cultures, contracts are merely a gesture of formalising a relationship. Once the contract is signed, then the contract is set aside, and projects are implemented based on trust and the relationship that has been built over the years. This is a common practise in East and Southeast Asia as well as Middle East. Such type of practise is also labelled as partnership supply relationships which is based on social processes such as personal bonding. In this case, they tend to be “emergent” arrangements, developing over time, which are not readily accessible through written documents and often cannot be directly observed (Marvel & Marvel, 2008).

In procurement contracting, tendering is a formal process where businesses are invited to bid for contracts from public or private sector organisations, which need specific skills for a project, or goods and services on an ongoing basis. Tendering involves the solicitation of bids from potential suppliers and the evaluation of those bids to determine which supplier to select. The tendering process requires commitment to being fair, transparent, and competitive to ensure that the selected supplier offers the best value for money. This involves developing clear and comprehensive procurement documents, ensuring that all potential suppliers have equal access to information, and using objective evaluation criteria to assess the bids. Effective tendering processes can help to ensure that governments obtain the best possible equipment and services at a fair price, while also promoting competition and innovation in the defence industry.

There are several tendering strategies that governments can use, including competitive bidding, sole sourcing, and restricted tendering. Each strategy has its own advantages and disadvantages, and the choice of strategy will depend on factors such as the complexity of the equipment or service being procured, the urgency of the need as in urgent operational requirement, and the strategic importance of the procurement. For example, competitive bidding can result in lower costs and increased innovation, but it can also be time-consuming and may not be suitable for all types of procurement. On the other hand, sole sourcing can offer greater control and certainty, but it can also result in higher costs and reduced competition.

Defence procurement is considered unusual in that a sizeable proportion of contracts for defence materiel are awarded non-competitively. The government often exempt contracts from the usual procurement requirements of open competition for reasons of national security, to maintain sovereign capabilities, and to protect a nation’s operational advantage and freedom of action. This act of sole source tender preference has created dissatisfaction and uneasiness amongst the procurement stakeholders who view competitive bidding as a more fair and transparent method to select suppliers (UK Cabinet Office, 2020).

Costs and Benefits of Competitive Tendering

Competitive tender creates an incentive for contractors to provide goods and services at a lower price (economic efficiency), spurs innovation of transformational technologies, which allows for the procurement of best weapon systems for warfighting. Competition can also yield improvements in the quality of products delivered and services rendered. Competition promotes the opportunity to acquire performance improvements in terms of faster, lighter, and more sustainable products. Competitive bid gives access of buyers to multiple supply source and at the same time to accumulate a wide source of knowledge about the product and supplier credibility. Competitive tender can be a good avenue for small business and start-ups to enter new markets. Competition is said to enhance a strong defence industrial



base that can meet operational requirements and support the capability demand of the military at speed and to the quality and performance. On the other hand, competition may force suppliers to compromise on quality of material to be able to meet the lowest price point to win a bid. This act can be detrimental in defence sector where the end-users of the products and services are putting their lives at stake and that the product is being used for defence. Failure of an equipment due to the lack of reliability and not being able to produce up to the specific military standards can be detrimental and jeopardising the operational effectiveness.

Costs and Benefits of Sole Source Tendering

Sole sourcing is a preferred choice in cases where the choice of contracting is dependent on national security and sovereignty of technology. Considering that defence equipment takes a long lead time to develop and introduce, when the product is complex, such as in defence, a sole source option is favoured to build the relationship between the buyer and supplier. Sole source also helps with attaining economies of scale especially if the government (buyer) wants to develop a local defence industry. In a sole source option, the buyer and seller may be able to collaborate with a long-term plan to develop product and further improvement such as upgrades and retrofits. There is also a higher level of confidentiality in the business arrangements but also this becomes a key criterion for countries that have mutual political and strategic geo-political interests to building military capability.

According to some sources, restricted tender and sole sourcing are necessary for the development of critical domestic industrial capabilities. This is supported by reasons such as equipment complexity, interoperability, urgent operational requirements, and the importance of trust and long-term partnerships with suppliers. On the other hand, sole sourcing is said to stifle innovation and creativity, and often leads to increased costs due to cost-plus contract options. Many academic papers, government reports, and parliamentary debates have discussed the benefits of sole sourcing versus competitive bidding. In 2018–2019, the UK Ministry of Defence spent £8.6 billion or 35% on non-competitive or sole source contracts (Holland, 2020). The TI report found that only three countries, including the United States, UK, and Slovakia, have been transparent about their sole sourcing practices (Davies, 2015). The UK acquisition practice community argues that there is greater oversight with sole sourcing, while many developing countries do not provide any transparency as to why they choose sole sourcing.

Sole sourcing has various inherent challenges including the likely of a cost-plus contract that can inflate the overall price of the contract, dependence on one or two suppliers for the success of the project which makes the relationship between the buyer and supplier vulnerable and fragile especially if there is an embargo or political sanction. In such cases where the information is not available, the choice of contracting becomes important. A sole source option may put the buyer at a disadvantage as the seller may not be offering all the information required to make decision and determine. Further, the seller has the upper hand in controlling and determining the price of the product.



Table 1. Comparison of Advantages and Disadvantages to Sole Source Versus Competitive Bidding

	Sole Sourcing	Competitive tendering
Advantages	Stronger buyer supplier relationship	Economic efficiency
	Helps economies of scale	Quality products and services
	Long-term cooperation and strategy building	Multiple supply sources
	Higher level of confidentiality	Enhance strong defence industrial base
Disadvantages	Undermines innovation and creativity	Price competition can undermine product quality
	Higher price	

Determinants of Defence Procurement Contract for Tendering Method

What are the factors that can be considered for whether a specific procurement contract should opt for sole sourcing or competitive bid? Based on the various literature on the costs and benefits of both methods, a defence procurement tendering method is developed. The policy framework is meant to support the defence procurement stakeholders when deciding on what are the available options and considerations when deciding a tender bid. This framework has not included the third option which is collaboration.

It is argued that cost of the product can be one of the factors that determines sole sourcing or competitive bid. The question of high costs versus low costs of product as a determinant of tender bid choice. For example, procurement of uniforms as opposed to fighter aircraft. High costs product also involves higher risks which may suggest that the buyer partner with a single or few suppliers with whom they already have a track record.

Choice of tender in contracting process is also determinant on the security of supply chain that is associated to national security and sovereignty of technology. Specific products that need to be developed in country due to geographical proximity to prime tier one level suppliers and buyers may require a sole source single supplier who is reliable and accessible. This is contradictory to a competitive bid when the product can be sourced from anywhere and there are many suppliers selling the same product.

The framework also identified technology as another determinant where the level of technological sophistication, the need to develop in-country capability in the specific technology area and affordability to invest in R&D as a consideration for sole source versus competitive tendering. Technology transfer is not only about investment, skilled workers and absorptive capability (Balakrishnan, 2018). Successful technology transfer involves intrinsic factors such as time, effort, patience, and understanding of each other's values. A country that wants to build a sustainable defence industrial base will need to consider long term technology and industrial acquisition strategy and develop a strategy for selection of suppliers whether through sole sourcing or competitive bid.

Relationship and trust are another key consideration in the choice of tendering option for products. For complex military products, reliability and maintainability is a key requisite to ensure that the equipment purchased is also supported during and after the warranty period. This will include military to military joint exercises on the usage of the equipment, training, and education of the equipment and the services being bought. Hence, it is vital that there is good relationship, cultural understanding, and the availability of documents and language translation if required. Sole sourcing is said to allow the option of building a long-



term relationship and trust for when considering aspects of maintainability and reliability of equipment between buyer and seller as opposed to a transactional relationship where that level of trust and relationship may not be present.

Next is the type of product tied to costs benefit and level of risk as per Figure 3. For low costs benefits and low risks such as computers, non-secure communication equipment, and white-fleet vehicles, the option is to go with competitive bid. Similarly, generic military items like GP frigates and support helicopters which has high costs benefits but low risks, the option is to enter competitive bid. Finally, for specialised military products such as typhoon and Type 45 Frigate naval warship which has high costs benefits and high risks, the option is to go with sole sourcing.

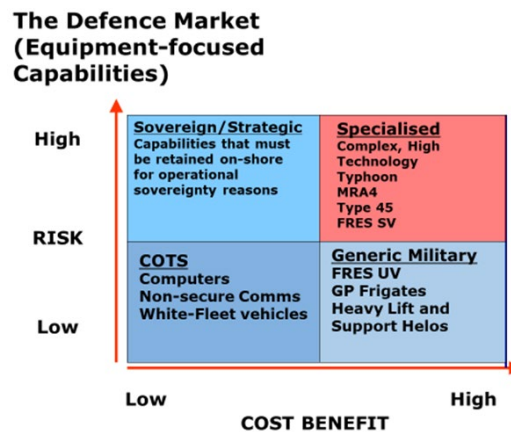


Figure 3. Tendering Option Based on Type of Products

In the defence context, standardization is also a critical factor when considering the type of tendering. If there are well established standards in a technical field, this indicates that an open tender process is viable. However, if there are few or no well-established standards in a technical area, this indicates that a close tender process may be more suitable.

One of the key drivers for a fully open tender process where there is a drive to achieve maximum interoperability. For example, where in the case of NATO standards which form the basis for interoperability across the NATO members nations.

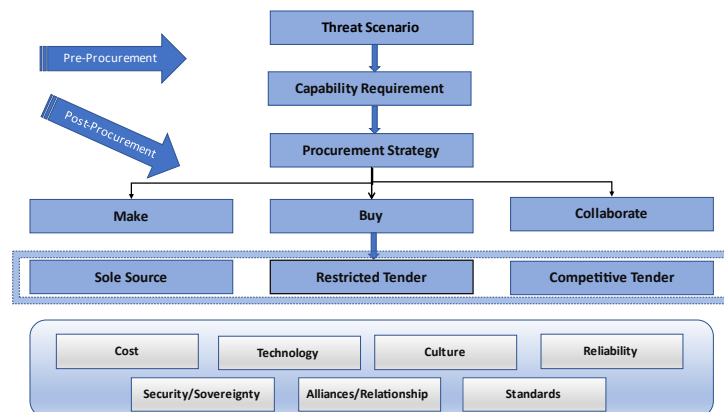


Figure 4. Procurement Contracting Framework for Tendering Method

Future

Looking at the future of defence procurement and tendering, there is an inherent tension between growing demands for cost reduction with stretched defence budget, leaning towards open-source tendering. At the same time, there is the power of emerging technologies such as AI and space technologies that is creating a push towards sole source bespoke suppliers. The challenge of future defence procurement is therefore in addressing the path to reconcile this growing tension. In addition, there is an increasing pan- defence requirement to address sustainability and environmental factors.

As the defence budget shrink, there is also a move towards multi state partnerships to deliver complex weapon platforms, for example sixth generation fighter jets such as the Tempest (UK-Japan-Italy) alliance. This move to multi-state platforms brings with it significant complexity and technical challenges. In addition, the existence of the need to align between the relevant states specific tender processes. This was also the case in previous fifth generation fighter programmes such the Eurofighter programme and the A 400M (Directorate-General for External Policies of the Union, 2013). In the final analysis, each state must choose its own priorities in relation to defence tender processes. This will often reflect cultural and political preferences.

Conclusion

The choice of tendering in defence procurement contracting is a complex issue that cannot be addressed with a one-size-fits-all solution. Therefore, further inductive and deductive research is necessary to determine the specific factors that drive and determine tendering choices. In addition, these factors must be contextualized to reflect the specific needs and requirements of each country. As this research is focused on defence procurement, access to key stakeholders such as procurement officials, policy makers, and military personnel may be limited. Obtaining data from the defence industry may also present challenges. Given the limited resources available for this desk-based research, the researchers will have to carefully allocate their time and identify the most effective ways to obtain data. They should consider using a combination of primary and secondary data sources, as well as leveraging their professional networks to gain access to relevant information.

The proposed framework , a work in progress informs the determinants or variables for choice of tendering in defence procurement contract. The range of factors include political and economic issues, operational requirements, resource, and procurement planning processes. The framework also considers costs, technology, products, or services being procured. The framework provides a systematic process for determining the choice between competitive, restricted, and sole source bids.

This research is to contribute to the body of knowledge in defence procurement strategy and help government procurement officials and defence contractors to make informed decisions that deliver “value for money” from defence procurement spending.

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