Productivity in Public Procurement

A Case Study of Finland: Measuring the Efficiency and Effectiveness of Public Procurement

OECD

Productivity in Public Procurement

A CASE STUDY OF FINLAND: MEASURING THE EFFICIENCY AND EFFECTIVENESS OF PUBLIC PROCUREMENT

This document, as well as any data and any map included herein, are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Photo credits: Cover © passion artist/Shutterstock.com.

The report was approved by the Working Party on 26 October 2018 and declassified by the Public Governance Committee on 11 January 2019.

Table of contents

Tables

Figures

Boxes

Executive summary

Increasingly, public procurement is used as a lever to drive economic growth, and achieve secondary/complementary policy objectives such as unlocking innovation, SMEs participation and delivering sustainable outcomes. From an economic perspective, public procurement is increasingly recognised as a lever for improving the efficiency and effectiveness of public spending. For this reason, increasing the 'productivity' of government spending has been seen as a worthwhile pursuit for governments. In a recent study by McKinsey it was found that the global fiscal gap of USD 3.3 trillion could be addressed by 2021 if public spending was better managed and followed the practices of best performing countries. In the area of health care, the research found that by spending existing funds more efficiently, healthy life expectancy would be increased by 1.4 years (McKinsey & Company, 2017[1]).

As the complexity of public procurement activity and the associated expectations increase, so does the difficulty of measuring its impact. These challenges are well understood in Finland, where measuring and improving public procurement's impact on productivity will be a key enabler for improving economic performance.

This study provides an analysis of public procurement's role in driving government productivity, while acknowledging the difficulties of measuring the dynamics between public procurement and economic performance. This is supplemented by an analysis of efforts to measure public procurement activity through the development of indicators and the collection of performance data. The study then assesses Finland's attempts to measure public procurement performance, while also providing concrete recommendations on how to improve the procurement system's efficiency and effectiveness.

Finally, a framework is proposed for understanding and measuring public procurement's contribution to the economy and national well-being more broadly. The framework is then tested on the Finnish and Chilean procurement systems to validate its relevance.

Key Findings

- Public procurement's impacts are widespread, yet measurement frameworks are unable to systematically demonstrate the benefits or drawbacks of procurement policies. Where multiple government policies target the same or similar objectives, cross-government measurement frameworks can help to maintain a view of impact at the central level.
- High-level indicators can be used for measuring progress against objectives. Due to data availability and complexity, measurement of centralised activity can act as a launch-pad for developing a broader measurement framework that takes into account the broader procurement system.
- By building a clear linkage between public procurement and government priorities, policy makers can gain a clearer understanding of public procurement's

role. This helps to demonstrate to procurement officers which complementary objectives should be pursued and how.

- The use of national e-procurement systems is a pre-requisite for effective measurement. Ensuring widespread and coherent use of systems will improve data availability, particularly at regional and local levels.
- Framework agreements are effective at generating efficiencies and savings across government. Ongoing measurement of participation and usage helps to identify opportunities to increase these benefits.
- Broader measures of success that capture the perspectives of the business community and other stakeholder groups can be used as proxies for measuring the effectiveness of public procurement's impact where quantitative measurement is not possible.
- A framework for measuring 'procurement productivity' that takes into account the inputs and outputs of the system, as well as the 'enablers' (such as legislation, e-procurement systems, and capabilities) allows the impact of strategic public procurement to be demonstrated. In Finland application of the framework has highlighted the potential positive impacts of public procurement such as the presence of procurement of innovation and transparent use of Framework Agreements which have quantified economic benefits. The potential to further quantify those benefits is explored. Research indicates that based on an analysis of the savings made in different categories of Finnish public procurement, that centralised purchasing could achieve an average of 25% savings through centralised purchasing.
- To assess the viability of a framework for measuring procurement productivity, develop an understanding of the metrics that could be used to assess performance at different levels of government, and the data that is required to ensure effective measurement. This can be used to develop a roadmap towards comprehensive and effective measurement. Further refinement of the measurement indicators will enable the tangible benefits to the economy in terms of value to be quantified in countries such as Finland where 5% of tenders are innovative.

Introduction

Faced with common challenges such as an ageing population and fiscal shortfalls, there is more pressure on Governments to improve the efficiency and effectiveness of public spending than ever before. At the same time, low productivity within domestic economies means many Governments need to support businesses to increase exports by improving their competitiveness through disruptive and innovative offerings. Public procurement is one of the few areas of government activity that can both directly and indirectly influence both of these factors.

Governments are major consumers of the goods and services developed by the private sector. OECD member countries spend on average 13% of GDP with the private sector in order to deliver public services. Public procurement is seen as an 'operational' function of government and yet, there are many ways in which government can strategically influence the private sector, but few areas have as direct an impact as public procurement.

Public procurement regulations frame procedures to ensure that government spending is conducted fairly and transparently. Therefore, it is often perceived as a necessary evil; a time-consuming process that does not bring additional value. This perspective, however, fails to acknowledge that 'how' the process is carried out not only determines the efficiency and effectiveness of public spending, but can also influence the behaviour of the private sector.

A number of isolated studies have established connections between public procurement and economic performance, while research has also demonstrated that the nature of public spending can also improve citizen's well-being, by delivering better social and environmental outcomes. Yet these one-off cases have not been able to demonstrate how government can consistently and reliably measure these impacts. Beyond public procurement, governments are beginning to understand the importance of *ex ante* assessments for understanding the impacts of government policy and for communicating fact-based, objective results to taxpayers. The development of a measurement framework that uses data to systematically assess the effects of public procurement activity and the success of government policy would be a valuable tool for governments in this regard.

This study, Productivity in Public Procurement, has developed such a framework. The framework seeks to take advantage of improvements in e-procurement systems and data analysis by developing indicators that will support policy-makers to assess the performance of their public procurement systems. The framework was tested on two OECD member countries, Finland and Chile, to validate its applicability to different types of systems. While measurement of national procurement systems cannot take a 'one-size-fits-all' approach, the framework creates a common understanding that will enable governments to identify and then operationalise their measurement priorities.

The framework for measuring the productivity of public procurement has been developed to measure the efficiency and effectiveness of public procurement activity. The information and data provided by the Ministry of Finance and Hansel, as well as the

contributions of other stakeholders in interviews during the OECD's mission to Finland, has given a detailed insight into the workings of the institutions responsible for governing public procurement. A great deal of investment has been applied to developing the systems and skills necessary for measuring procurement activity. This will be supported by ongoing reforms to enhance digitalisation and coordination across the Finnish system.

The first chapter of this study provides an analysis of public procurement's role in driving government productivity, while acknowledging the difficulties of measuring the dynamics between public procurement and economic performance. This is supplemented by an analysis of efforts to measure public procurement activity through the development of indicators and the collection of performance data.

The second chapter features the case study of Finland, which begins with a summary of the economic challenges faced by the Finnish government, particularly those challenges that can be affected by public procurement. A description of the national procurement system is provided, with an emphasis on the challenges of collecting data and measuring performance within a heavily decentralised system. As a result, the majority of performance data that is currently available is on the work of Hansel, the central purchasing body (CPB) responsible for centralised procurement activity for the central government. Performance data has been provided by Hansel, mainly from the period 2014-2017, which has enabled a high-level analysis of the efficiency and effectiveness of centralised procurement. This analysis extends beyond centralised framework agreements to include their efforts to reform the wider procurement system, as well as the potential benefits that may result from the current focus on expanding the digitalisation of procurement activity across Finland.

The third and final chapter provides a structured assessment of the performance of the Finnish public procurement system, as well as an analysis of Finland's availability to measure performance from the data that is currently available to them. This structured assessment will then be tested against the Chilean system, provided as an Annex to this report.

1. Supporting Productivity through Public Procurement

Despite the significance of public procurement as an economic activity, and its importance for delivering effective public services, OECD countries still find it challenging to measure the performance of their national systems. First steps on the journey towards a sophisticated monitoring regime are typically focussed on the development of indicators for measuring centralised activity, whereas the measurement of decentralised activity may require a structured, bottom-up approach. This chapter summarises the potential impact of public procurement a country's economy and beyond, and assesses countries' attempts to establish measurement frameworks.

Increasingly, public procurement is being used as a lever to drive economic growth, and achieve secondary/complementary policy objectives such as developing SMEs, unlocking innovation and delivering sustainable outcomes. Member countries have therefore indicated a strong interest in establishing metrics that clearly articulate the value proposition of public procurement and its role in driving economic performance.

Measuring the effectiveness and efficiency of public spending in general is a challenge, partly because the characteristics of an effective or efficient public sector are not easy to define. Public spending is used to deliver services that meet the needs of citizens and society. These objectives, and in turn their achievement, are difficult to define and measure: results are usually only visible in the long run and are not clearly identifiable. Until now, assessing the impact of policies on the overall economy has evidenced more challenges than tangible insights. Impact assessments have increased in complexity, given that governments must now go beyond purely economic metrics to measure the country's well-being, and also consider social and environmental factors.

As part of a broader OECD project on measuring Civil Service Effectiveness (CSE), the Productivity in Public Procurement project will explore the relationships between centralised public procurement (i.e. procurement that is conducted within a central agency), public procurement more generally, and economic performance. The project supports the implementation of the 2015 Recommendation on Public Procurement which recommends adherents to (1) *develop processes to drive efficiency throughout the public procurement cycle in satisfying the needs of the government and its citizens* ('efficiency' principle) and to (2) *drive performance improvements through evaluation of the effectiveness of the public procurement system from individual procurements to the system as a whole, at all levels of government where feasible and appropriate* ('evaluation' principle) (OECD, 2015[2]).

1.1. Measuring public procurement activity to achieve economic impact through increased productivity

1.1.1. Procurement's impact is significant, economically and beyond, yet it's overall impact is hard to measure

Public sector productivity has a significant impact on the performance of the national economy and societal well-being. Governments are the main, and sometimes only, suppliers of key services to citizens, such as education, health, social services, transportation and infrastructure. In fact, in several sectors, governments purchase most of the sector's services: OECD governments are responsible for 70% of final consumption expenditure on health goods and services and for 84% of final consumption expenditure on education (OECD, 2017[3]).

Items like education, health, and the environment are typically the main targets of government spending: governments spend money to improve their citizens' health and education, for example. While most existing work on productivity has focused on the productivity of companies or factor inputs in the private sector, there is great value in better understanding productivity of the government, given government's important role in the provision of services and its substantial contribution to overall GDP.

This is especially relevant for Finland, where government spending accounts for a higher share of GDP than in most OECD countries. Between 2009 and 2015, government expenditure increased by 9.3 percentage points, from 46.8% of GDP to 56.1%, making Finland the country with the second-highest public spending levels in the OECD. Of that

government expenditure, 30.8% (higher than the OECD average of 29.1%) was spent through public procurement. During the same 2009 to 2015 period, revenue only increased by 2 percentage points, from 52.2% of GDP to 54.2%. In fact, the Finnish government undertook a comprehensive spending review in 2015 to try to identify consolidation measures that would reduce public expenditure and increase revenue (OECD, 2016[4]).

A recent study by McKinsey found that the global fiscal gap of USD 3.3 trillion could be addressed by 2021 if public spending was better managed and followed the practices of best performing countries. In the area of health care, the research found that by spending existing funds more efficiently, healthy life expectancy would be increased by 1.4 years (McKinsey, 2017[5]).

Given that the use of public procurement procedures is mandated for a large proportion of government spending, it is a key lever for increasing the efficiency and effectiveness of government spending. In the context of implementing austerity measures, trying to quantify the savings achieved through smart public procurement has been popular with governments, especially because a 1% saving in procurement expenditure might represent 43 billion EUR per year in OECD countries (OECD, 2017[3]).

Traditionally, assessing public procurement's impact has been associated with evaluating its immediate, monetary impact. Yet the link between public procurement and the economy of a country has to be considered in the light of various factors. For example, as mentioned above, the value achieved from public procurement in many countries can directly impact the health of citizens, which in turn affects a plethora of aspects, including their ability to contribute to GDP. With regards to the environment, strategic public procurement can minimise the CO_2 emissions of public transport, which in turn increases the health of citizens but also creates a market that, by leveraging economies of scale, can make low-emission propulsion more accessible to other consumers. Social and environmental objectives are increasingly relevant for countries to consider when conducting procurement, particularly in order to achieve the Sustainable Development Goals (SDGs) established by the United Nations (UN), and many countries have demonstrated how procurement can make a meaningful impact in these areas.

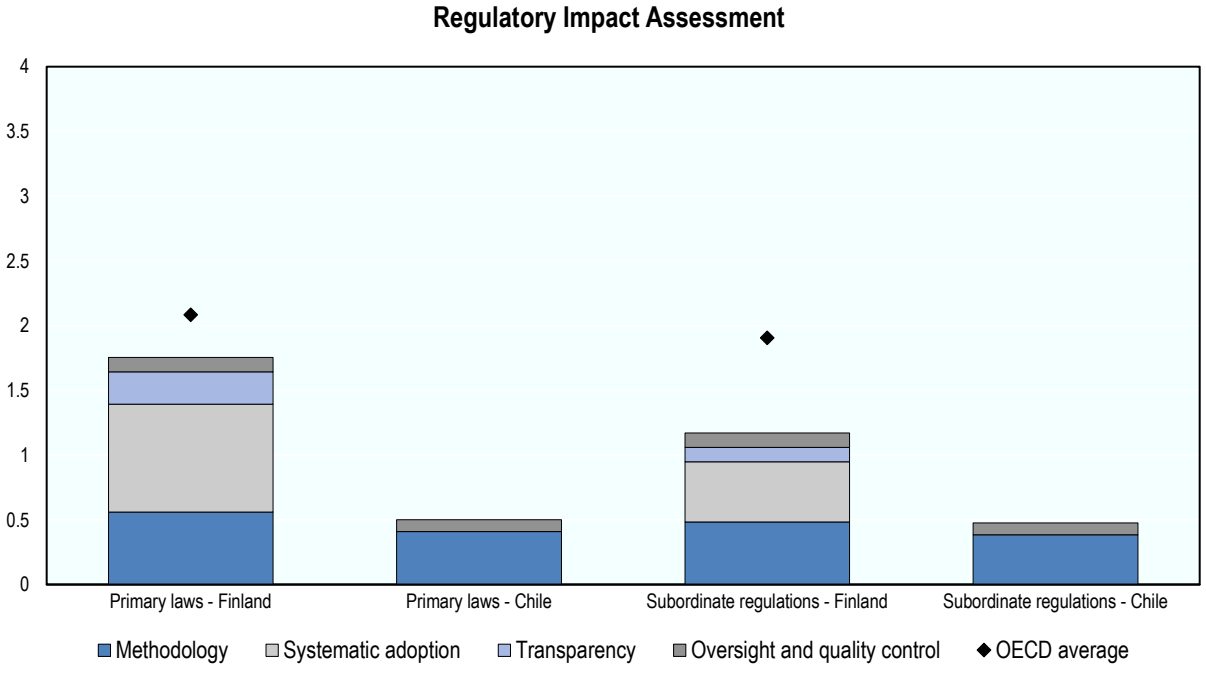
Furthermore, the professionalism and integrity with which public procurers manage tender processes influence the overall reputation of the civil service, which in turn affects citizen's trust in their government. This may also influence the overall investment climate in a country. In Finland, the percentage of citizens expressing confidence in government decreased by close to 30 percentage points between 2007 and 2016, a period covering the economic downturns in 2009. Even though confidence in government remains at around 50%, well above the OECD average of 42%, this decline in Finland has been the largest among OECD countries in this period. Therefore, procurement has a role to play in restoring confidence in government through the efficient and transparent use of public funds (OECD, 2016[4]).

1.1.2. Overcoming challenges to establish effective monitoring of regulatory impact

In recent years, governments around the world have established procedures to try to analyse the impacts of new regulatory proposals before they are adopted. By contrast, less attention has been paid to analysing regulations after adoption or to evaluating the impacts of the procedures and practices that govern the regulatory process itself, so-called regulatory policy (Coglianese, 2012[6]). To measure regulatory progress in a meaningful

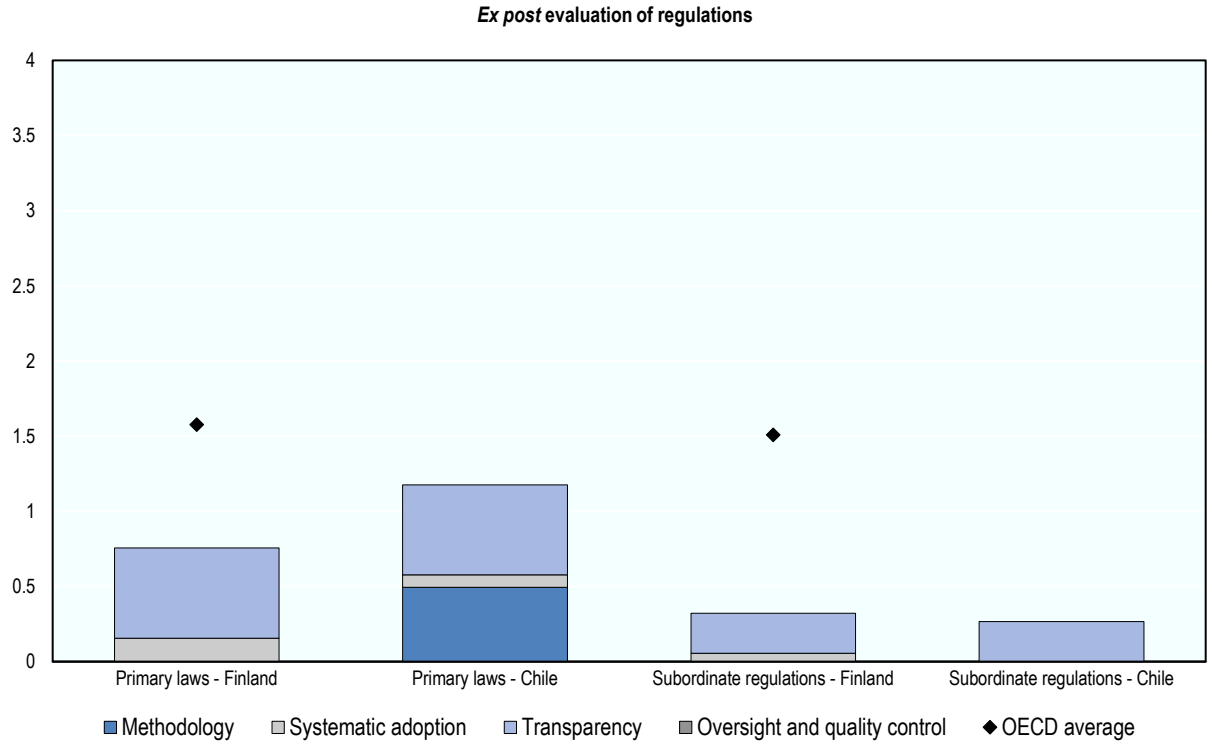
and credible way, OECD research indicates that governments will need both types of indicators (pre- and post- adoption) to measure relevant outcomes. In this area, Finland and Chile both currently perform less favourably than their average OECD peers, particularly in conducting *ex post* evaluations, as shown in Figure 1.1 and Figure 1.2 below.

Figure 1.1. Indicators on *ex ante* Regulatory Impact Assessment in Finland and Chile versus OECD average



Source: (OECD, 2015[7]).

Figure 1.2. Indicators on *ex post* evaluation of regulations in Finland and Chile versus OECD average



Source: (OECD, 2015[7]).

Regulatory areas such as public procurement can be used to increase the efficiency and effectiveness of public spending. This places a focus on assessing the current 'productivity' of procurement activity, to gain an understanding of how it can be improved. The importance of continuously evaluating the performance of the national procurement system is underlined by its inclusion in the OECD Recommendation on Public Procurement, as described in Box 1.1.

Box 1.1. OECD Recommendation of the Council on Public Procurement – principle on evaluation

X. (The Council) RECOMMENDS that Adherents drive performance improvements through evaluation of the effectiveness of the public procurement system from individual procurements to the system as a whole, at all levels of government where feasible and appropriate.

To this end, Adherents should:

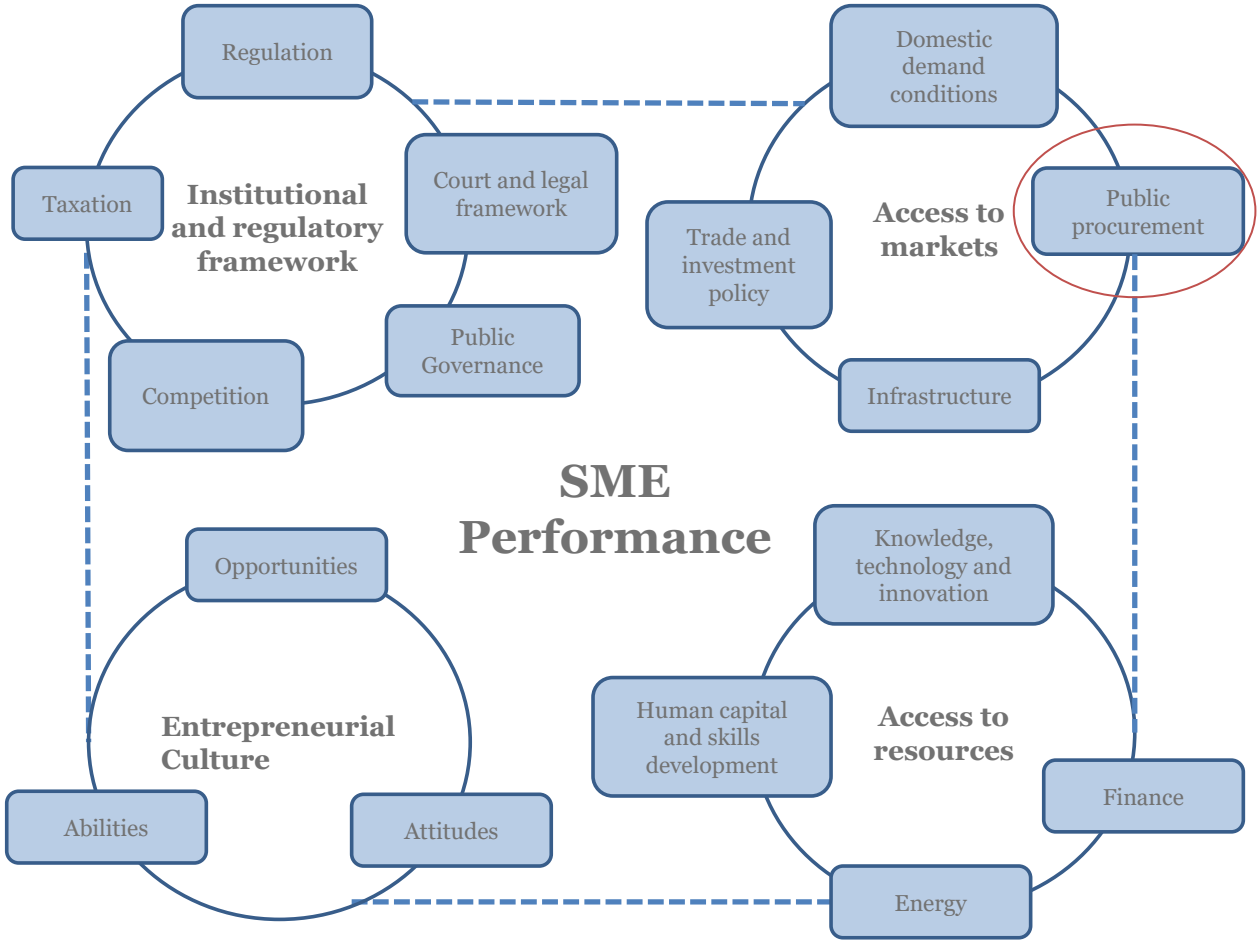
i) Assess periodically and consistently the results of the procurement process. Public procurement systems should collect consistent, up-to-date and reliable information and use data on prior procurements, particularly regarding price and overall costs, in structuring new needs assessments, as they provide a valuable source of insight and could guide future procurement decisions.

ii) Develop indicators to measure performance, effectiveness and savings of the public procurement system for benchmarking and to support strategic policy making on public procurement.

Source: (OECD, 2015[2]).

Setting SMART objectives (a methodology for effective measurement of results) requires goals that are Specific, Measureable, Assignable, Realistic and Time-related. Policy-makers have indicated that when evaluating the impacts of regulations or policies, the 'Assignable' part of the SMART criteria can be the most challenging given that implementation is likely to occur across several different ministries (Banks, 2018[8]). This also becomes more complex when procurement is just one of the many levers that can be used to impact a governmental priority. As shown in Figure 1.3, procurement is one of many policy areas that impact SME performance. Therefore, measuring the influence of each policy area requires a coordinated approach and comprehensive measurement framework spanning the work of multiple ministries.

Figure 1.3. Government policy areas impacting SME performance



Source: (OECD, 2017[9]).

The United States has established an ongoing performance management framework, owned and driven at the Presidential-level, which sets specific governmental targets that cut across different ministries yet are still measured centrally, as described in Box 1.2.

Box 1.2. Implementing cross-agency goals and targets in the United States

The President's Management Agenda lays out a long-term vision for modernising the United States Federal Government in key areas, in order to improve the ability of agencies to deliver mission outcomes, provide excellent service, and effectively steward taxpayer dollars. To drive these management priorities, the Administration leverages Cross-Agency Priority (CAP) Goals to coordinate and publicly track implementation across Federal agencies.

Each of the 18 CAP goals names a senior accountable official and establishes concrete goals and trackable metrics to ensure public accountability for each of the goals. Several goals relate to public procurement, including a commitment to improve the transfer of federally-funded technologies from lab-to-market, and most notably the goal of improving category management by leveraging common contracts and best practices to drive savings and efficiencies.

The category management goal identifies and names two owners from two different contracting authorities. Progress against goals is reported on the performance.gov site every 3 months, with a more fulsome report produced each year. The goal is summarised under the following three sub-headings:

- **Goal Statement:** Federal agencies will leverage common contracts in order to buy common goods and services as an enterprise. By the end of financial year 2020, the Government will achieve $18 billion in savings for taxpayers by applying category management principals—or smart decision-making where agencies buy the same kinds of goods and services through best value contract solutions—to 60% of common spend (this savings target is supported by a savings methodology). In addition, the Government will reduce duplicative contracts by 50 000, potentially reducing administrative costs by hundreds of millions of dollars.
- **The Challenge:** The government spends over $300 billion on common goods and services every year. However, because agencies buy in a fragmented manner, taxpayers often do not get the benefit of the government's buying power. Hundreds—and in some cases thousands—of duplicative contracts are awarded to the same vendors for similar requirements. This fragmentation leads agencies to pay significantly different prices—sometimes varying by over 300%—for the same items.
- **What Success Looks Like:** Success means the government will not only save taxpayer dollars but will improve mission outcomes. For example, this work will allow: law enforcement personnel to ensure their safety through easy access to equipment such as ammunition and body armour; medical professionals to save time and focus more on patients by ordering pharmaceuticals through electronic catalogues; agencies to more easily prioritise modernising the Government's IT infrastructure, to include efforts such as buying standardised computers; and the goal will be evaluated using industry best practice metrics, including savings, spend through common contract solutions, reduction of duplicative contracts, small business utilisation and training the workforce.

Source: (Performance.gov, n.d.[10]).

1.2. Establishing metrics for measuring procurement impact

1.2.1. Qualitative and quantitative indicators must be based on measurement priorities and data availability

Efforts to measure public procurement systems at present tend to take two forms:

- **Qualitative measures:** A subjective assessment of the attributes of a national procurement system, such as the OECD's Methodology for Assessing Procurement Systems, which assesses compliance against several indicators. For example, under the second pillar (out of 4) of the MAPS framework on Public Procurement Operations and Market Practices, compliance with a sub-indicator on procurement planning is measured according to compliance with a number of statements (e.g. "The requirements and desired outcomes of contracts are clearly defined") (OECD, 2016[11]). In the case of MAPS assessments, quantitative indicators are used to assess the level of compliance with certain principles, and are integrated into the score based on an overall methodology that is used by an expert assessor.
- **Quantitative measures:** Composite indicators that span different procurement operational areas, according to the type of data that is available. For example, the effectiveness of tenders might be assessed based on the average number of tender responses submitted (Hoxha and Duli, 2014[12]).

Several different indicator groupings have been suggested by academic and international organisations, focussing on various aspects of the procurement system; several are described below.

Indicators of a 'sound procurement system'

The OECD developed a suite of indicators with the intention of describing the functions of a 'good procurement system'. A good or sound procurement system was considered to meet two conditions, which were: the existence of decision centres setting possible multiple and non-contradictory objectives, and periodically assessing whether the system works coherently with those objectives; and the system is built on a set of processes that maximize the likelihood of reaching the system's objectives while minimising the use of resources. To measure the existence of such a system, five classes of indicators were developed using a combination of quantitative and qualitative measures (OECD, 2012[13]):

- **Strategic leadership:** When the number of contracting authorities is high enough and when procurement processes pursue more than one single objective, it becomes of paramount importance to assess whether there are institutional actors steering the system towards the desired goal, that is, setting a consistent set of objectives, designing an assessment system and correction mechanism. Many of the metrics in this section are qualitative in form, yet don't necessarily measure outcomes or impact (e.g. number of distinct objectives listed in the strategy).
- **Objectives:** This section aims at discussing the main objectives of public procurement strategies (e.g. savings/value for money, sustainability, promotion of SMEs) and how these could be measured, building on the experience of selected OECD countries. This section uses mainly quantitative measures.
- **Procedures/processes:** The organizational dimensions in public procurement refer to the set of arrangements designed to meet needs for goods/services/civil

works. Different organisational solutions often have different implications for the human resources and duration of procurement processes. This category gathers indicators aimed at capturing the main features in terms of i) demand aggregation; ii) level of specialisation of purchasing organisations; iii) size of workforce; and iv) duration of public procurement processes.

- **People:** Traditionally, compliance with policies and procedures was a primary focus for more transactional procurement; whereas today's public procurement professionals encounter more complexity and a more central role in organisational performance. Procurement professionals are asked to carry out market intelligence analyses, to state and pursue several co-existing objectives, to handle complex contracting arrangements and to execute and administer them. In order to assess to what extent the acquisition and the development of human capital in public procurement is considered a top-ranked priority, measurement could consider the professional profile of the workforce and human capital development and career development.
- **Relationship with suppliers, end-users and other stakeholders:** A constructive and non-adversarial relationship with the supply market is essential to fully reap the benefits of well-designed public procurement processes. The proper execution of public contracts matters not only in terms integrity of procurement processes, but also because it represents the opportunity to extract the amount of value that was proposed during the tender. This category provides quantitative and qualitative measures on supplier management, as well as indicators on relationships with other stakeholders, such as end users, civil society and communities.

Monitoring Aligned with the OECD Recommendation

The grouping of indicators was revised following the development of the 2015 Recommendation of the Council on Public Procurement. The Recommendation built upon the foundational principles of the 2008 OECD Recommendation on Enhancing Integrity in Public Procurement, expanding them to reflect the critical role governance of public procurement must play in achieving efficiency and advancing public policy objectives (OECD, 2015[2]).

A suite of measures was developed to try to both assess the extent to which the Recommendation had been developed, and to measure the efficiency and effectiveness of national systems. The measures were not officially adopted by the Working Party of Leading Practitioners in Public Procurement because of challenges for some member countries to access the necessary data. However, the framework still indicates the importance of measuring progress against the 12 pillars of the Recommendation.

Procurement Value Levers

This group of indicators, proposed by the Public Spend Forum, focuses on four areas that are seen to be key to delivering value through procurement. Several indicators sit underneath these categories of metrics (Public Spend Forum, 2016[14]).

- **Managing total cost:** these metrics measure how well an organisation is applying various leading practices in managing cost such as achieving better prices, managing specifications, managing demand etc.
- **Managing and engaging suppliers:** This area is focused on measuring how well an organisation is managing and collaborating with suppliers in terms of

meaningfully engaging suppliers, achieving socio-economic objectives, and managing supplier performance.

- **Managing internal operations and customer satisfaction:** Efficiency and customer satisfaction is the focus of this metrics area. Examples include measuring cycle time, internal procurement function costs and of course internal customer satisfaction with the procurement function.
- **Managing the workforce:** The focus of this metrics area is on acquiring, retaining and developing leadership and broader talent with the required qualification, which is key to building a world-class procurement system.

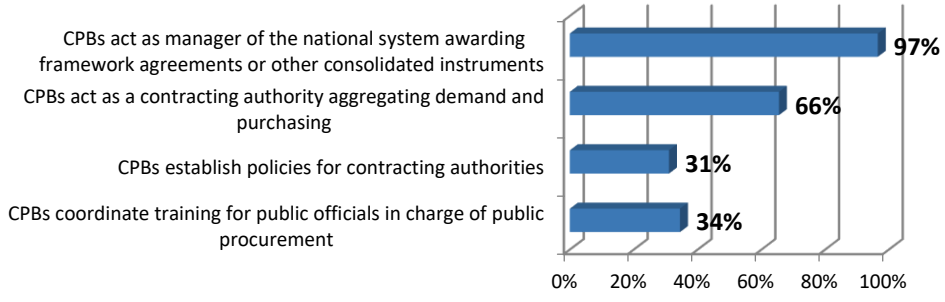
The frameworks above differ based on governments' priorities for measurement and the availability of data. Different approaches for collecting and using micro-level data are discussed in the following section.

1.2.2. Data availability means measurement should start with centralised activity

A central purchasing body (CPB) is a contracting authority that: i) acquires goods or services intended for one or more contracting authorities; ii) awards public contracts for works, goods or services intended for one or more contracting authorities; or, iii) concludes framework agreements for works, goods or services intended for one or more contracting authorities. There are numerous benefits resulting from centralised purchasing activities, including better prices through economies of scale, lower transaction costs and improved capacity and expertise (OECD, 2015[15]).

Recent developments on the roles of CPBs in OECD countries reaffirm their strategic role as an efficiency enabler. Central or coordinated purchasing is carried out in several ways, from the facilitation of purchasing through framework agreements to a more direct service involving aggregated purchasing and warehousing of products. Since 2014, CPBs in an increasing number of OECD countries have established framework agreements (FAs), as in Germany, Norway, Poland and the Slovak Republic. At the same time, fewer countries' CPBs purchase on behalf of other contracting authorities (19 countries) in 2016, compared to 2014. CPBs in OECD countries increasingly focus on strategic aggregation of demand through development and use of procurement tools, including framework agreements and dynamic purchasing systems, to achieve greater value for money, as shown below.

Figure 1.4. CPB strategies in OECD countries



Source: (OECD, 2017[16]).

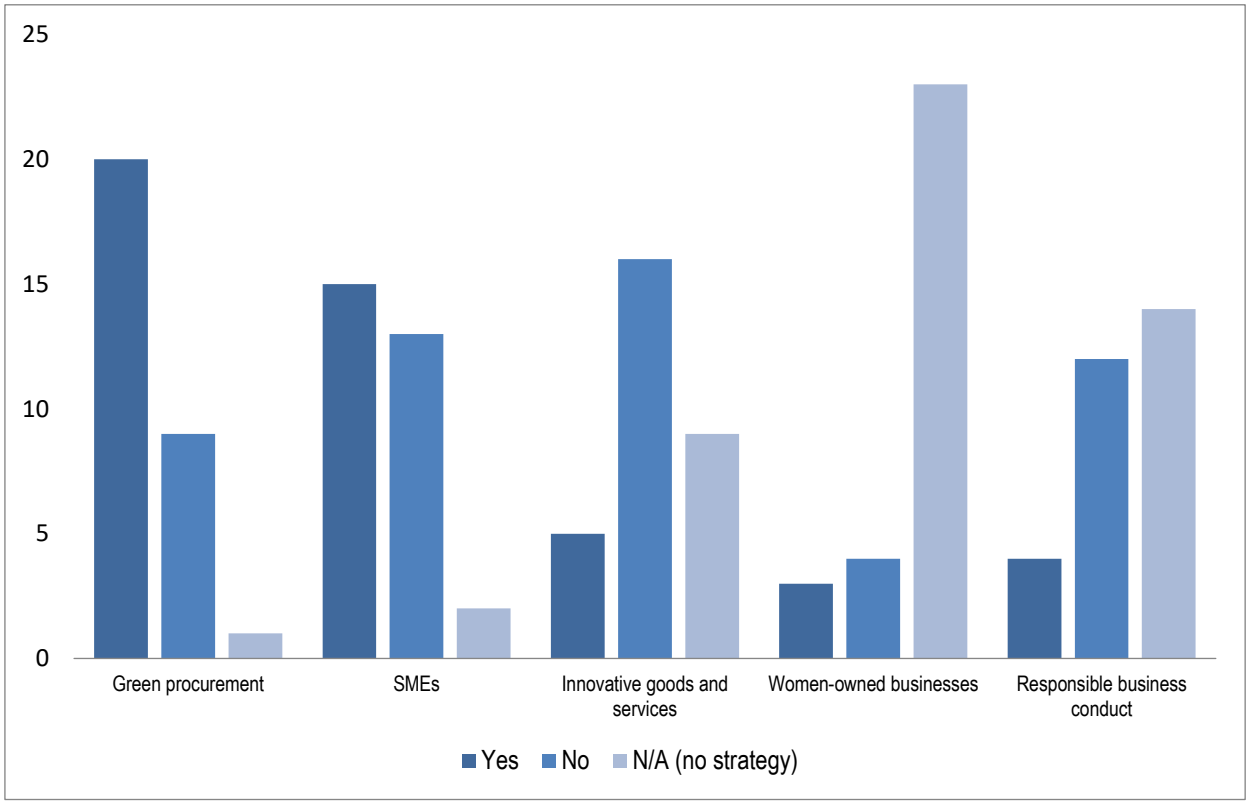
Other common roles of CPBs include co-ordinating training for public officials in charge of public procurement (10 countries) and establishing policies for contracting authorities (9 countries) (OECD, 2017[17]).

In 31% of OECD countries, CPBs also act as the policy-making body, and are therefore responsible for implementing the policies that govern the procurement system.

Yet, based on data collected from OECD countries in 2016, only 52% of OECD countries regularly measure the implementation of the CPB's objectives, and 22% do not measure at all (OECD, 2017[17]). Responses indicate that measurement focuses on the delivery of savings and occasionally involves the use of user satisfaction surveys to measure the success of FAs and other services. For example, to incentivise good service delivery, employees of Hansel, Finland have their performance bonuses attached to scores from customer satisfaction surveys.

In relation to strategic procurement policies, 75% of countries do not measure the implementation of secondary policies related to innovation, and 46% do not measure policies aimed at supporting SME's. The extent to which OECD member countries measure the implementation of strategic procurement policies is shown below.

Figure 1.5. Measurement of results of strategic procurement policies in OECD countries



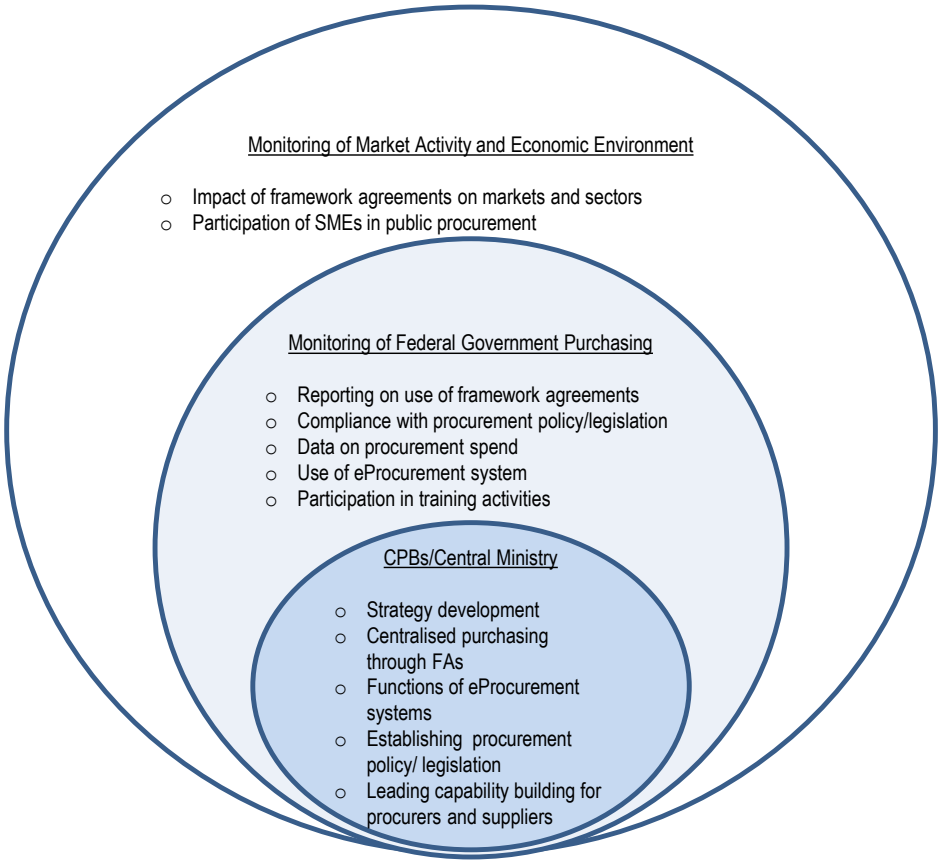
Source: (OECD, 2017[16]).

There are also broader questions, for example, related to how centralised procurement contributes to national economies that are challenging for CPBs to answer.

As a result of the increased buying power involved, centralised procurement activity has a greater economic impact than stand-alone procurement conducted by contracting

authorities. Therefore measuring the work of CPBs will go some way to measuring public procurement. The ease of measuring public procurement activity decreases as it extends beyond centralisation. In Figure 1.6 below, the expanding circles illustrate that a large part of public procurement takes place outside of CPBs, making it harder for policy-makers to collect data and measure impacts.

Figure 1.6. Illustration of different levels of procurement activity



Countries have a broad range of maturity in their ability to measure the broad range impacts stemming from procurement activity. The changing nature of the role of CPBs across OECD countries is just one of the many nuances that make it challenging to use performance data to conduct benchmarking or identify simple and comparable metrics across countries. Each country has its own institutional settings, policy objectives and legislative framework, meaning that any metrics that are developed to compare performance across countries would require significant caveats. Building on the above discussion on the use of indicators for measuring procurement activity, Table 1.1 below illustrates the generic metrics that can be used to measure public procurement performance at various levels of government, and the data requirements for operationalising them.

Table 1.1. Metrics for measuring procurement objectives at various levels of government activity

	Objective	Metric description	Implication for government	Data requirements
Measuring CPB Performance				
Economic impacts	***Inputs – General***			
	Overall inputs required of CPB	Measurement of number of staff and cost in relation to spend levels and activities carried out	Setting optimal staffing levels for completing centralised activity	Staffing levels; cost of running CPB; breakdown of time spent on different activities
	Inputs – Framework Agreements (FAs)			
	Cost of establishing framework agreements (FAs)	Number of staff and time to develop FA centrally	Can be used as a benchmark of cost of central vs decentralised purchasing	Cost and time of staff (inside and outside of CPB) spent on establishing and managing FAs
	Increased competition in FAs	Trends in supplier participation in FA tender processes	Indication of increased interest in working with government, as well as assumption that increased competition reduces prices.	Numbers of bids submitted for different stages of each FA (including call-off stage)
	SME participation in FA tenders	Proportion and number of bids received from SMEs in FA tenders	Measure of success of policies to reduce barriers to SME participation in order to increase economic activity of SMEs	Number of bids submitted for different stages of each FA by businesses categorised as SMEs
	Inputs – Capability building and consulting services			
	Spend/time on advisory services and resources	Level of CPB spend and personnel time consumed by resources to support the procurement activity of CAs	Use of central pool of expertise to improve outcomes and manage risk across the broader government spend portfolio	Staffing levels related to advisory services; additional costs for providing such resources and tools
	Training spend	Spend/time on providing training/certification services to procurement personnel	Increasing efficiency and effectiveness of public procurement by lifting staff capability	Cost of providing training courses, and amount of employee time consumed in delivering training
	Outputs – Framework Agreements			
	FA hard savings	Reduction in price from FAs compared to market price, related to amount of contracting authority spend through the FA	Increased value from government spending	Cost of goods and services agreed in FA (or cost paid by CAs in second stage) versus market rate for CA or centrally agreed rate, depending on methodology
	FA time savings	Measurement of time savings from contracting authorities' (CA) use of FAs	Increased efficiency for civil service	Average time spent by CA personnel to establish a contract for the relevant good or service
	FA customer satisfaction	Level of satisfaction of CAs that FAs meet price, service and quality expectations	Indication that FAs are effectively supporting the delivery of public services	Survey results from users of FAs from within CAs
	Efficiency in second-stage FA processes/ through dynamic purchasing system (DPS)/other instruments – businesses	Time taken to complete second stage down-select process	Value for money (i.e. revenue received compared to cost of competing) for private sector in participating in FA tenders	Assessment of time taken for businesses (averaged across several business profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS

	Objective	Metric description	Implication for government	Data requirements
	Efficiency in second-stage FA processes/DPS/other instruments – CAs	Time taken to respond to second stage process in relation to degree of success	Increased efficiency for civil service	Assessment of time taken for CAs (averaged across several CA profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS
	SME success	Proportion of SME bids that go onto both be selected and generate revenue from FAs	Contribution to economic strength of SMEs, potentially resulting in job growth	Ratio of SMEs that are successful in FA tender. For multi-stage FA, assessment of success at 1) initial tender stage and 2) call-off stage (and number and value of contracts awarded to SMEs)
	Impact of innovative procurement	Introduction of innovative products and services to FAs through specific innovation policies and tools	Innovative goods and services can improve public services and give businesses a competitive advantage, potentially in overseas markets	Ratio of goods and services purchased that meet innovation criteria (e.g. purchased through PCP, first introduction into domestic market etc).
	Outputs – Capability building and consulting services			
	Spend under advisory services	Level of CA spend of projects that are subject to advisory services provided by CPB	Use of central pool of expertise to improve outcomes and manage risk across the broader government spend portfolio	Information on contracting authority projects (e.g. type of procurement, spend level) that have received support from CPB
	Satisfaction with advisory services	Feedback from CAs on the effectiveness of advice and support provided through CPB consulting/advisory services	Indication of effectiveness of support and advice provided by CPB staff	Survey response from relevant CAs
	Qualified/certified personnel	Ratio of procurement personnel	Increasing efficiency and effectiveness of public procurement by lifting staff capability	Levels of certification in procurement professionalisation of workforce versus overall workforce numbers
Environmental impacts	Reduction in energy consumption	Application of a consistent lifecycle costing methodology to measure energy consumption from certain FA product categories	Will help to achieve governmental and SDG environmental targets	Comparison between energy consumption of historical goods and services from FAs and new goods and services selected using MEAT or other criteria
	Reduction of CO_2 emissions	Measurement of changes over time in CO_2 emissions from goods and services in FAs	Will help to achieve governmental and SDG environmental targets	Comparison between CO_2 emissions from historical goods and services from FAs and new goods and services selected using emissions as criteria
	Improvement in air/water quality	Comparison of the impacts that FA goods/services and works have on water and/or air quality	Will help to achieve governmental and SDG environmental targets	Comparison between impacts on air/water quality of historical goods and services from FAs and new goods and services selected using environmental considerations as criteria

	Objective	Metric description	Implication for government	Data requirements
Social impacts	Transparency in use of FAs	Level of public access to tender documents related to FAs	Demonstration of transparency in public procurement, thereby increasing accountability and public trust	Proportion of FA tender documents that are shared openly in a format allowing review and analysis
	Open and inclusive procurement	Ability of all suppliers to compete for opportunities to participate in FAs	Improved perception of accessibility of public procurement procedures	Proportion of centralised tenders (and second-stage processes) that use open procedures as opposed to restricted or closed tenders
	Stakeholder perception and involvement	Feedback from business and/or civil society on centralised public procurement activity	Improve perception of public procurement through increasing engagement with stakeholder groups	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to FA performance
	Use of social criteria in FAs	Extent of centralised tenders pursuing social objectives in addition to primary objective	Use of public funds to compel private sector to deliver additional benefits to citizens	Ratio of FAs pursuing social objectives (and where possible, aggregation of social outcomes secured through FAs)
	Skills/jobs creation	Quantification of use of social clauses in centralised contracts to create jobs or deliver training courses	Use of public funds to compel private sector to deliver additional benefits to citizens	Number of jobs/training courses/qualifications generated through FAs (note: specifically generated through contract clauses)
Measuring National Procurement System Performance				
Economic impacts	***Inputs***			
	Cost and time of procurement processes	Measurement of time taken to complete tender activity by personnel involved	Increased efficiency of civil service and ability to reduce headcount or spend time on more valuable activities	Time taken (and any associated overt costs, not including employee salaries) by government personnel, including non-procurement roles, to undertake procurement activity
	SME participation	Proportion and number of bids received from SMEs	Measure of success of policies to reduce barriers to SME participation in order to increase economic activity of SMEs	Number of bids submitted for government tenders by businesses categorised as SMEs
	Business perceptions on cost and time of participating in government tenders	Assessment of public procurement by businesses that have participated	Feedback on government performance and accessibility from key stakeholder group	Survey responses, including quantitative results, on time taken (and resources engaged) in responding to government tenders
	Overall inputs of national procurement system	Measurement of number of staff carrying out procurement activity in relation to spend levels or number of procedures	Allows benchmarking of distribution of procurement work between CAs, regions and countries	Data/estimates on number of personnel in each contracting authority engaged in procurement activity, and value of procurement spend at each contracting authority
	Business participation and competition	Trends in supplier participation in government tender processes	Indication of increased interest in working with government, as well as assumption that increased competition reduces prices.	Average number of bidders per tender; ratio of tenders that are open procedures versus limited tenders and direct awards

	Objective	Metric description	Implication for government	Data requirements
	E-procurement inputs	Cost and resources consumed to establish, upgrade and/or maintain e-procurement system	Indication of inputs for establishing a national e-procurement system(s)	Direct costs for purchasing, upgrading or maintaining e-procurement system; personnel costs associated with system management and maintenance
	Outputs			
	Government customer satisfaction	Assessment of results of public procurement by stakeholders within CAs that benefit from procurement services	Allows analysis of whether procurement is effective at delivering public services	Survey results from teams within CAs that use procurement services on service/efficiency/effectiveness provided by public procurers
	SME success	Proportion of SME bids that go onto both be selected and generate revenue from government tenders	Contribution to economic strength of SMEs, potentially resulting in job growth	Ratio of SMEs that are successful in government tenders, and number and value of contracts awarded to SMEs
	E-procurement time savings	Measurement of savings generated through e-procurement through measurement of average reductions versus proportion of system use	Demonstration of how introducing electronic tools has increased efficiency	Assessment of time taken for CAs and businesses to conduct tender procedures before and after introduction of different digital procurement functionalities
	Use of whole of life costing	Contracts awarded on the basis of MEAT criteria as opposed to lowest price	Can lead to reduction in total costs paid by government while also reducing environmental impacts	Ratio, value and number of contracts awarded following a procedure containing life-cycle costing award criteria
	Cost and time reduction resulting from process simplification	Measurement of time savings achieved through introduction of tools	Demonstration of how policy changes to simplify processes have increased efficiency	Measurement of time taken by government and business personnel to complete tender procedures both before and after efforts to improve or simplify processes (e.g. use of model contracts)
Environmental impacts	Reduction in energy consumption	Application of a consistent lifecycle costing methodology to measure energy consumption from certain product categories	Will help to achieve governmental and SDG environmental targets	Comparison between energy consumption of historical goods and services bought by government and new goods and services selected using MEAT or other criteria
	Reduction of CO_2 emissions	Measurement of changes over time in CO_2 emissions from goods and services bought by government	Will help to achieve governmental and SDG environmental targets	Comparison between CO_2 emissions from historical goods and services bought by government and new goods and services selected using emissions as criteria
	Improvement in air/water quality	Comparison of the impacts that goods/services and works bought by government have on water and/or air quality	Will help to achieve governmental and SDG environmental targets	Comparison between impacts on air/water quality of historical goods and services bought by government and new goods and services selected using environmental considerations as criteria

	Objective	Metric description	Implication for government	Data requirements
Social impacts	Transparency in government contracting	Level of public access to government tender documents	Demonstration of transparency in public procurement, thereby increasing accountability and public trust	Proportion of government tender documents that are shared openly in a format allowing review and analysis
	Open and inclusive procurement	Ability of all suppliers to compete for opportunities to participate in FAs	Improved perception of accessibility of public procurement procedures	Proportion of government tenders that use open procedures as opposed to restricted or closed tenders
	Stakeholder perception and involvement	Feedback from business and/or civil society on government procurement activity	Improve perception of public procurement through increasing engagement with stakeholder groups	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to public procurement
	Use of social criteria in government contracts	Extent of government tenders pursuing social objectives in addition to primary objective	Use of public funds to compel private sector to deliver additional benefits to citizens	Ratio of public contracts pursuing social objectives (and where possible, aggregation of social outcomes secured through public contracts)
	Skills/jobs creation	Quantification of use of social clauses in government contracts to create jobs or deliver training courses	Use of public funds to compel private sector to deliver additional benefits to citizens	Number of jobs/training courses/qualifications generated through public procurement (note: specifically generated through contract clauses)

Source: (OECD, 2016[11]) (The World Bank, 2017[18]).

The above metrics are generic in that they measure policy goals that are common across countries. Many are just a starting point and may enable further measurement of economic impacts. For example, measuring SME success in public tenders may be supplemented with additional information to find out whether SMEs are economically stronger or have been able to increase exports as a result of winning government business. Similarly, the longer-term impact of innovative goods and services and the businesses that develop them with government support may be measured in further detail.

Some areas of activity, such as the development of procurement capability through training and other means can have a significant contribution towards improving procurement outcomes, and it may be the enabler with the greatest overall effect. However, examples of effective measurement of capability building are limited, other than the counting of training hours or qualifications. It may be possible to make connections between the levels of qualifications achieved by procurement professionals and the effectiveness of their outputs; however, this is not yet possible in a typical country context.

The case studies that follow will assess each country's ability to measure these areas. However, public procurement is often used to deliver different and quite specific objectives. In these cases, impact must be monitored at an individual project level, and then aggregated where possible. This is particularly relevant where circumstances change in different geographies or sectors, making certain objectives, such as SME participation for example, particularly important.

1.2.3. Tracking impact of public procurement from project to portfolio level

As the previous section illustrates, the impact of public procurement can be approached from different perspectives: firstly, through a focus on the measurement of procurement's impact on the overall economy at an aggregated level, and secondly a focus on the impact of individual procurement processes.

Measurement can be carried out on the outcomes of individual procurement exercises in order to form an overall picture of procurement activity. This approach presents its own challenges, most notably the requirement to build this discipline into the daily work done by procurement professionals. It does, however, present an opportunity to develop a framework that measures the far-reaching impacts of public procurement.

Considering a tender as a 'project' can help to understand and assess the varied and often conflicting impacts of a specific procurement. A procurement project spans from the establishment of a need, to the delivery and then ongoing management of a supplier delivering a good or service. This perspective highlights that every procurement process' goal is to achieve goals and deliver benefits. Additionally, a strategy such as 'delivering sustainable procurement' can be viewed as a programme, or a collection of projects.

Countries have developed frameworks to support the assessment and measurement of project success. Projects in the private sector have been assessed according to a number of criteria, many of them relating to financial impact, or the degree to which the project was completed on time and on budget. Research by the Project Management Institute identified a number of criteria that were used by private sector respondents to assess a project's success, as shown in Table 1.2.

Table 1.2. Common measures of project success

Success Criterion	Description	Frequency of Mention*
Technical performance	To what extent the technical requirements specified at the commencement of the execution phase were achieved.	93%
Efficiency of project execution	The degree to which targets of time and cost were met.	93%
Managerial and organizational implications	A measure of user satisfaction, incorporating the degree to which the project was carried out without disturbing corporate culture or values.	43%
Manufacturability and business performance	The ease with which the product resulting from the project can be manufactured and its commercial performance.	43%
Personal growth	The satisfaction of the project team, particularly in terms of interest, challenge, and professional development.	29%
Project termination	The completeness of the termination, the absence of post-project problems, and the quality of post-audit analysis.	14%
Technical innovativeness	The success in identifying technical problems during the project and solving them.	14%

Note: A percentage of mentions from 14 papers reviewed.
Source: (Freeman and Beale, 1992[19]).

Many of these measures are inadequate for government, as they are not able to measure the broad spectrum of outcomes that a government may seek to achieve from their spending, which range from constructing sports facilities to incarcerating prisoners. Each of these procurement projects might have a broad range of outcomes that they seek to achieve, and each must be aligned with relevant government strategies. In response to this challenge, the UK government developed an approach to support the delivery of major projects through structured measurement, as illustrated in Box 1.3.

Box 1.3. Benefits management approach to track outcomes from government spending in the UK government

According to the structured project delivery methodology Prince2, developed by the UK government, business cases are developed to secure funding for government investments. The 'benefits' that are expected to be delivered by a project are typically recorded within the business case, but the realisation of those benefits and their relationship with the investment that was initially requested are not often tracked, monitored or reported on. The concept and practice of benefits management was developed in response to this challenge. It involves detailing the expected benefits from a project in a measurable way, and continuing to monitor whether they have been realised (and whether the costs required to deliver them have increased) over time.

According to the UK government's Guide for Effective Benefits Management, a benefit is defined as "the measurable improvement resulting from an outcome perceived as an advantage by one or more stakeholders, which contributes towards one or more organisational objectives". Fundamentally this means that benefits:

1. Should be measurable – if they cannot be measured they cannot be claimed as 'realised';
2. Are the improvement resulting from the outcome (the end result) of the change, they are not the change itself;
3. Are in the eye of the beholder – in other words different stakeholders will value the same benefits differently. Additionally, in some cases, a benefit to one stakeholder may be a dis-benefit (an outcome perceived as negative) to another;
4. Create the link between tangible outputs and strategic goals; and
5. Ensure there is alignment of effort, resources and investment towards achieving organisational objectives.

Preparation of the public procurement procedure should start with an identification of the targets and benefits that can be achieved. A key product during this stage of the benefits management approach is development of a Benefits Logic Map, which links drivers, enablers and business change that will result from the project to the expected benefits and dis-benefits, and links the benefits to objectives and goals. An example of Benefits Logic Map for environmentally friendly procurement is provided in annex A to this chapter. The desired objectives should comply with the S.M.A.R.T. principles, i.e. they should be **S**pecific, **M**easurable, **A**chievable, **R**ealistic and **T**ime-bound. This also means that consideration should be given to how data on benefits and dis-benefits are tracked and aggregated so that a 'bottom-up' view of the impacts of the whole public procurement system can be monitored.

The last phase of every procurement project should be focused on evaluation, providing information on the effectiveness of the procedure itself as well as an analysis of whether the outcome has helped to achieve the expected benefits. Creating public procurement strategies according to these rules can boost the efficiency and effectiveness of the public procurement system and can lead to the achievement of desired benefits, thanks to proper design, monitoring and evaluation of the process.

Source: (Infrastructure and Projects Authority, 2017[20]); (Department of Finance, n.d.[21]).

In procurement terms, these benefits are often described as 'outcomes'. A specific form of contracting has been developed tied directly to the achievement of outcomes (known as 'outcome-based contracting/commissioning', also referred to as 'payment by results'. Unlike traditional contracts where suppliers are paid for delivering services or 'outputs', these contracts are typically structured so that payment is only made on meeting pre-determined goals. Such approaches have been used widely in the UK, and learnings from these approaches have led the National Audit Office to advise that these contracts need to be well-structured and managed to be successful. This approach is described in more detail in Box 1.4.

Box 1.4. Contracting for outcomes in the United Kingdom

The UK government looked to change the way suppliers that delivered certain types of public services in order to build a closer connection between the service being delivered and the achievement of outcomes, while also encouraging suppliers to achieve outcomes by using financial incentives.

One example of this approach was a system called Social Impact Bonds, where investors put forward the money to pay for a novel or improved service and are reimbursed by the commissioner, usually a government department or local authority, when it can demonstrate progress on outcomes. This type of contracting allows suppliers more flexibility to change the way services are delivered in order to improve outcomes.

An additional burden is often placed on suppliers to provide evidence that outcomes have been achieved, leading to more data being provided to contracting authorities in order to receive payment. Application of this approach across the National Health Service in the UK has seen a variety of reimbursement models along a spectrum that differs according to the extent to which payment is linked to outcomes. An analysis of the advantages and disadvantages of each type of contracting model was also developed and is available here: https://outcomesbasedhealthcare.com/Contracting_for_Outcomes.pdf

Source: (Churchill, 2017[22]).

Provided a measurement approach is developed for monitoring individual projects, those impacts must be aggregated to form a more holistic picture. Adding up impact is easiest if there is a predetermined set of outcomes and indicators, so that all activities can use the same measures to measure impact. Overly simple indicators can be used to measure impacts that are harder to define. For example, social programmes that have a range of activities and objectives, can report on 'lives touched' in order to aggregate the diverse changes that can impact people's lives in a simple way.

Centrally developed methodologies must be developed and agreed upon by stakeholders to enable the implementation of system-wide performance metrics. Clearly, where possible the data should be collected through electronic systems to ease the reporting burden on contracting authorities. Where that is not possible, it must be clear to contracting authorities why the information is being collected. Through a World Bank project in Kosovo, a methodology was developed to standardise the data collection process so that reporting could be conducted that measured progress towards a number of objectives (described in Box 1.5).

Box 1.5. Implementing the centrally-developed indicator methodology in Kosovo

A number of procurement reforms have been established in Kosovo since 1999, including efforts towards centralisation and the implementation of an e-procurement system. The focus now shifts towards compliance and performance monitoring. The objectives of the monitoring system are to measure:

- Compliance with public procurement legislation in Kosovo;
- Performance in terms of achieving efficiency and effectiveness in carrying out procurement activities; and
- Performance in terms of increasing transparency, and improving governance.

A range of indicators were developed that different aspects related to the achievement of these objectives. To support the implementation of these indicators, a handbook was provided to contracting authorities that includes the following information for each measure:

- Indicator objective;
- How to measure each indicator;
- Data to be collected;
- Forms for the required data collection; and
- How to analyse and present the data.

The system sought to develop indicators that would be suitable to be implemented at all CAs. As a first step, the indicators were not rolled out universally, but a list of CAs was established from whom data would be collected on approximately 10-15 tenders. Monitoring would be conducted at CAs from all levels including the central level, local authorities, public utilities, independent agencies or government organisations, and regional hospitals. Procurement activities will be selected from all categories such as goods, services and works. The methodology was to be tested during the first year, and will be revised as needed based on lessons learned.

Source: (Kosovan Public Procurement Regulatory Commission, 2014[23]).

Alternatively, existing data can be harnessed for insights into the efficiency of procurement activity. Box 1.6 below describes how the different functionalities of e-procurement systems across the World Bank portfolio are used to generate different insights into how efficiently procurement activity is conducted.

Box 1.6. Approaches for measuring procurement efficiency through e-procurement at the World Bank

Measuring and analysing procurement inefficiency requires data to be collected on each step of the procurement process. The principal World Bank-wide source of procurement data is a web-based interface for entering contract information for World Bank-funded contracts. The interface, however, does not cover all contracts and captures only the final stage of the procurement process: the date of the approval of the contract award, and the date of contract signature. In effect, the interface does not provide information capable of tracking processing time at different stages of the procurement cycle, a requirement vital to tracking efficiency.

Some World Bank regions, such as Latin America and Caribbean, use the Procurement Plan Execution System (SEPA), which focuses primarily on the monitoring and execution of procurement plans related to World Bank funded projects. SEPA's objective is to promote transparency in World Bank operations and to offer a procurement management tool to borrower governments. SEPA requires the input of core procurement dates and provides the option of tracking additional procurement steps. It is, however, a standalone system and dates are inputted at the discretion of the borrower, thus introducing a high level of variability in available information by project and country, rendering the dataset unsuitable for global analysis of procurement efficiency.

It has been used to identify sources of inefficiency, however. For example, analysis showed that a procedure for buying consultancy services was prone to delays. On further investigation, this process required two documents to be prepared by the country in question and approved by the World Bank. Steps could then be taken to increase the efficiency of the process.

The Procurement Cycle Tracking system developed in the World Bank Africa region, PROCYS, is a platform of communications between the principal parties involved in the procurement process. The number of days taken at each stage of the process and the interactions between stakeholders is recorded in the system. It thus tracks not only the total elapsed time between a borrowing country submitting a document to the World Bank for approval and approval being given, but also the number of iterations between the parties, and between different approval levels within the World Bank. It currently covers over 460 projects in over 40 countries in the Africa region, and is being used to provide management information on the responsiveness of different participants in the procurement process.

Systems across the World Bank portfolio all have different objectives and architecture. While there is a wealth of information collected and analysed for specific monitoring needs, the systems do not provide necessary data to analyse the efficiency of procurement process across the World Bank.

Source: (Kumar, Nair and Piecha, 2015[24]).

2. Case Study on use of public procurement to lift productivity: Finland

Progress in the systems, skills and processes employed in the Finnish procurement system has enabled the collection and analysis of data relating to centralised procurement activity. Procurement activity that is not centralised, particularly procurement that is carried out at a municipal level, is not well captured, which prevents a holistic assessment of the national procurement system. Yet steps are in place to increase visibility and coordination across the system. This chapter discusses the state of play in Finland in relation to the use of data to measure public procurement efficiency and effectiveness. Suggestions are made on how data can be better captured or used, as well as on steps to increase the productivity of the system.

The participation of Finland in this case study on measuring productivity in public procurement presents an opportunity to take stock of achievements from reforming public services, and identify the next stage of reforms and improvements that will enable procurement to further support the growth of the Finnish economy. The centralisation of central government procurement activity has already begun to deliver benefits, with Hansel delivering value to the system not only through delivering savings from collaborative purchasing, but also acting as a centre of excellence for all other central government purchasing. Impending reforms of electronic procurement through the Finnish government's e-procurement improvement programme (named the "Handi programme") will also seek to deliver process efficiencies and contribute to the collection of data on procurement activity.

As discussed in the first chapter, data is essential to efforts to measure the impact of public procurement. While a large amount of data does exist on centralised purchasing, more is required in order to effectively measure all other central government activity, not to mention local and regional public spending, which accounts for the majority of government spending. This case study will assess the use of public procurement in Finland to achieve governmental priorities, and how those achievements are captured and measured. Addressing economic challenges in Finland through an ongoing reform agenda

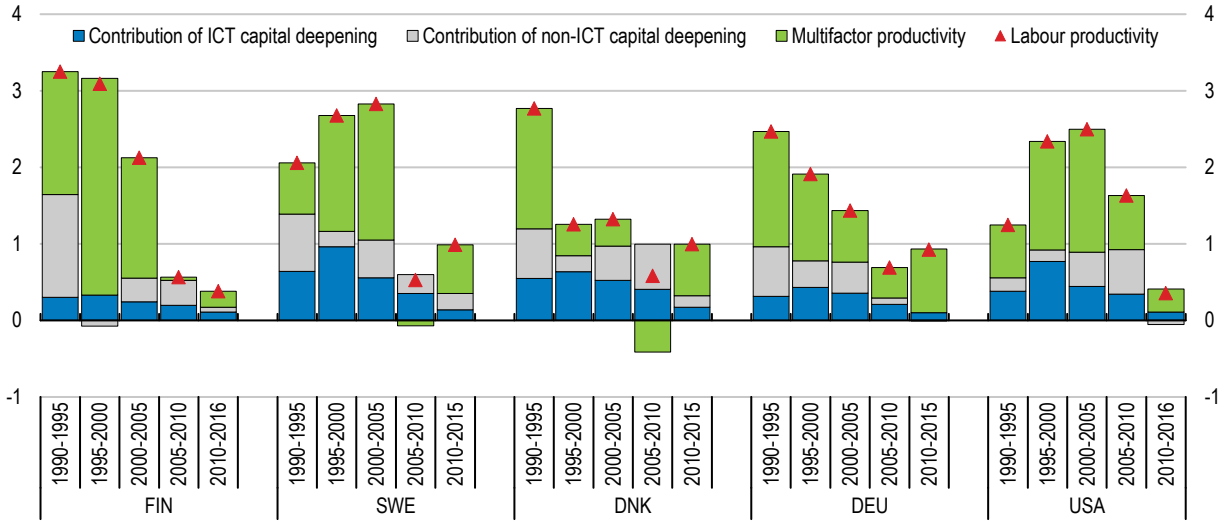
2.1. Addressing economic challenges in Finland through an ongoing reform agenda

2.1.1. Increasing productivity may help to contain the increasing amounts of pressure on public spending

Following several years of recession, the Finnish government has identified several priorities to boost economic performance. The recent trend of poor economic performance is now being abated thanks to a strong rebound in exports. The government deficit is shrinking and public debt is stabilising. Government revenue as a share of output, which is high by OECD standards, contributes to high-quality public services and low and relatively stable income inequality (OECD, 2018[25]).

Finland has an exceptional track record in education and innovation, which translated into strong productivity growth from the 1990s to the mid-2000s. However, multifactor productivity (which is a measure of economic performance that compares the amount of goods and services produced (output) to the amount of combined inputs used to produce those goods and services) has stagnated since then. This is partly due to cyclical factors and the global slowdown in productivity growth, but Finland has lagged behind neighbouring countries over recent years, as shown in Figure 2.1.

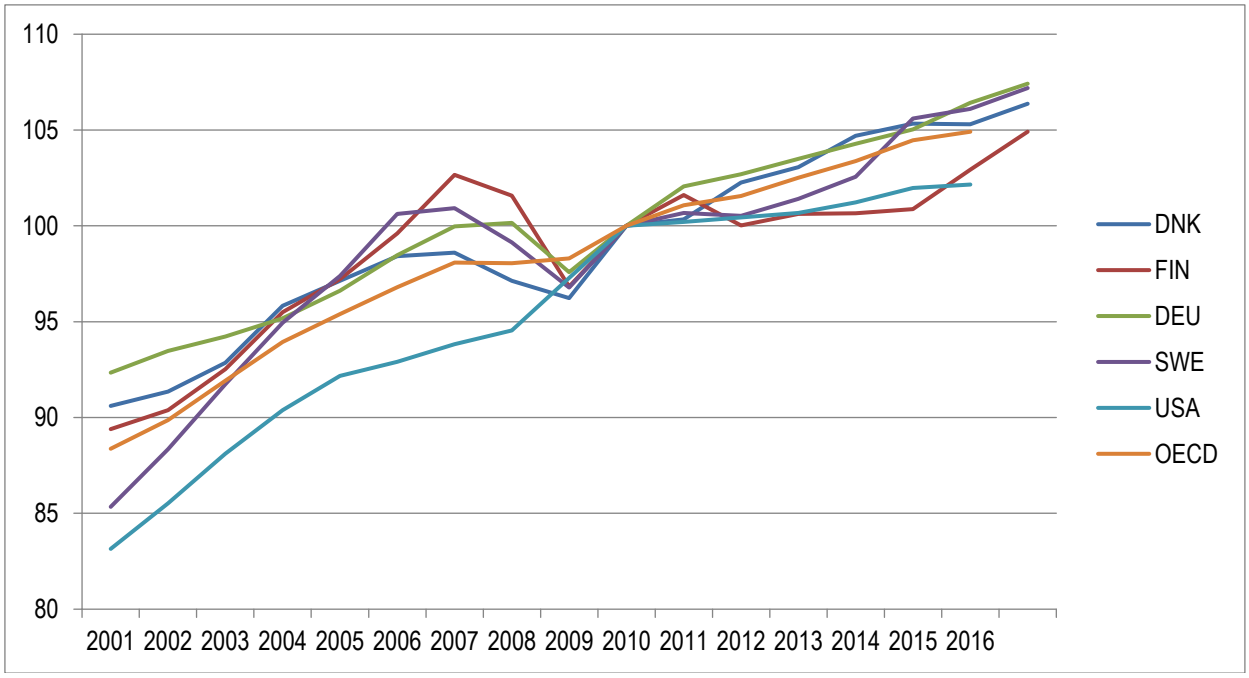
Figure 2.1. Contributions to labour productivity, total economy, annual percentage change, 1990-2016 or latest



Source: (OECD, 2018[25]).

A comparison between Finland and neighbouring countries in relation to other metrics, such as gross domestic product (GDP) per hour worked, demonstrates that countries such as Denmark and Sweden currently demonstrate more efficiency in terms of labour input as a component of the production process. This measure is considered to only partially reflect the productivity of labour, given that factors such as the personal capabilities of workers and the intensity of their effort will also impact the efficiency of production. Yet Finland has consistently performed below the level of other Nordic countries for this metric since the global financial crisis, as shown in Figure 2.2 (OECD, 2017[26]).

Figure 2.2. Comparison of GDP per hour worked amongst Nordic countries



Note: GDP per hour worked is a measure of labour productivity. It measures how efficiently labour input is combined with other factors of production and used in the production process. Labour input is defined as total hours worked of all persons engaged in production. Labour productivity only partially reflects the productivity of labour in terms of the personal capacities of workers or the intensity of their effort. The ratio between the output measure and the labour input depends to a large degree on the presence and/or use of other inputs (e.g. capital, intermediate inputs, technical, organisational and efficiency change, economies of scale). This indicator is measured in USD (constant prices 2010 and PPPs) and indices.
Source: (OECD, 2017[26]).

Further challenges are expected ahead for Finland, particularly in relation to public spending and the delivery of public services to an ageing population. The high rate at which the population is ageing is reducing labour supply and will put pressure on public finances. Analysis conducted as part of the Finnish Ministry of Finance's 2016 spending review noted that, because of the ongoing increase of public debt (which was expected to continue for several years), action would be needed to manage the expenditure pressure arising from population ageing (Ministry of Finance, 2016[27]). Hence, future growth and well-being will hinge on a higher employment rate and productivity gains, both in the private and public sectors (OECD, 2018[25]).

Lifting productivity can have a material impact on the living standards of a country. This has led economic researchers to attempt to measure a country's 'national competitiveness, defined as '*the set of institutions, policies and factors that determine the level of productivity of a country*'. National competitiveness can be said to set the level of prosperity that can be achieved by an economic system, given that a nation's standard of living hinges on the capacity of its companies to both achieve high levels of productivity and to increase productivity over time. Economic growth depends ultimately on a country's ability to upgrade itself.

2.1.2. Government reforms seek to enhance coordination and centralisation efforts

In response to the economic challenges described above, the Finnish government is implementing an ambitious and comprehensive structural reform programme, aimed at enhancing competitiveness and boosting the growth potential of the economy, while ensuring the long-term sustainability of public finances. The government programme also targets savings in government expenditure and a social welfare and health care reform aiming at reducing costs and enhancing equality in access to services.

The country will be divided into 18 autonomous regions managed by elected councils, and the government is also proposing that more specialised healthcare will be provided by dividing into five university hospital areas. The initial reform is set to enter into force in January 2020 while the changes to healthcare are still under debate. Currently, health care services are provided at the local level by municipal governments. Most municipalities are small, with a median size of around 6 000 inhabitants, which results in fragmentation of service provision, hindering economies of scale and scope, and presenting difficulties in organising services and recruiting qualified personnel (OECD, 2018[25]).

The restructure will transition from the current structure, where public services are split between two levels of government (the public sector, responsible for centrally funded and management activities, and the local/municipal governments). The regional layer of government will fit between these two, with roughly half of all municipal staff moving to roles in the regional government. At current levels, the state sector is the smallest level of government in terms of number of employees and spending (current estimates indicate EUR 6 billion of spending at the central level, compared to EUR 22 billion at the municipal level).

The high degree of autonomy held by councils and municipal authorities at present does hamper the extent to which procurement can be coordinated and/or ‘centre-led’. A centre led approach ensures that decentralised decision-making still conforms to centrally-developed policies and processes. Instead, councils have the freedom to conduct their procurement activity as they see fit. This is likely to mean pursuing regional objectives, which could be prioritising cost-effectiveness pursuing more environmentally friendly outcomes. Councils are not currently compelled to report on their activity to any state-level body, making it impossible to monitor sub-national activity. An OECD study on driving productivity in sub-national governments found that countries with heavily decentralised decision-making must identify alternative ways of incentivising performance among regional governments, as demonstrated in Box 2.1.

Box 2.1. Key findings from a report on benchmarking and performance frameworks for managing sub-national government performance

National governments implement systems to measure and influence the performance of sub-national service delivery, including frameworks based on financial rewards and reputational effects. For benchmarking, good quality data are required, to allow for the calculation of reliable indicators – metrics aimed at determining the equity, efficiency and effectiveness of public sector services. These metrics usually require data on the inputs, outputs and quality of public services.

A study of such performance frameworks in OECD countries identified the following findings:

- Performance systems are one tool for central governments to improve the efficiency and effectiveness of and access to sub-national services. Performance systems accomplish this by reducing information asymmetries between different levels of government or by stimulating competition between sub-national governments. When designing performance systems, collaboration across levels of governments is necessary to construct relevant metrics.
- Performance systems that aim to create competition between sub-national governments (through transparency of performance information) may be more applicable for countries with strong, centralised governments. A more collegiate or collaborative form of benchmarking which is less likely to rate or rank participants will be more amenable to sub-national governments with greater revenue power and administrative responsibilities.
- Measuring the output and quality of public services presents many challenges. However, capturing the efficiency and effectiveness of public services is an integral aspect that requires further statistical work. Although they have weaknesses, composite indicators can help simplify vast amounts of information into an easily digestible framework. Qualitative mechanisms in the form of external inspections and user surveys are useful in providing insights into consumer experience and well-being.
- Performance systems that aim to measure and compare costs across jurisdictions are helpful to ensure that services are cost-efficient and to better understand cost discrepancies across regions. However, making cost adjustments should remove the effect of external or geographical differences, which can better ensure the accurate portrayal of cost differences.

To take Australia as an example, the Australian Constitution determines the areas of expenditure for which state governments have primary responsibility, resulting in quite narrow powers to the central government. Every year, Australia's governments co-operate in producing the Report on Government Services (RoGS), which provides information on the equity, efficiency and effectiveness of government services delivered by Australia's state governments. It is a collaborative exercise in which the Commonwealth government plays a facilitative role rather than a directive or coercive one, where service objectives and indicators are identified through a consultative approach.

Source: (Phillips, 2018[28]).

The constitutional reform in Finland seeks to achieve economies of scale, as the proposed changes in social and health care foresees that one national unit would take care of all health care related public procurement, with a view to improving the efficiency of public procurement in this sector. Moreover, there are plans for health care ICT to be centralised, though implementing this may be challenging (OECD, 2016[29]).

This is not the first significant restructure of government in recent years, following the re-organisation of state-level activities over the past 10 years. To combat the recession that took hold following the global financial crisis in 2008, the Finnish government took steps to privatise and outsource as many services as possible in an effort to reduce costs and gain economies of scale for state-level activities. Following this sizeable reform, shared service centres have been established for procurement (Hansel Oy – Hansel), property management and real estate (Senaatti), IT strategy and implementation (Valtori), financial transactions and accounts payable (Palkeet) and financial management and budgeting (Treasury). This reform has delivered significant benefits since its inception, including direct financial savings. Further savings are expected, given the lag between creation of shared service centres and the normalisation and standardisation of processes.

2.1.3. The roles of CPBs in Finnish public procurement

The Finnish legal framework requires contracting authorities to have an ownership interest in CPBs that are established to conduct procurement on their behalf. Otherwise, a separate legal mandate must be created bestowing the CPB with the authority to purchase for a group of contracting authorities. Hansel was established by law and given the authority to conduct centralised purchasing activities on behalf of state contracting authorities. The State Budget Act gives the Ministry of Finance, the owner of Hansel, a mandate to compel contracting authorities to purchase from Hansel FAs in a select number of categories.

As a result of these structural requirements, contracting authorities at the municipal level and councils cannot use FAs developed by Hansel. Instead, a separate CPB, KL-Kuntahankinnat (Kuntahankinnat), was established to act as a central CPB that provides services to municipalities. In addition, several CPBs (estimated between 5 and 10) have been established in the different regions. Further, many joint purchasing initiatives, either temporary or more established, are conducted in the regions. With no legal provision for these regional CPBs, they must be jointly owned by the contracting authorities that wish to use their services. Some regional CPBs are small and conduct "joint purchasing" services to just five or six councils. The result for regional contracting authorities is a choice between purchasing through Kuntahankinnat, their regional CPB (provided there is one), or conducting their own procurement.

Much of this landscape is about to change, as a result of a recent decision to merge Hansel and Kuntahankinnat. This change would result in a single national CPB, which can develop FAs that can be used by contracting authorities at all levels of government. Previously, legal constraints made it necessary to have separate CPBs for state- and municipal-level centralisation efforts. The upcoming merger will not only expand the buying power of government and strengthen the cost efficiencies already secured through centralised purchasing, but it will also ease the coordination of large-scale procurement improvement programmes.

However, structural issues will still exist that prevent some state-level bodies from participating in centralised activities, and therefore achieving the inherent benefits. The Handi programme, a procurement digitalisation reform programme that will modernise

electronic procurement practices for state-level entities (discussed in further detail in section 2.3.2) will not involve state bodies that are outside of central government. This means that bodies such as universities and state-owned entities, which collectively make up around 20% of spend through Hansel FAs, will not be able to use the central ordering system, the contract management system and competence development services delivered by the Handi programme. Instead, stand-alone initiatives are being developed for these entities that mirror activities in the central government. For example, the Prime Minister's Strategic Programme known as the "Government Programme" states that one actor may be made "*responsible for all basic information technology in the same way as Valtori (Government ICT Centre)*" (Prime Minister's Office of Finland, 2015[30]). This duplication of activities, roles and responsibilities inhibits efforts to increase efficiency across the system.

This issue reflects a broad trend across the Finnish government. The absence of a single entity responsible for procurement legislation, regulation, policy and tools at all levels of the Finnish government has led to a fragmented approach to improvement initiatives. The scope and reach of different procurement tools, laws and processes can differ greatly. These issues are caused by structural issues inherent in the Finnish system, and incorporating these entities into centralised procurement processes would also require the same changes to be made with respect to the human resources and finance shared service centres. However, by leaving 20% of procurement activity out of scope, the government risks reducing the benefits of initiatives to enhance centralisation and coordination.

Hansel sees its purpose as reducing public expenditure by increasing productivity in central government procurement. They do this through driving and developing central government purchasing, which is currently conducted through three business segments (Hansel, 2016[31]):

- **Central procurement:** the provision and management of FAs through which government organisations can purchase products and services without specific tendering processes. Customers are further supported through simplified tendering processes for selecting suppliers from FAs, or supplementary services including provision of a tailored FA on a turnkey basis.
- **Tendering and legal services:** Tendering services are needed when no FA exists for the scope of the procurement in question. The expertise of Hansel staff ensures that acquisitions are put out to tender in accordance with the valid rules, with the best contractual terms possible, taking account of price and quality factors.
- **Procurement development services:** This unit was established in 2016 to support broad improvements to enhance the efficiency and cost-effectiveness of procurement both inside and outside the organisation. A variety of tools and information is analysed to understand the current status of procurement services and to increase impact through reform. Contracting authorities are supported through provision of a consulting service for procurement processes and projects to re-design procurement functions. This work has now been extended to provide contracting authorities with outsourced procurement leadership roles, such as Chief Procurement Officers (CPOs), and lead projects on current initiatives such as the digitalisation of government procurement.

At present, Kuntahankinnat do not provide such a broad array of services, and are more focused on the provision and management of FAs. They can count nearly every Finnish municipality as a customer, including regional council and health care districts. Clients also include bodies such as the Finnish Evangelical Lutheran Church organisations and

Keva[1]. In addition to traditional large-scale procurement, Kuntahankinnat also tender major information systems for the municipal sector, including systems for electronic procurement, patient information and digital well-being services. Table 2.1 below compares the scale and costs of Hansel and Kuntahankinnat's operations (Kuntahankinnat, 2017[32]), which demonstrates the potential size and scale of their operations once they are combined.

Table 2.1. Key statistics for Finland's main CPBs

	Hansel	Kuntahankinnat	Total
No. of employees	94	18	112
No. of FAs	80	70	150
No. of contracting authority customers	368	1 300	1 668
Value of FAs	EUR 826 million	EUR 474 million	EUR 13 billion
No. of suppliers	380	220	600

Source: (Kuntahankinnat, 2017[32]); (Hansel, 2016[31]).

As the table above shows, though the two CPBs operate a similar number of FAs, spend through Hansel contracts is around 60% higher. There is also a considerable difference in staffing levels; spend through Kuntahankinnat contracts amounts to around EUR 26.3 million per employee, compared to EUR 8.8 million at Hansel. This also reflects the additional services that Hansel provides to its customers. The organisational structure at Hansel is broken into three main delivery functions, which are supported by a number of other horizontal functions (as illustrated below in Figure 2.3):

- The Legal and Competitive Tendering Department offers not only services related to common procurement tendering and contract management but also to the practical implementation of Hansel's and the central government's procurement processes, and legal consultation services.
- The Category Management and Procurement Support department is in charge of the company's FAs, which are divided into three sectors: ICT procurement, Procurement of administrative services, and Material and technical service procurement. The department consists of experts from various sectors, consultants specialising in FAs, and the Procurement support unit that serves and assists customers in internal simplified tendering processes related to FAs.
- The Account and Stakeholder Management Department is responsible for sales promotion, marketing, customer service and stakeholder cooperation. The department is mainly staffed by generalists, whose success is measured based on contracting authority participation in FAs. They are supported by other teams when technical conversations with contracting authorities are required.
- The tasks of the Finance, HR and communications department consist of financial administration, HR management and communications. The department is responsible for the company's management and external accounting and for corporate responsibility reporting. Communications is responsible for internal and

[1] Responsible for administering the pensions of local and central government and the Evangelical Lutheran Church, Keva is Finland's largest pension provider.

external communication and brand management, and related development projects. HR takes care of resourcing and competence development.

- Digital Services, formerly known as ICT, is responsible for the maintenance and development of e-procurement systems operated by Hansel. The unit also plays an active role in development projects relating to the digitalisation of government procurement.

Figure 2.3. Hansel organisational structure

Source: (Hansel, 2016[31]).

This structure was introduced in recent years, after Hansel moved away from a strictly category management structure. The previous structure was divided into teams that could develop deep specialist knowledge of their particular category, yet their workload would vary greatly depending on the lifecycle of the FAs that they managed. During periods of stability where contracts were not being re-tendered, team members would often be under-utilised.

The new structure has enabled specialisation to be developed in the disciplines of contract management and tendering. The tendering team, for example, conducts 18 month rolling planning in order to establish a pipeline of tender opportunities. Once initiated, a tender follows the project management discipline known as the Project Management Body of Knowledge (PMBOK) developed by the Project Management Institute (PMI). Each tender, depending on its requirements, may be staffed by a project manager, a tendering specialist and a lawyer. The flexibility of this structure also means that these resources can be distributed across multiple projects.

Project management tools also allow Hansel to monitor the time and cost required to deliver a project. However, employees do not always input their actual time usage into the system, meaning that information is typically incomplete. Instead, internal accounting processes are established to estimate and allocate the time and cost of each procedure.

2.2. The work of central purchasing bodies in increasing the productivity of Finnish public spending

2.2.1. Developing a clear link between economic strategy and public procurement

Given the potentially broad impacts that procurement can have on the economy, the environment and society more generally, public procurement's impact might be enhanced if government was to align work across different contracting authorities towards the achievement of clear objectives and targets. Procurement's contribution towards those targets might then be easier to isolate and quantify. Common economic objectives were established in New Zealand to provide a common goal across contracting authorities, as described in Box 2.2.

Box 2.2. Unified economic purpose for the New Zealand government

The New Zealand government set clear economic objectives under the headline 'Grow NZ for all'. The over-arching target (increasing real household income by 40% by 2025) serves to provide a clear and unified objective for government employees. Under the main objectives sit a number of action plans and sub-targets, requiring contracting authorities to measure and report on how their work contributes to these goals, as shown in the below diagram.

Source: (Ministry of Business Innovation and Employment, 2015[33]).

The efforts of Finnish procurers are guided by the State Procurement Strategy, which is contained in the Handbook on Government Procurement. The strategy sets out the aim to use procurement to "*promote the state economy in terms of transparency and financial acquisition and related logistics, as well as to strive to increase the efficiency of procurement execution in all state administration units. Procurement supports the*

achievement of government organizations' performance goals by delivering the right products and services at the right price, in the right time and in the right place."

This over-arching goal focuses on the use of procurement to achieve the goals of contracting authorities through efficiently executing against the government's requirements. The strategy identifies some general guidelines for procurers to bear in mind:

- Purchases will be based on actual need and will be part of an annual approved procurement plan, which will be connected to the Agency's activities and economic planning.
- In the procurement process, priority should be given to framework contracts established by Hansel Oy, and other centralised operational models of the State Administration allowing opportunities to conduct joint procurement to achieve greater economies of scale.
- The contracting entity in its own tendering will ensure that, while pursuing the law and taking into account supply needs, innovative procurement models are exploited, to ensure the result is the most economically advantageous outcome, taking environmental and social considerations into account.
- The total cost of ownership can be lowered by utilising electronic transactions and communication, by standardising the product offering and optimising products and suppliers' volumes through lifecycle management (Ministry of Finance; Hansel Oy, 2017[34]).

While helpful, these guidelines do not set clear targets for procurement, nor do they clarify the economic, environmental or social goals that should be targeted, or provide a mechanism for collating the work of different agencies towards a common goal. There is not currently a clear connection between procurement activity and economic targets set by the Finnish Government, such as:

- Increasing the employment rate to 72% and increasing the number of people in employment by 110 000 during the parliamentary term;
- Requiring 5% of public spending to be put towards 'innovation';
- Making the savings and restructuring decisions necessary to bridge the EUR 10 billion sustainability gap in general government finances; and
- Through the Competitiveness Pact, improve Finnish companies' price competitiveness in the global market, increase exports and employment, and accelerate economic growth.

The Government Programme does cite procurement's involvement in achieving a number of objectives, for example by improving "market activity, free competition and opportunities for SMEs to participate in procurement processes" (Prime Minister's Office of Finland, 2015[30]). It is not clear how this over-arching objective has translated into directives or guidance to support implementation by procurement professionals.

The government's 2016 spending review identified a savings target for procurement activity, specifically achieving a EUR 5 million saving in 2017 through an enhancement of the procurement process (Ministry of Finance, 2016[27]). The report does not detail how this saving will be achieved, or how it will be measured or reported. Yet, more concrete commitments have been made in the area of innovation.

The OECD Economic Survey of Finland identified that growth could be enhanced by using public procurement to foster demand for innovative products, as uncertainty about

demand may deter firms from developing some innovations and investors from funding them. As public procurement amounts to nearly a fifth of GDP in Finland, having innovation requirements where applicable can make a difference, and in response the government has set an objective of 5% of innovative public procurement. How this target can be achieved is unclear, however, as 'innovation' has not yet been clearly defined. It is also not clear whether 5% relates to value of spend or number of procurement procedures.

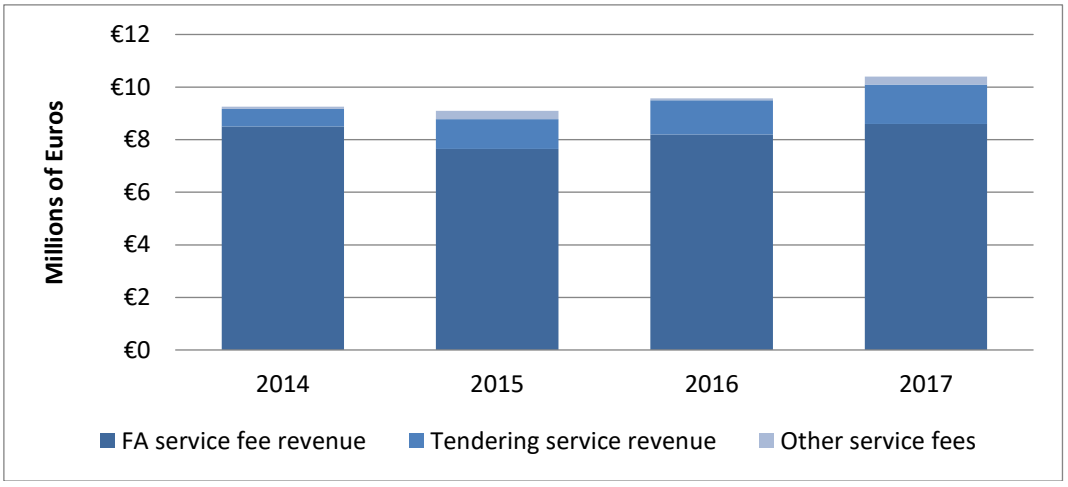
Ownership of the central government procurement strategy and the direction of centralisation and e-procurement activity within Finland currently rest with the Ministry of Finance. A small number of staff within the Ministry of Finance has direct responsibility for policy matters related to procurement. Meanwhile, central purchasing bodies such as Hansel and Kuntahankinnat (discussed further below) have responsibility for implementing the procurement strategy in relation to centralised procurement activity. Another state-level contracting authority, the Ministry of Economic Affairs and Employment, has responsibility for coordinating with European bodies on procurement legislation.

As discussed in more detail in section 2.2.3 below, implementation of the national strategy entails Hansel developing procurement strategies for FAs that may have significant economic, environmental or social impacts. This is especially pronounced where the establishment of a FA in a certain sector involves the concentration of spend in what is a relatively small supplier market. Such cases are common in a relatively small economy such as Finland. There is a risk that, without strong guidance from central government, opportunities to harness procurement's impact towards specific governmental goals may not be maximised. However, this must be balanced with the requirement to ensure Hansel has the flexibility to pursue appropriate commercial strategies according to changing market conditions.

2.2.2. Increasing procurement efficiency through collaborative procurement vehicles

Hansel finance their operations through service fees, paid by suppliers based on the value of purchases made through FAs. The service fee is limited to 1.5% of contract value. Although Hansel is a not-for-profit organization, their revenue, along with revenue generated through the provision of other services, goes towards covering the cost of Hansel operations, as shown in Figure 2.4. Any additional revenue can either be returned to government shareholders as a dividend or re-invested into Hansel as cash equity.

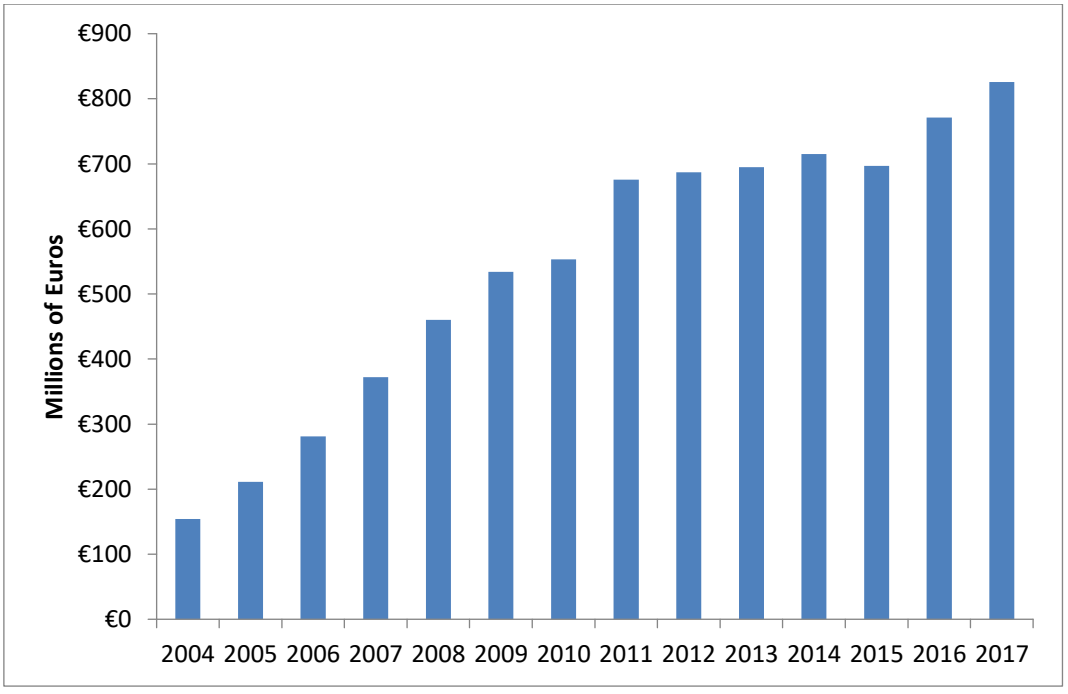
Figure 2.4. Make-up of Hansel operating revenue over time



Source: (Hansel, 2016[31]).

As demonstrated in the figure above, the cost of operating Hansel has increased in recent years, which can be attributed to increases in supplier and personnel costs. In 2014, a larger proportion (and a larger amount) of revenue came from service fees applied to suppliers than in 2016, despite the fact that spend through FAs increased in those years, as shown in Figure 2.5.

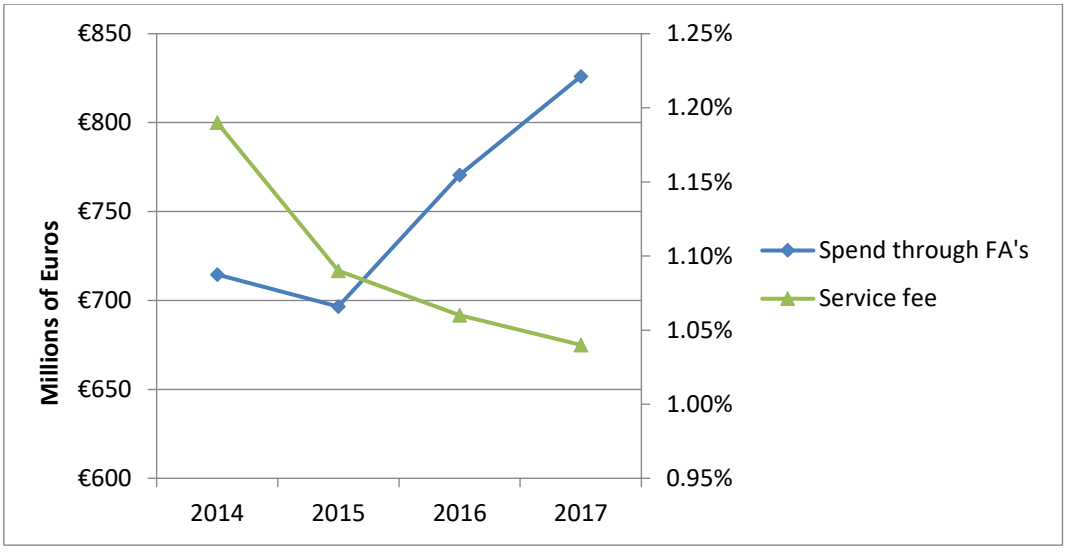
Figure 2.5. FA spend from 2004-2017



Source: Based on data provided by Hansel.

As shown in Figure 2.6, the significant increase in usage of FAs between 2014 and 2017 has allowed Hansel to reduce the average service fee while covering the increasing costs of operating the business.

Figure 2.6. Increased FA spend has allowed a decrease in average service fee

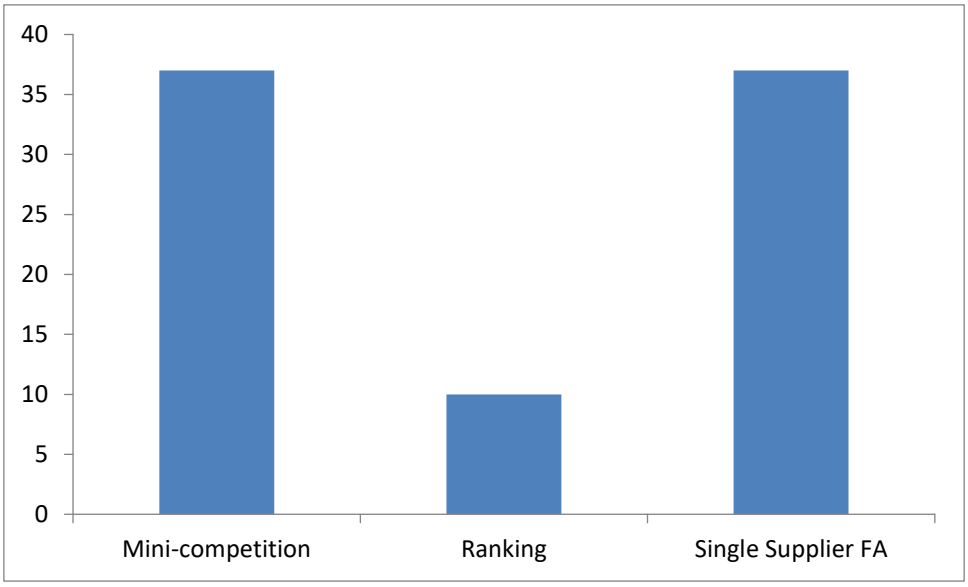


Source: (Hansel, 2016[31]).

Given that suppliers pay it, the service fee represents an additional burden to the cost of tendering for businesses, though without being overly significant given that it represents a low percentage of a business' turnover from a FA and continues to reduce over time. Yet participating in a tender for a FA can be costly for businesses. The benefit for businesses is that it presents an opportunity to gain access to a significant proportion of government business.

Hansel employs three types of FA, each with a different method for contracting authorities to select (or 'call off') suppliers. The three main methods are: single supplier (where only one supplier is successful and available for selection); ranking (where suppliers are ranked following the tender according to their suitability to deliver customer needs); and mini-tendering (where contracting authorities conduct a second-stage process to select a supplier, often with Hansel's support and advice). The number of suppliers available to select through mini-tendering processes ranges from 2 to 23. The popularity of the three methods is represented in below.

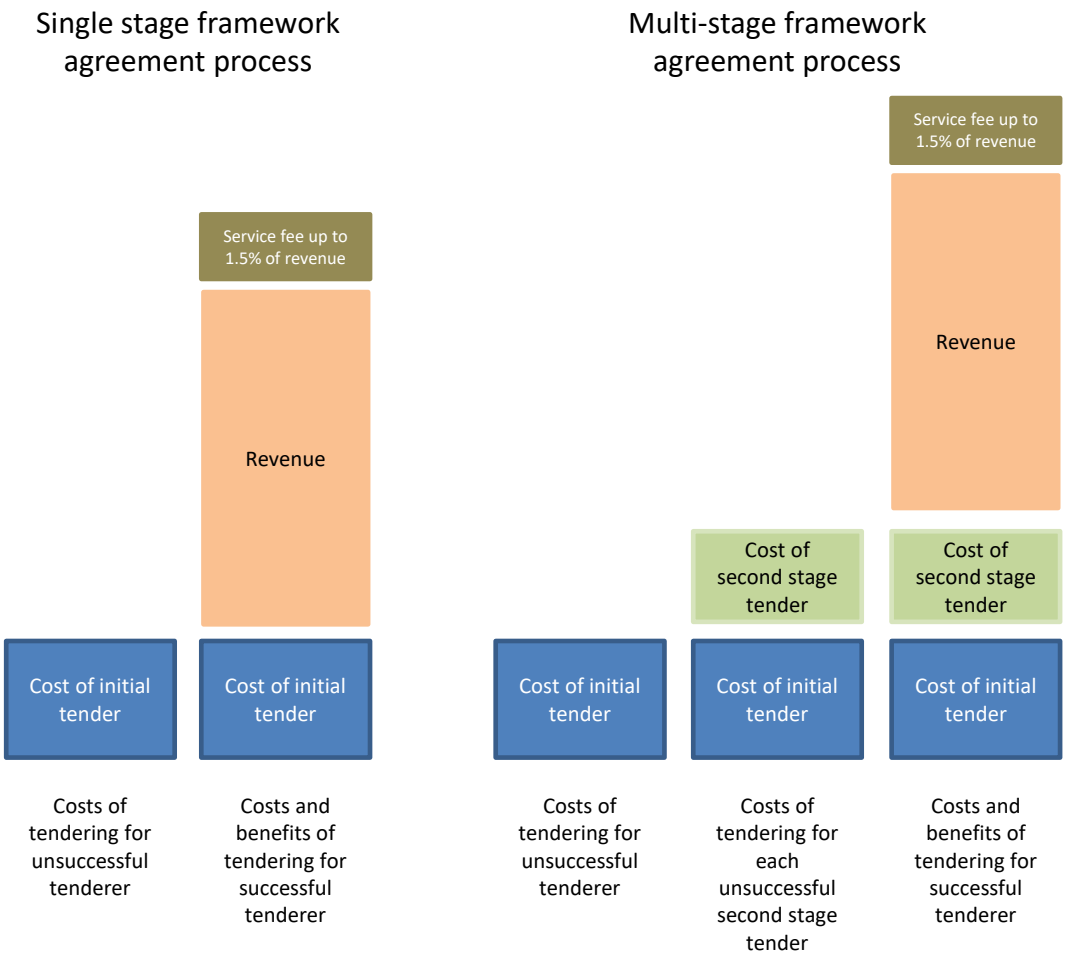
Figure 2.7. Number of procedures using different call-off methods in Hansel FAs



Source: Based on data provided by Hansel

Different forms of FA are chosen depending on the nature of the goods or services being procured. A single-stage process, which would typically have a single successful supplier, represents the lowest-cost form of tender for suppliers and for government. Whereas a multi-stage process, involving what Hansel and the EU procurement directive call a 'mini-competition', requires successful tenderers to participate in a second process for each contracting authority that wishes to contract with a supplier. In both cases, successful suppliers must then accept that the revenue they receive is likely to be reduced by around 1.04%. Suppliers are likely to consider this as a 'cost of doing business' and incorporate it into their unit price. The differences in cost for suppliers are represented in Figure 2.8 below.

Figure 2.8. Cost impacts for businesses in FAs



Hansel has recently implemented a dynamic purchasing system (DPS), which represents a digitalisation of the FA process. The DPS can streamline procurement for both suppliers and authorities, as it avoids the need for suppliers to demonstrate their suitability and capability when competing for each public sector contract. The contract award process can also be conducted more quickly than under other procedures. The DPS is more flexible in some respects than traditional frameworks, particularly as suppliers are not locked out of competition for the contract's duration and instead may join it at any time during its period of validity. A DPS also offers flexibility in fast-paced, constantly changing markets. The FA for IT consultancy services, for example, was established at a time when the employment market was over-populated and as a result, rates for IT professionals were low. This situation has now changed, and suppliers risk making a loss if they provide contractors at previously-agreed rates. A DPS would allow the terms of the contract to reflect the current market rates, and not put undue stress on suppliers.

As opposed to FAs, dynamic purchasing systems only request suppliers to fulfil selection criteria and have no grounds for exclusion. The second competition stage then provides for competition among suppliers on financial and technical aspects. Those two instruments are not exclusive and often provide complementary options to respond to collective government procurement (OECD, 2017[35]). Despite the inherent flexibility of a

DPS, EU rules still require contract award notices to be published once a supplier is selected through a DPS, a step not required for the 'call-off' process under a FA.

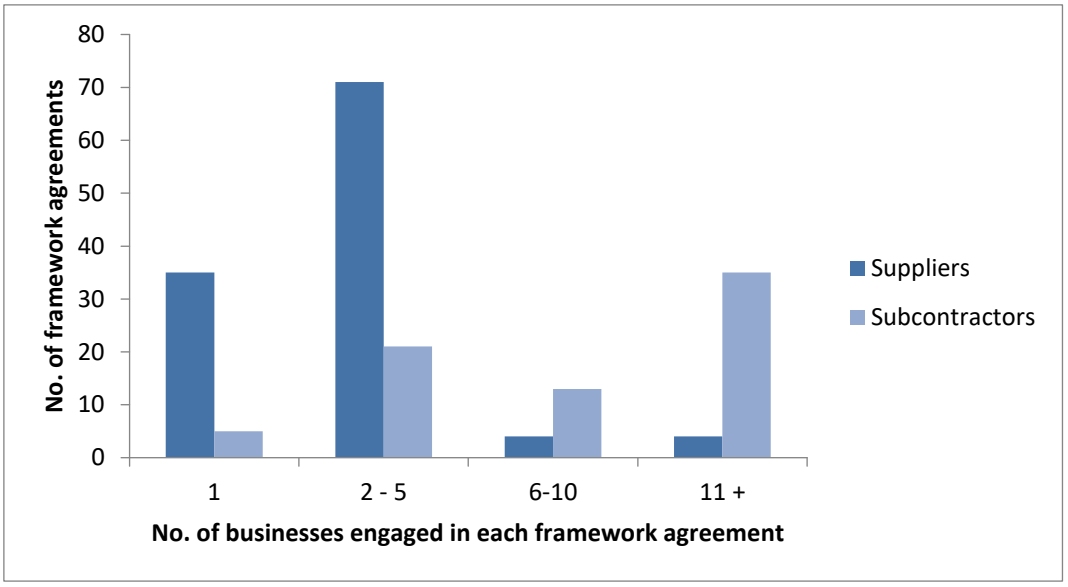
Technology has also changed the way orders can be placed from supplier catalogues. Where e-ordering systems link directly to a supplier's own online catalogue (known as a 'punch-out'), the buyer can lose some ability to control changes in prices or products without investing resources in monitoring. This is why most e-ordering systems have their own in-built and managed catalogues, with suppliers submitting price or product changes when required that can be validated or approved by system administrators. However, such a process of constantly checking and verifying catalogue changes can be a resource-intensive process. Advancements in technology mean that artificial intelligence tools can play a role in making the monitoring process more efficient by identifying and flagging catalogue changes, even in 'punch-out' systems.

This represents a step towards a more efficient way of interacting with the supply market. This may also help to remove some of the barriers that SMEs face when participating in public tenders. However, when implementing these developments, Hansel (or the wider government) must be sure that businesses have the technical competence to participate. At present, most Finnish businesses are likely to be comfortable with using technology. Unsurprisingly, research from 2009 identified that SMEs in Finland with e-systems were more likely to be current suppliers to public tenders (Karjalainen, 2009[36]) as they were more comfortable with technology.

Businesses submit tender responses for FAs based on their assessment of the likely revenue that they will receive, and therefore the extent to which their fixed costs can be distributed across a large volume of sales

The data collected by Hansel is currently used to monitor the use of FAs by contracting authorities and to measure the resulting efficiency benefits (as further described in this chapter). Data is collected on the spend attributed to each supplier that is party to a FA, but this is not taken further to estimate the potential impact that participation in FAs is having on suppliers. For example, Hansel does acknowledge that by triangulating data from different sources, it would be possible to estimate the share that centralised contracts makes up in each supplier's overall revenue. By monitoring this over time, Hansel can get a better picture of how FAs are affecting overall market dynamics. By extension, with an expanded data set this may eventually be possible across all government suppliers, as opposed to just suppliers to Hansel contracts. Figure 2.9 below demonstrates the scope of suppliers that are parties to Hansel FAs.

Figure 2.9. Scope of businesses engaged in Hansel FAs



Source: Based on data provided by Hansel.

Hansel's initial attempts to monitor FA spend by collecting data from suppliers were problematic, given that the aforementioned service fee model gives suppliers a disincentive to fully report spend, given that a higher rate of contract spend results in a higher service fee. A Finnish academic study proposed that the average revenue per user model (ARPU) could be used to provide estimates for potential FA spend and to measure the performance of buyer organisations in a specific procurement category.

Previous research on public procurement in Finland suggested that fully compliant purchasing through Hansel FAs could reach EUR 850 million (it is currently EUR 826 million), and that compliance rates at the time varied wildly from 20% to 80% (Karjalainen, Kivioja and Pellava, 2008[37]). Therefore, Hansel required a formula that allowed them to measure contract usage at a time when they did not have access to all the necessary data. The ARPU model was originally used by the telecommunications industry to distribute revenue across multiple users.

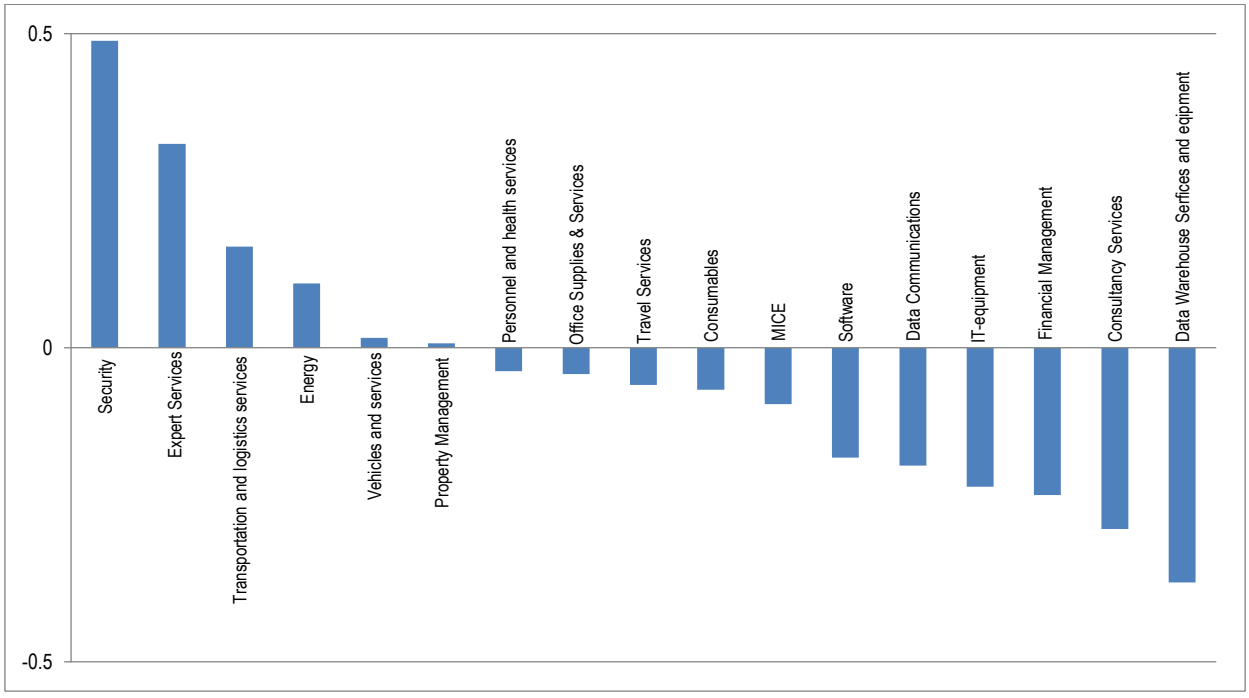
As the starting point for ARPU estimations, information is gathered on the number of staff at each contracting authority that is eligible to be a Hansel customer. Hansel then gathers the most recent and complete set of annual spend data available, and divide this by the number of employees in order to estimate the current spend per customer (or ARPU). Contracting authorities are then divided into segments according to their level of spend through the contract. The user at the 75th percentile is determined to operate at the optimal level of usage, and all those organisations with a lower ARPU than the 75th percentile user are assumed to have higher rates of off-contract spend. Once the model could determine an "ideal" user organisation for the category, this could then become a benchmark to measure the consumption of buyer organisations (Lempinen, 2013[38]).

While the model served as useful benchmark through Hansel's formative years, it was then criticised by procurement experts for over-estimating the amount of potential spend. To compensate for anomalies, Hansel then started to use the ARPU model to generate a starting point, which was then arbitrarily revised by individuals with a good knowledge of government's spend in the category. However, Hansel has now returned to the ARPU

model, which is at least founded in a defensible methodology. A further weakness of the ARPU model is its inability to take cyclical or irregular purchasing methods into account. Government vehicles, for example, are not purchased at regular intervals, but are instead typically purchased in bulk at infrequent intervals.

With the advancement of electronic systems in Finland, Hansel has more data at their disposal, allowing them to capture more accurate information on contracting authority spend. This should allow them to provide the supply market with more accurate predictions of spend in each category. A category by category analysis shows that some categories are more challenging to estimate than others, with spend in the majority of categories being underestimated, as shown in Figure 2.10.

Figure 2.10. Difference between estimated and actual FA spend in 2017



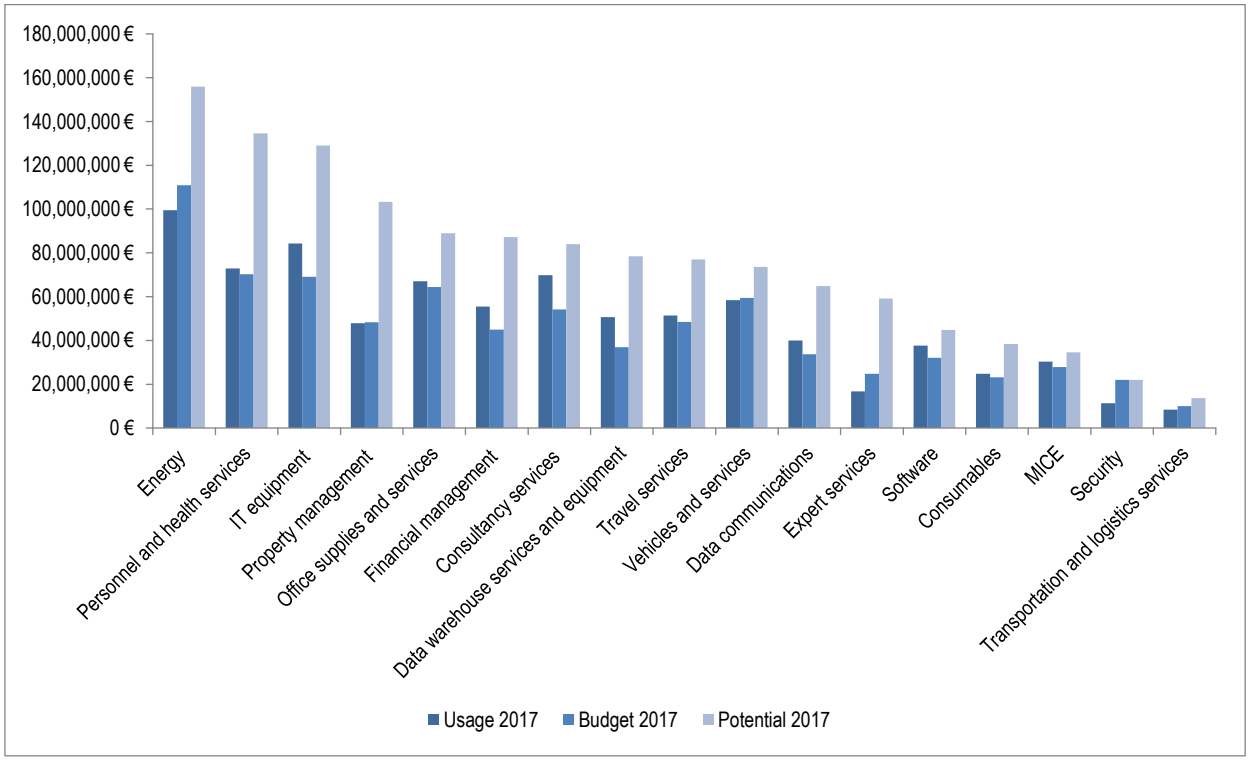
Note: MICE – Meetings, Incentives, Conferences and Exhibitions
Note: If the actual spend in 2017 was greater than expected then the column is above the 0 axis. If the spend was less than was estimated then the column falls below the 0 axis.
Source: Based on data provided by Hansel

Where a FA exceeds its estimated spend, Hansel must formally amend/vary the contract to account for the additional spend. This does risk raising questions about whether the original estimates misled the market and discouraged suppliers that otherwise may have participated in the initial tender (in relation to contracts where suppliers cannot be dynamically added at a later date). Where a FA does not achieve the estimated spend levels, participating suppliers are unlikely to achieve the revenue that they expected from the contract. Therefore, increasing the availability and accuracy of data through the Handi project will be critical to putting in place a robust methodology for achieving accurate estimations.

Despite improvements in Hansel's ability to forecast FA spend, their estimations still allow for a significant amount of 'maverick spend', meaning contracting authority spend

that is directed towards other suppliers or through other contracts, despite the mandatory status of Hansel contracts. According to Finland's National Audit Office, internal control teams within contracting authorities do not play a role in reviewing the use of mandatory FAs, given conflicts in reporting lines (internal control teams typically report to finance teams and do not review the work of their own department). It is not therefore clear which body is taking an active role in monitoring and pursuing non-compliance with FAs by contracting authorities. As shown below predictions of usage ('Budget 2017') came close to actual usage ('Usage 2017'), yet estimates of total spend by contracting authorities in those categories are still significantly higher.

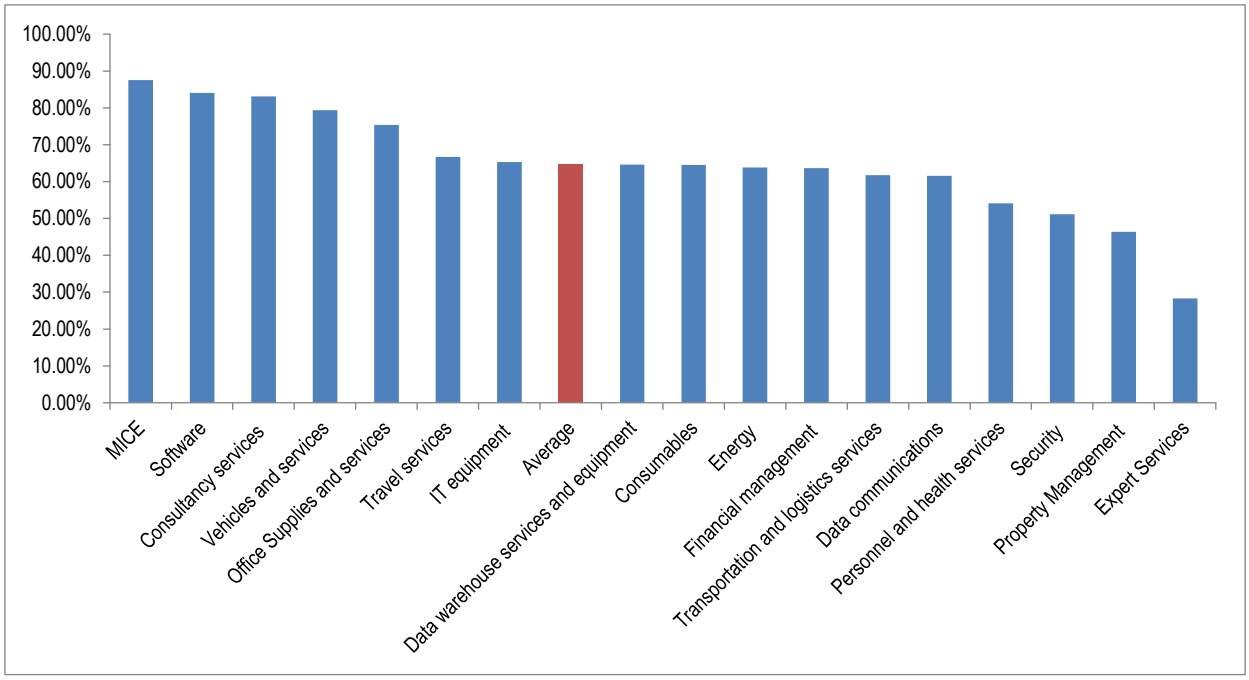
Figure 2.11. Actual estimated and potential FA spend by category for 2017



Note: MICE – Meetings, Incentives, Conferences and Exhibitions
Source: Based on data provided by Hansel.

As shown below, estimated compliance against Hansel FAs ranges from 28% to 88%, with an average of 65%, meaning that a third of spend by the central government in these areas is 'maverick buying'. Research showed that maverick buying by public procurers in Finland was best combatted through two levers: output monitoring and incentives (Karjalainen, 2009[36]). Furthermore, the increasing digitalisation of the ordering and invoicing process has presented an opportunity to cut off other forms of ordering and payment. Through collaboration with Palkeet, Hansel collects and publishes detailed data on off-contract transactions by contracting authorities. Based on data currently held by Hansel, it should also be possible to establish, on a contract by contract basis, whether off-contract spend is a result of contracting authorities not being an active party to the contracting authority, or whether a large amount of maverick buying is taking place. Hansel has undertaken this exercise, yet the misalignment between the classification of invoices in accounting and procurement systems is presenting a barrier.

Figure 2.12. FA compliance against estimated total category spend



Note: MICE – Meetings, Incentives, Conferences and Exhibitions.
Source: Based on data provided by Hansel.

Categories of low compliance raise further considerations for Hansel, such as:

- If contract management and administration costs can be isolated, whether the costs of managing some of their contracts outweigh the benefits achieved?
- Is the lack of compliance caused by a weak value proposition (e.g. insufficient savings or poor product selection) for a particular contract?

The model used by Hansel to estimate the savings achieved from centralised purchasing was developed in-house by Hansel and is not currently reviewed by the National Audit Office or any other independent organisation to verify the methodology. It is based on two subcategories of savings, each of which are affected in different ways by maverick buying (Karjalainen, 2009[36]):

- **Process savings:** research on public procurement in Finland indicated that, strictly from a buyer's perspective, a decentralised tender consumes approximately 167 person hours per contracting authority, which amounts to a personnel cost of EUR 5 845. A centralised tender process consumes 1 030 person hours, which equates to approximately EUR 20 000. Across 90 contracting authorities, many of which would be expected to conduct multiple tenders across different business units, an average of 270 tenders would be run in each category. Full compliance to a centralised contract would therefore result in a 'process saving' of EUR 1.5 million. This assumes that no additional time is spent by the contracting authority on activities such as mini-tendering.

  This category of saving is very different from hard savings, as the benefit would not be realised or re-distributed. There is also no way of identifying the additional

value that would be attained by employees during that recaptured time. However, each contracting authority that conducts its own unauthorised procurement process reduces this savings figure by the estimated personnel cost for conducting a tender in that category.

- **Price savings:** Research indicated that, based on an analysis of the savings made in different categories of Finnish public procurement, that centralised purchasing could achieve an average of 25% of savings. This was based on a review of purchases in a small number of categories, and the comparison between prices achieved in centralised tenders against market prices, which are assumed to be close to the prices achieved from decentralised tenders. It was also acknowledged that prices from decentralised tenders would be different from prices of truly maverick buying, i.e. the purchase of goods or services directly from the market. The research did indicate that economies of scale could be achieved quite quickly, even with low levels of contracting authority participation.

  This methodology assumes that centralised tender processes have generated savings based on volume discounts, or that goods and services are selected based on lowest price criteria. However, increasingly Hansel's FAs seek to achieve complementary objectives such as enabling the participation of SMEs and lifting sustainability standards. The savings that can be achieved are also likely to vary greatly depending on the type of FA being used, with greater savings likely to be available where a single supplier guaranteed who is guaranteed high sales volumes is locked into a low unit price. The additional data now available, coupled with Hansel's business intelligence capabilities, could be used to make more accurate assessment of the cost of maverick buying by identifying and benchmarking the difference between centralised costs and 'rogue' invoices.

2.2.3. Hansel's role in managing government-wide risk and leading reform and capability-building efforts

Despite Hansel's ongoing attempts to increase compliance with FAs, spend levels are already sufficiently high that Hansel contracts have the potential to affect markets in Finland. As opposed to private sector procurement, which is typically measured based on the reduction of cost and the concentration of supply into a smaller group of suppliers, public procurement has a duty to ensure that the weight of government buying power does not detrimentally affect the national economy. At several stages of the procurement cycle, individual procurement professionals are making policy decisions that may have significant effects on the market. Taking these considerations into account could be labelled risk management, yet Table 2.2 below demonstrates the breadth of risk management concerns and the potential impacts that public procurement professionals must navigate.

Table 2.2. Illustrative list of common economic risks in public procurement and the impact of successful mitigation

Procurement stage	Potential risk	Mitigation	Economic impact
Market analysis	Insufficient understanding of market leads to strategy that distorts market	Detailed and thorough market analysis by industry expert	Maintains equilibrium in market
Early market engagement	Lack of engagement of certain businesses, such as SMEs	Broad communication with potential suppliers	Provides opportunities to SMEs and new entrants
Specifications	Development of specifications favours previous suppliers or is prescriptive about technologies or brands	Generic specifications or focus on outcomes as opposed to inputs	Allows suppliers with new/innovative approaches to be successful, which could alter market technologies
Development of procurement strategy	Selection of favoured outcomes (i.e. cost, sustainability, SME participation through division into lots) will have adverse impacts on market dynamics	Strategy is aligned with overall government strategy to favour certain supply market characteristics	Re-aligns market towards certain governmental goals
Tender process	Failure to identify corrupt or collusive practices	Various risk identification and mitigation measures put in place during tender process	Distribution of revenue favours efficient and effective businesses rather than those pursuing unethical practices
Evaluation and selection	Incorrect application of evaluation criteria leads to incorrect supplier selection and damages government reputation	Clear evaluation plan and participation of a number of stakeholders during evaluation process	Enhanced supplier participation and trust in government procurement process
Contract management	Overly harsh/lenient application of contract determines supplier and subcontractor behaviour	Development of contract management and supplier relationship management skills	Delivery of government projects on time and on budget, enhancing international reputation of government delivery and economy

Source: (OECD, 2009[39]).

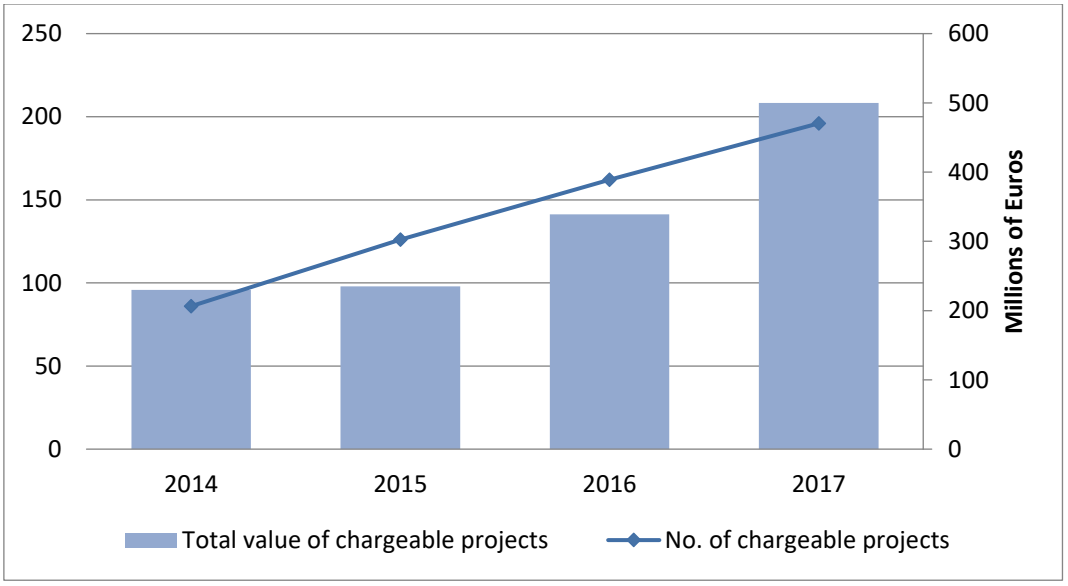
The table above demonstrates how the actions of procurement professionals can have far-reaching consequences, emphasising the need to provide training and guidance on the application of regulations and policies. This is even more pronounced at Hansel given the increased buying power of centralised contracts. By their own admission, Hansel employees are making policy choices on behalf of government with the establishment of each FA. Decisions are made on whether to try and deliver social or environmental benefits through government procurement through certain categories of purchases, which often comes at the expense of other areas of focus (for example, taking a purely cost-focussed approach).

In certain categories, Hansel has developed FAs that allow contracting authorities to make their own decisions on the characteristics that they wish to prioritise. For example, purchases from the FA for vehicles have been enhanced through the development of an online tool that allows contracting authorities to focus their search according to certain factors, such as CO_2 emissions, value or size. The technology does allow certain characteristics to be favoured to influence contracting authority buying decisions, provided a clear policy direction was selected by government.

Yet at present, the absence of an over-arching government policy leaves each contracting authority free to determine their policy preference. Similarly, at the sub-central level, Kuntahankinnat strive to achieve the outcomes that suit each council or municipal authority, which can vary between price, social outcomes such as increasing employment or achieving green outcomes.

Another important role for Hansel is managing risk and building capability across the broader procurement environment. Initially, this involved supporting contracting authorities to conduct second-stage tenders from their FAs. Their increasing role in supporting procurement reform means that they now do this by providing consultancy services to contracting authorities. In fact, the revenue generated from FAs has increasingly been supplemented by sales of procurement expert services, which rose from EUR 670 000 in 2014 to EUR 1.5 million in 2017. This not only diversifies the services and revenue sources available to Hansel, but also increases their influence and ability to manage risk and lift capability in procurement delivery across the central government (as shown in Figure 2.13).

Figure 2.13. Increase in number and value of procurement projects supported by Hansel over time



Source: (Hansel, 2016[31]).

The consulting services provided by Hansel can take several forms, such as:

- Supporting contracting authorities to undertake mini-tenders in order to develop a fit-for-purpose solution from a FA (known as 'Mini-Tendering Plus');
- Providing advice and support for contracting authorities' own procurement initiatives (the number and value of which are shown in the figure above);
- Advising on projects to re-design procurement functions; and
- Providing individuals as outsourced procurement leadership roles.

Hansel has a vision to spearhead procurement reform by "assume a stronger role in developing government procurement and to collaborate actively with government entities." At the moment, these collaborative services are provided to contracting authorities that request support from Hansel. However, by acknowledging the utility of expertise held within Hansel as a pool that could be applied to the areas of greatest need in government, the central government could use a risk or value based approach to ensure the most high-risk, high-profile or high-value procurement projects across government have support from Hansel. The pipeline of public procurement projects could be monitored to identify those in greatest need of support, those that could be done

collaboratively, or the projects done by contracting authorities without the necessary resources or expertise to deliver their priorities.

At the moment, these services are provided to contracting authorities based on hourly pricing. However, Hansel now has sufficient experience in the cost and duration of different projects to be able to develop a fixed fee approach for some services, where appropriate. This would provide both Hansel and contracting authorities with more budgetary certainty on the cost of each engagement.

Hansel and Kuntahankinnat have worked together on several initiatives which have the potential to achieve broader impacts than provided tailored support to individual contracting authorities. For example, an initiative to establish standard terms and conditions for contracts across the central government was launched in collaboration with the Ministry of Finance and the private sector, with the objective of targeting sectors with high number of instances of malpractice and poor ethical conduct by suppliers and their supply chains, such as ICT and furniture. Also, standard clauses were developed in areas of increasing importance for government agencies, such as the retention and management of government data by suppliers. An initiative like this has a number of benefits, such as increasing supplier awareness of the issues, establishing clear standards of practice, and prevents suppliers from spending time reviewing different forms of contract across government.

A survey of Finnish contracting authorities found that procurement was not a high-profile or well-paid role, and much procurement activity is conducted by individuals who are not operating in dedicated procurement roles. Therefore, building expertise in and awareness of procurement across Finland is a critical part of building capability. In working towards this objective, Hansel supports the work of HAUS, the Finnish Institute of Public Management Ltd, which trains civil servants and supports the development of state administration organisations. Experts from Hansel and Haus serve as lecturers for HAUS procurement courses. Seven online training courses have also been developed, each one covering a different part of the procurement process, and explaining how the relevant Finnish e-procurement system for that stage of the process should be used.

2.3. Measuring and monitoring the national Finnish procurement system

2.3.1. The role of oversight bodies in monitoring Finnish procurement activity

Finnish central government ministries such as the Ministry of Finance, the Ministry of Economic Affairs and Employment, and Hansel each have a role in improving procurement practices across the central government to ensure that standards and regulations are met and that value for money is achieved. As discussed in section 2.3.2 below, the use of electronic platforms and the submission of annual procurement plans provide oversight agencies with information that allows some form of monitoring. However, Hansel and most central ministries do not play a role in exerting influence over sub-central procurement activity. Regional bodies do not have to report on the management of their finances, and have no obligations to provide information or reporting to Kuntahankinnat. Yet some government agencies do play an active role in ensuring that procurement conducted across the entire national system is in line with policy and regulation.

The Finnish Competition and Consumer Authority (Kilpailu-ja kuluttajavirasto) has a national remit to conduct reviews of anti-trust and competition practices. In the course of identifying anti-competitive market in the behaviour, the Competition and Consumer

Authority gets good visibility of sub-national (in Finnish terms, local (municipal) and regional) procurement practices. This is a worthwhile endeavour for the Finnish government, as described in Box 2.3.

Box 2.3. The benefits of preventing collusive behaviour

Research shows that industries where there is greater competition experience faster productivity growth. Competition leads to an improvement in allocative efficiency by allowing more efficient firms to enter and gain market share. Competition also improves the productive efficiency of firms, as firms facing competition seem to be better managed

In 2013, a group of Finnish municipalities won record damages in a landmark case against eight road-building companies. They were convicted of artificially inflating prices for asphalt work and ordered to pay nearly EUR 40 million in damages, the largest financial settlement in Finnish history.

The Anti-Trust Chronicle, by Competition Policy International, conducted additional research and found that those damages only accounted for about 25 % of the monopoly profits of the Finnish Asphalt cartel, and in-fact the government paid around 17-20% (EUR 500 million to EUR 1 billion a year) of over-pricing. Together with a record fine, about 63% of overcharges were recovered, a level insufficient to deter cartel formation.

Source: (OECD, 2014[40]); (Yle Uutiset, 2013[41]); (Connor and Kalliokoski, 2014[42]).

Part of the Competition and Consumer Authority's role is also to encourage the implementation of good practices, including effective mechanisms to control conflicts of interest. There has been some resistance to taking such measures at the local and regional level because of fears of increasing administration costs or negative publicity. These attitudes have improved over time, also because of the work done by the Competition and Consumer Authority to provide guidance to councils and municipalities on the importance of identifying and preventing collusive behaviour. This is being reinforced through the development of a tool that can be used by procurement professionals to analyse data from past procurements and identify warning signs that businesses may be colluding. This approach of providing a tool to authorities to conduct their own analysis is currently the only viable option, in the absence of a central data repository that holds information on national procurement activity.

The government recently proposed an amendment to competition legislation which will enable the FCCA to obtain from contracting authorities any tender information, including tender documents and commercially sensitive information, for the purpose of supervising compliance with the Competition Act. This amendment will allow the development of technical interfaces to Hansel's and Kuntahankinnat's tendering systems, and will at least in part alleviate the absence of a central repository. Better access to procurement data will improve Kilpailu- ja kuluttajavirasto's ability to detect collusive behaviour.

At the central level, while Hansel are not legally obliged to report on cartel activity, the expertise of their procurement workforce means that they are more likely to identify and report collusive activity. This is also reinforced by training provided by Kilpailu-ja kuluttajavirasto, which is useful where knowledge is affected by staff turnover.

The Public Procurement Supervision Team was established in 2017 within Kilpailu- ja kuluttajavirasto. Its role is to monitor compliance with the Act on Public Contracts and Concessions (1397/2016). Their main focus is on the most significant errors and misconduct, such as illegal direct awards. EU legislation, enforced in Finland by the Act on Public contracts and concessions (1397/2016), and obligations from international treaties such as the GPA (to which Finland is a party) require contracting authorities to use open competitive procedures for tenders over a certain threshold. Exceptions exist in cases where the good or service are of a particular nature (for example highly sensitive defence spending) or market factors, such as a limited market making open competition unnecessary. The misuse of these rules of 'exception' can hinder open competition and the perception of fair access for all suppliers, which negatively impacts the productivity and performance of the procurement system.

The team has the authority to provide non-financial reprimands to contracting authorities for illegal direct awards over EUR 60 000 (which is the national threshold for open competition), as well as for other breaches of procurement law. However, for contracts that fall above the EU open competition threshold, illegal direct awards can also be punishable by an annulment of the award or a submission to the Market Court to impose sanctions on the offending contracting authority. These sanctions include fines, a shortening of the agreement period or setting aside the procurement decision.

To identify illegal direct awards, the team rely on a number of different data sources, including reviewing meeting minutes, notifications in local media sources, or tips from anonymous and known sources. A number of barriers currently impede the team's ability to fully investigate issues, including a lack of public knowledge about the newly formed team, the lack of legislation allowing them to access e-Tendering data (which is currently under debate in parliament) and a relatively small amount of contract notices available for analysing direct award procedures.

The National Audit Office (NAO) of Finland, as an independent body that is answerable only to the Finnish Parliament, also provides oversight of national procurement activity. Their predominant focus on compliance with laws, regulations and policies has led to criticism that this risk-averse approach stifles performance and prevents innovation. As a result, they are now attempting to take more of a performance perspective, which involves considering how taking a different approach in a given procedure might have resulted in better outcomes.

They have been able to gain a perspective of the differences between procurement practices at the local, regional and central levels. This has particularly come about when conducting a review of procurement for innovation. In reviewing eight case studies of procurement for innovation, all of the case studies came from tenders at the municipal level. This can be attributed to the fact that the procurement of frontline service that takes place at the municipal level, such as the purchase of health, education and social services, is more conducive to the implementation of innovative practices. It also demonstrates that cases of good practice are occurring at the local and regional level. Yet interestingly, the NAO became aware of the eight examples through word of mouth, given there was no systematised collection of data or common communication platforms on local and regional activities.

According to the NAO, good practices are happening at the local level despite a widespread lack of both an awareness of central procurement strategies and policies, and an understanding of the importance of applying them in day-to-day procurement

activities. Instead, locally developed strategies are commonly developed and applied by local procurement staff.

The lack of a central repository on tender information prevents the NAO from taking a risk-based approach to identifying tenders that warrant a detailed review. However once a tender process has been selected for review, auditors typically gain access to a wide-array of information directly from procurement professionals, down to detailed invoice information, and they then have the tools to review the information for anomalies.

The work of these monitoring bodies has identified several common themes and improvement areas in the course of reviewing public procurement activity, for example:

- Contracts that are renewed with incumbent suppliers are not amended or 'modernised' to include green criteria, even for goods or services where this is highly relevant;
- Procurement professionals apply the simplest criteria possible, namely assessing tender responses by lowest price, in order to avoid complications or challenges that may arise should more complex criteria be applied;
- Challenges with the contract execution or management phase, such as issues with ordering or invoicing, still regarded as a 'procurement' issue;
- The above is enabled by an environment that has insufficient internal guidance, reporting or control mechanisms.
- Financial officers often do a poor job of conducting cost/benefit analysis or sometimes do not conduct it at all, which raises questions about the effectiveness of procurement activities if they are not targeted at the most worthwhile activities;
- The reduction in government headcount is a governmental target, meaning that build vs buy decisions typically favour buying given it is easier to outsource an activity than to increase headcount in order to deliver it in-house;
- Even cases of good practice of procurement for innovation do not demonstrate an ability to effectively monitor the outcomes of such activities;
- Contract provisions that provide bonuses to suppliers for delivering outcomes have been identified as an effective way of incentivising delivery to targets; and
- Effective innovation requires effective planning; therefore, there must be more focus on improving the effectiveness of procurement planning.

2.3.2. Building technical and staff analytics capabilities can go some way to overcoming current data limitations

The use of detailed and reliable indicators is reliant upon the collection of high quality and consistent datasets. The prospects of obtaining such data have been enhanced by the proliferation of e-procurement platforms. If structured and used in the right way, e-procurement platforms can collect data on procurement activity and interactions between government and the supply market.

Comprehensive data is held on the use of Hansel's FAs, down to the level of the individual invoices paid to suppliers by contracting authorities. The system through which Hansel enables contracting authorities to call off from FAs captures data in a way that enables analysis of spend against suppliers, spend by contracting authorities, and spend by category or purchase type. The system only categorises spend by product groups (e.g. electricity, laptop, paper) as opposed to more specific items (e.g. chair). However, the business intelligence tool used by Hansel can be used to analyse invoices in detail to

make assumptions on which line items might refer to specific products, which means that deeper product-based analysis could also be conducted.

The information held by Hansel is restricted to spend by Hansel clients (the central government and other state entities such as universities and state-owned enterprises) on common goods and services provided by Hansel. The information held in structured form does not include any off-contract spend by contracting authorities in those spend categories, which (as discussed in more detail in section 2.2.2) is likely to be at least 30% of estimated spend in that category. Hansel does, however, have access to invoice data on all other central government spend, though this information is categorised according to accounting codes, which does not necessarily align with procurement categories. Proposed changes to legislation governing Hansel activity suggest that Hansel should be given rights to review the procurement information of government procurement units. This would considerably expand the visibility that Hansel has over government spend, and increase their ability to apply their tools and expertise to analysing government procurement activity.

At the local and regional level, where the majority of public spending takes place, a dedicated e-procurement system for council purchasing is used by around 220 different municipalities. As at the state level, there is not yet a fully functioning contract management module in place to record data on spend through contracts. This is largely because, with no coordinated ordering system spanning the local and regional level, only a small proportion of councils have their own systems. As a result, ordering is mainly carried out through suppliers' ordering systems.

The result of the e-procurement landscape described above is a dataset that does not fully reflect procurement activity at any level of government, and therefore does not allow comprehensive analysis of procurement performance or its economic impact. Analysis is further impeded by a failure to share data to enable comparison and analysis across levels of government or between municipalities. The independence of municipalities also extends to the decision to publish or share procurement data. Some large cities and municipals have opened access to their procurement data, yet others have not demonstrated an appreciation of the benefits of transparency in public procurement.

A report conducted by Hansel in 2015 on the state of public procurement in Finland was a catalyst for a deeper review of the reforms needed in the procurement system of the central government, based on a gap analysis between the current state and Finland's vision for the future of the procurement system (some sample data on the workings of the national procurement system can be found in Table 2.3). The Handi programme was developed as a result, with a view to 'reforming the government's procurement system' as part of the broader 'Digitalising Public Services' work programme. The Handi programme is run out of the Ministry of Finance and now forms part of the Government Programme out to 2019, the end of the government's current term in office.

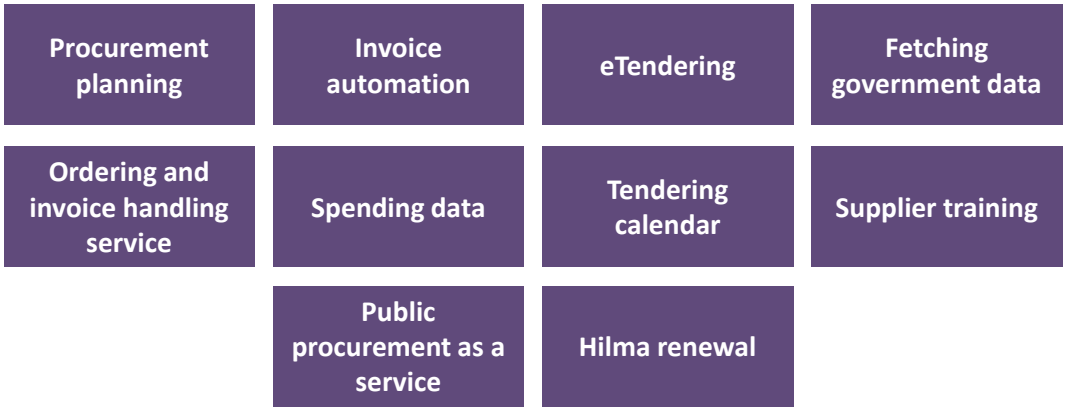
Table 2.3. State-level procurement in numbers – 2017

Spend	EUR 6.3 billion
No. of buyers	73 000
No. of suppliers	54 000
No. of invoices	1 million
No. of ordering systems	16
% done through central ordering system	9.8%
% done through e-invoicing	91%
Time to process an invoice	35 minutes
Cost to process an invoice	$22
Supplier payment time	21 days

Note: Data relates to state-level entities of the central government, excluding non-central government state-level entities such as universities and state-owned enterprises.
Source: Based on data provided by Handi programme.

The programme has a focus on e-procurement in particular, while also touching on the roles played by processes and governance. The transition to a new way of working should also emphasise that procurement is more than just buying, and includes contract lifecyle management, ordering and payment, and evaluation and management of data. The initial report acknowledged that some systems exist in isolation across different levels of government and managing different parts of the procurement cycle. As a result, once it was initiated, the Handi programme incorporated other isolated projects that sought to improve or implement different procurement-related systems. The different improvement initiatives under the control of the Handi programme are shown in Figure 2.14 below.

Figure 2.14. Projects within the Handi programme



Source: Based on information provided by the Handi programme.

The current state assessment conducted by Hansel in 2015 identified three key challenges that the Handi programme (and the aforementioned legislative changes) is attempting to overcome:

- Procurement services are not shared across the system;
- There is a low degree of automation of processes; and
- The various systems do not work together.

Beyond eliminating these challenges, the project is also expected to deliver several other benefits, such as:

- Increasing the average amount of spend per invoice to lower costs of doing business for suppliers (and the resulting positive environmental impacts);
- Enabling contracting authorities to monitor supplier activity and therefore more effectively manage contracts;
- Providing greater visibility of government spend to citizens and other stakeholders;
- Increasing supplier participation in tenders, thereby increasing competition and reducing cost; and
- Improving the efficiency of the tender process to reduce process costs for suppliers.

The implementation of some of the Handi projects, such as the European Standard Procurement Document (ESPD) is beginning to demonstrate the potential benefits to suppliers. The ESPD, in conjunction with the automated checking of exclusion and selection criteria, allows the verification of supplier information, saving suppliers from providing the same basic information for every tender in which they participate (with the exception of criminal record information, which it is hoped will be integrated into the system shortly).

The completion of the Handi programme should result in the more comprehensive digitalisation of procurement activity at the state-level, excluding non-central government state-level entities, such as universities and state-owned enterprises). Data will be available on each step of the procurement process, including:

- Annual procurement plans developed by contracting authorities;
- Tender processes, including the types of procedure used and supplier responses;
- Contract awards and agreed terms; and
- All invoices paid to suppliers.

However, the data limitations of the finalised procure-to-pay system, besides the absence of data from the state-level entities and local and regional bodies that will not use the system, include the fact that the contract management module will focus on the qualitative aspect of managing supplier relationships, and will not be linked to execution of the contract and payment of invoices. Furthermore, at present it is not possible to link procurement activities through the system with a unique identifier, which restricts the ability to measure a tender from planning through to execution.

Hansel has been in the process of extending its capabilities by formulating a team of data analysts and providing them with the business intelligence tools that can be used to analyse large quantities of data. Even with an incomplete dataset, insights can be inferred by triangulating different datasets. How this might be done to analyse the efficiency and effectiveness of procurement activity is discussed further in section 3.2.

2.3.3. Measuring impact of strategic procurement in Finland

In practical terms, public procurers have begun to realise that the impact of their purchases – and therefore the value for citizens – can be found in many different dimensions. In managing public procurement, the concept of value has evolved from strictly financial and cost driven considerations towards a broader spectrum of value. This

has been recognised by the Finnish government, as they have indicated a desire to use procurement to achieve a number of broad objectives, such as:

- Strengthening competitiveness by providing opportunities for SMEs to participate in procurement processes by reforming legislation and removing regulation that prevents competition;
- Creating a growth environment by ensuring the level of innovative procurement is at least 5% of all public procurement; and
- Boosting the strength of the domestic market by using public procurement to make Finland a pioneer in clean technology.

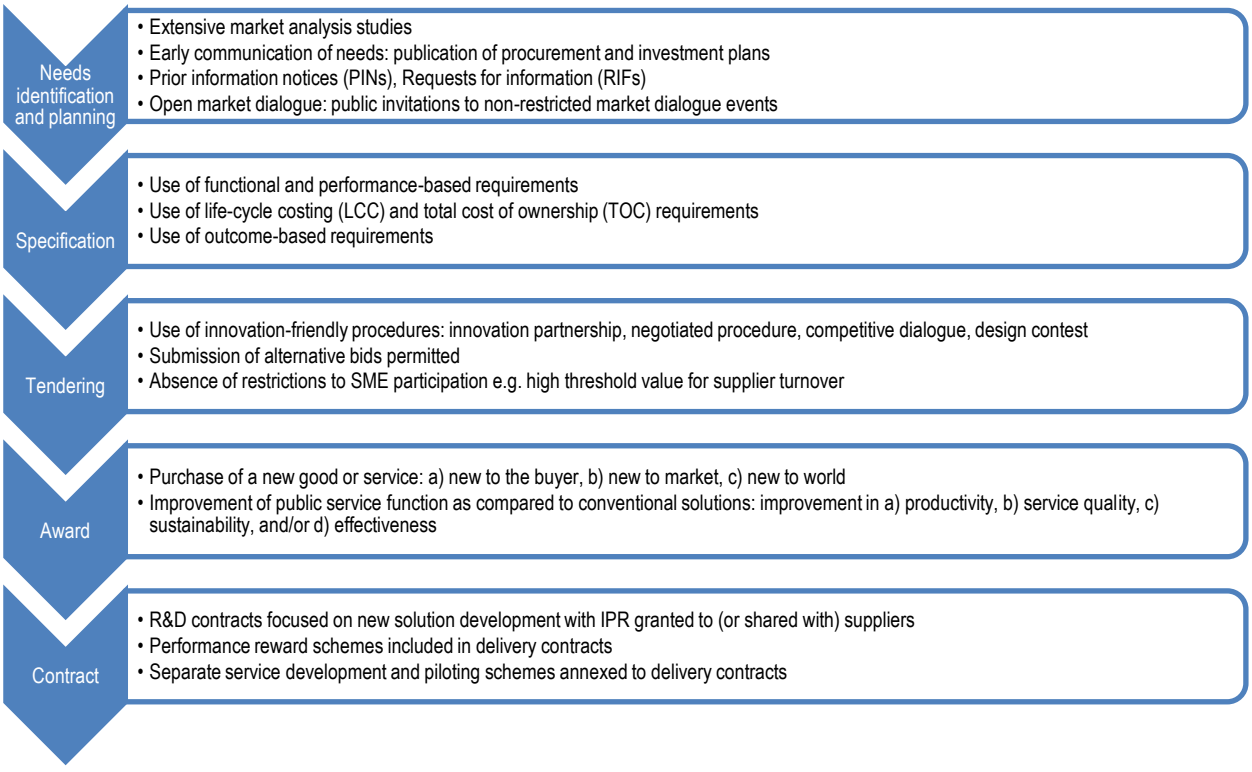
Many of these initiatives are in their early stages in Finland, and so measuring their impact will be challenging. For example, a learning centre for innovation ('Keino') was developed in 2018 as part of achieving the goal of achieving growth through innovation. Keino was founded based on an initiative that spans six different government ministries, and it represents a network of eight different organisations representing different parts of government, research bodies and groups representing the supplier community and exporters. The group's expertise spans procurement, innovation and the implementation of green and sustainable practices. Their work has four different focus areas:

- Increasing awareness of strategic procurement management and increasing impact by assisting contracting authorities through developing tools for managing and measuring innovation procurement;
- Establishing networks of buyers in the fields of social welfare and health services, construction and energy use, mobility and logistics, and bio- and circular economy;
- Supporting the development of procurement competence through advisory services, events and network meetings, as well as promoting peer learning among procurement professionals; and
- Providing procurement professionals with information on sustainable and innovative procurement by drawing on international examples, and helping to disseminate examples of successful Finnish procurements both in national and international contexts.

This work is supported by other bodies such as the innovation funding agency, Business Finland, which funds the planning of innovative procurements by public sector organisations. However, their ability to support innovative procurements will diminish in the future, as in the Finnish government's strategic plan that covers budget allocation out to 2020, the budget allocated to Business Finland for innovation grants will be incrementally cut each year until it is cut by EUR 95 million in 2020.

VTT, the Technical Research Centre of Finland, has also undertaken research on measuring the impact of innovative procurement. Their research sought to develop indicators that could measure the use of innovation friendly processes, and then resulting innovation-specific outputs resulting from public procurement, as a way of measuring the success of Keino's efforts to increase the uptake and impact of innovative procurement. The indicators developed by VTT's research are demonstrated in Figure 2.15 below.

Figure 2.15. Indicators for measuring implementation of innovative procurement in Finland



Source: (VTT Technical Research Centre of Finland, 2017[43]).

Implementing these indicators was not a straightforward exercise, given limitations of the data available. As a result, the measurement scheme developed by the VTT study identified some proxy or replacement measures for different stages of the process, as shown in Table 2.4 below.

Table 2.4. Measurement scheme proposed by VTT for innovation procurement

Object	Measurement scheme
1. Innovation-friendly procurement process	• Some indicators for planning and tendering stages are available in tendering data • Identification of innovation-friendly specifications requires content analysis with domain expertise
2. Procurement of new or improved products and services (output)	• Sample based survey approach (due to lack of comprehensive tendering and contract databases)
3. Impacts on public service improvement	• Sample based survey approach
4. Impacts on firm innovation and growth	• Requires separate impact assessments (with large data)

Source: (VTT Technical Research Centre of Finland, 2017[43]).

Measuring the implementation of green procurement has not progressed to the same extent. Collaboration is underway with the Finnish Environmental Centre to developed standards for green procurement, so that the sustainability of different products can be assessed and benchmarked. This would also eventually allow for labels to be developed that verify the sustainability level of a product or service. However, at present this work is

done on a case by case basis. Also, the independence of councils means that they cannot be compelled to implement green standards.

Some progress has been made in developing green standards within FAs by both Hansel and Kuntahankinnat. All Kuntahankinnat FAs now include standard clauses to increase reporting obligations on suppliers related to environmental impacts of their goods or services.

For each FA implemented that includes environmental considerations, Hansel records spend against that FA as environmentally compliant spend. Yet this still does not enable the impact of procurement activity on the environment to be quantified in any way.

3. Towards a productivity framework: Conducting a structured assessment of public procurement performance in Finland

The OECD's framework for measuring productivity at a governmental-level considers efficiency as the relationship between inputs and outputs, and effectiveness as the use of public funds for delivering outcomes. When applied to procurement, this framework can be used to measure the overall efficiency and effectiveness of public procurement operations. The application of indicators to each area of the framework can provide governments with a dashboard for measuring changes in the system's performance over time. This chapter provides an overview of the framework and how it can be applied to procurement activity. The framework is then applied to present recommendations for improving measurement and enhancing productivity.

Having assessed efforts in Finland to monitor and measure public procurement activity, the OECD has conducted a structured assessment of performance management of public procurement in Finland. Leaning on existing OECD research on measuring governmental productivity, this assessment may help to further the understanding of procurement's role in driving productivity (and vice versa). Until it becomes possible to develop a single indicator or equation to measure the level of productivity in procurement, measurement will still require the use of indicators spanning different parts of the procurement system. Without this, policy decisions will continue to be made without any insight into how the functioning of the system has changed over time.

Due to the measurement complexities identified this performance assessment will not enable public procurement performance to be measured through the application of a straightforward equation. It will, however, enable the development of a scorecard view of the different inputs, outputs and outcomes that affect the system's performance. This may then be used to determine how those factors, or in fact the enablers surrounding the system, need to be adjusted in order to improve performance.

This Chapter will provide an overview of the methodology for the structured performance assessment, which will then be applied to Finland. This will be reinforced through additional performance assessments of other participating countries. This will result in guidance for case study countries on the additional data that could be collected to enable more holistic performance measurement, as well as a preliminary assessment of system performance.

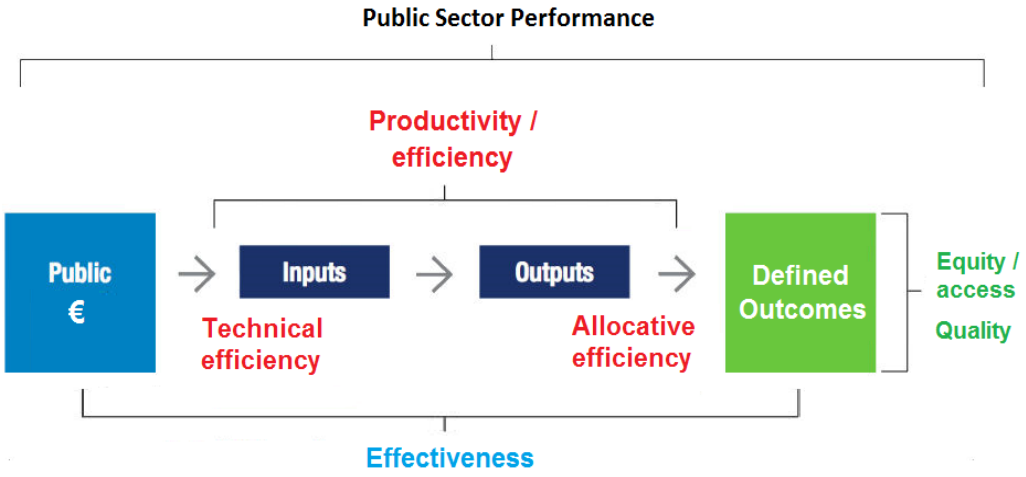
3.1. Towards a relevant productivity framework for public procurement

3.1.1. Measuring productivity requires an understanding of a number of system-wide factors, such as 'inputs' and 'outputs'

Analysis by the OECD concluded that productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output (OECD, 2008[44]).

When conceptualising the measurement of public service productivity, a framework developed by the OECD (shown in Figure 3.1) gave the customer (i.e. citizens) an integral role as the consumer to the production process, meaning that customer satisfaction should ideally be integrated and accounted for, particularly in the concept of services productivity. Furthermore, the framework clarified that, in contrast to efficiency (which is the ratio of outputs and inputs), effectiveness is the ratio of defined outcomes to defined inputs, and is conditional on the quality of service provision. Given that public procurement is a vehicle for delivering services to the public, applying this framework to public procurement would provide a holistic picture of how efficiently and effectively it is used to deliver public services. The framework also aligns with the commonly used concept of 'value for money', which has been described as the "*simultaneous optimisation of both outcome effectiveness and resource use efficiency*" (Boland and Fowler, 2000[45]).

Figure 3.1. OECD Productivity Framework showing the relationship between performance, efficiency and effectiveness

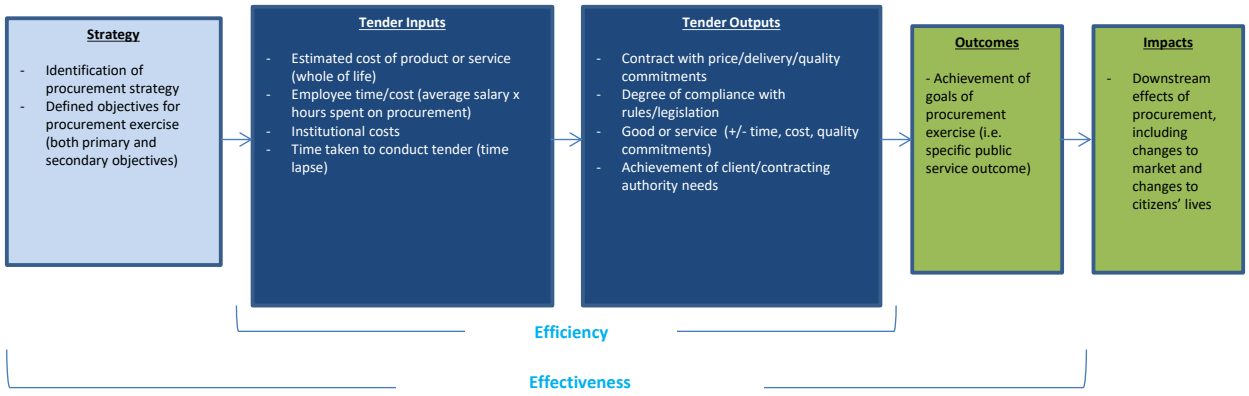


Source: (Phillips, 2018[28]).

Tailoring this framework to measuring procurement requires an understanding of the various factors (inputs, outputs, outcomes etc.) that make up the procurement system. However, these factors will vary for each national system, making it very difficult to develop a standardised framework that works across multiple national procurement systems. Where the system is underpinned by indicators for measuring inputs, outputs and outcomes (as discussed in section 1.2), it may be possible to identify the indicators that are common across multiple jurisdictions.

It is also important to understand that there must be different ways of measuring the productivity of a single tender exercise compared to the productivity of an entire procurement system. Scholars have developed increasingly sophisticated models to measure the outputs of procurement exercises, such as efficiency/cost, total cost of ownership, on-time deliveries, accuracy, quality, innovation, sustainability, internal customer satisfaction, and professionalism (Patrucco, Luzzini and Ronchi, 2016[46]). These outcomes will be dependent on the intended objectives of a particular tender exercise. For example, Figure 3.2 below demonstrates how the productivity framework can be applied to measure the efficiency and effectiveness of a single tender exercise.

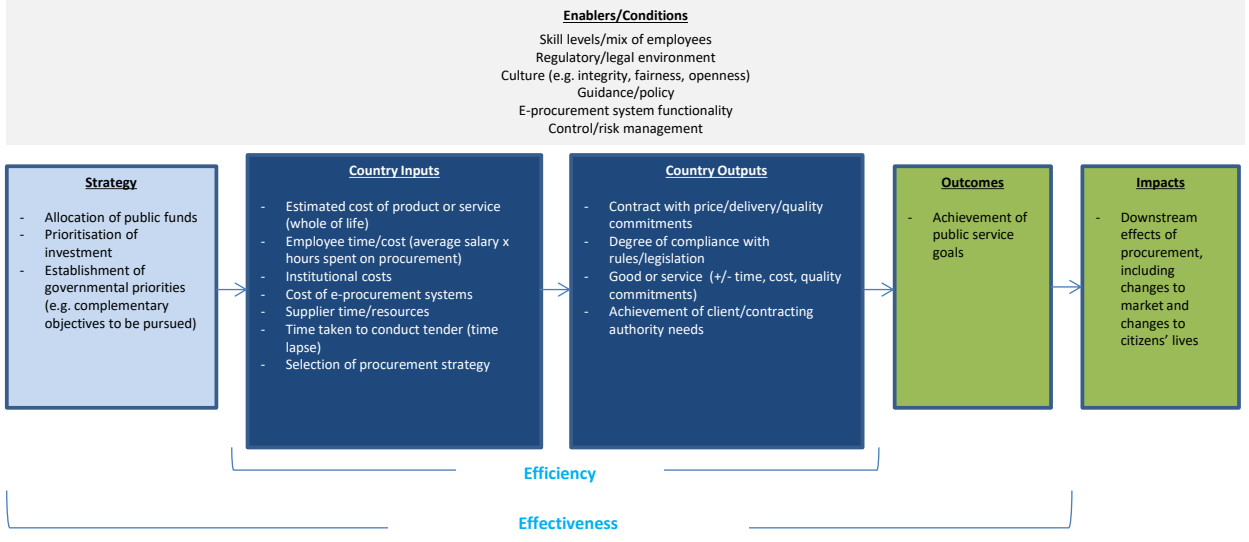
Figure 3.2. Illustrative structured performance assessment of a single tender exercise



Source: Based on productivity framework from (Phillips, 2018[28]).

Measuring the productivity of an entire procurement system is undoubtedly more complex than measuring a single tender and requires analysis of a number of factors. Not only do the scale of inputs and outputs grow exponentially, but a number of other factors must be taken into account which cannot strictly be classed as inputs or outputs. This becomes increasingly difficult (and depending on the structure of government, potentially impossible) within federal systems, where the central government's visibility and control over sub-national spending is restricted. In Figure 3.3 below, the additional factors that determine how the system functions are labelled 'Enablers/conditions', as they represent the many considerations that impact the performance of the procurement system. Depending on the scope of their work, CPBs often target many of these considerations in order to improve the performance of the procurement system. As discussed above, the degree to which these factors impact the overall system will vary across countries.

Figure 3.3. Illustrative structured performance assessment of a national procurement system



Source: Based on productivity framework from (Phillips, 2018[28]).

Given the factors by which individual tenders and national procurement systems are different in nature, measurement of a national system is not as simple as aggregating the assessments of a multitude of individual tenders. To illustrate this, each of the areas that have been used in the performance assessment of national systems is discussed in more detail below:

Strategy

The original productivity framework had 'Public Funds' as the origin from which productivity should be measured, i.e. the baseline from which efficiency and effectiveness should be measured. The objective of public procurement is to help render the performance of public tasks as economical, effective and efficient as possible.

However, given that procurement has a duel activity of being an operational process through which a certain amount of public funds must be spent, as well as a strategic activity for delivering government objectives, the baseline must be more comprehensive, taking into account the priorities that governments hope to achieve through procurement. This can either be direct effects (such as delivering hard savings on public spending or improving performance by outsourcing certain government services) or indirect effects (such as reducing government's carbon emissions or increasing exports). This is why the broader term 'Strategy' has been included instead.

Inputs

This is the first part of the 'efficiency' equation; in other words, measuring the cost of producing the outputs. Countries can seek to improve the efficiency of their systems by reducing these inputs. When measuring a national system, the inputs can be quite nuanced. Due to the regulative nature of public procurement, measurement might be based on system-wide compliance, for example the type of bidding process used for awarding a contract (e.g., 'number/value of procurement contracts awarded by means of non-competitive procedures/open/restricted procedure'), or aspects linked to the use of governmental tools (e.g., 'percentage of spending through the electronic marketplace') (Patrucco, Luzzini and Ronchi, 2016[46]).

The below selection of potential country input areas illustrates the degree of nuance:

- *Estimated cost of product or service*: A simple assessment of the success of a tender process is often done by measuring the anticipated cost against the actual cost. The assumption is that government budgeting is also carried out with a view of previous supplier costs and an analysis of market changes that may impact the budget. A holistic assessment will do so by measuring the 'whole-of-life cost' of the good or service. An aggregated assessment is required to measure efficiency at a national level, where data availability and quality allow it.
- *Employee time/cost*: While conducting a tender is a necessary and often legally obliged process to follow, reducing the amount of resources that are consumed by the process is an inevitable input when measuring efficiency. A procurement process can involve many stakeholders, which can complicate measurement. The benefits of centralisation are often calculated through a simplistic calculation of the 'cost reductions' that will come from conducting fewer tenders. Such calculations are often based on a simplified average tender cost (e.g. typical tender requires one full time procurement person for 6 months at EUR 50 000 per year).

- *Institutional costs*: Procurement teams typically sit within a broader Ministry, and are therefore supported by a number of other functions, including IT, HR and Finance services. Similarly, maintaining a national procurement system may incur costs from other parts of government.
- *Supplier time/resources*: An individual procurement does not necessarily measure success based on costs incurred by suppliers. However, many national procurement systems try to create an environment where suppliers see government as an ideal customer, and where the cost of doing business with government is low.
- *Time taken to conduct tender*: Similar to how private companies might assess their 'time to market', meaning the time it takes to move a product from conception to sale, procurement activity should be assessed based on how quickly it can deliver government's needs. This can be lowered with efficiency tools, such as FAs, dynamic purchasing systems and standardised tender documents.
- *Selection of procurement strategy*: National legal frameworks typically allow a number of options in terms of procurement methods that can be used. Applying the right procurement method/strategy is a key determinant of both the efficiency and effectiveness of the process.

Outputs

In the immediate aftermath of a procurement process, the outputs can be assessed based on the negotiated agreement between a contracting authority and a supplier. The agreement, typically in the form of a contract, will outline the agreed delivery requirements for the goods or services to be delivered, and the associated cost. The good or service may include some additional characteristics, such as being innovative or environmentally-friendly, that can be measured against the original strategy.

Outputs can be further measured through the assessment of the goods or services as they are delivered, which may be under different terms than those agreed under the contract. There could be variances in the price that is finally paid, the quality of the good/service (or the extent to which they comply with the requirements), or the delivery time. It is also likely that there will be 'rogue purchasing', meaning individuals may not use the agreed supplier or contract to purchase the same good or service, which then diminishes the benefits of the agreed terms. This highlights the need for the measurement of procurement to incorporate the full lifecycle, including the supplier/contract management phase. Additional inputs may be required in the form of contract management costs in order to maximise the outputs from suppliers.

Finally, in the immediate aftermath of a tender, it is possible to assess the extent to which the process complied with legislation and policy. This is important to measure, as variances from legislation or policy will impact the overall efficiency and effectiveness of the procurement system.

Outcomes

Building a clear connection between the outputs of a national procurement system and the outcomes for citizens is perhaps one of the most challenging elements of the procurement productivity equation. Given the customer-centric nature of the performance assessment, a necessary element of measurement relates to customer (or citizen) satisfaction with, or consumption of, public services. However, as mentioned above, the procurement process is a necessary process for a large proportion of public spending, therefore demonstrating

the value that the procurement process alone adds to the services delivered to citizens can be challenging.

Furthermore, the extent to which procurement can act as a value-adding function is dependent on several factors, including recognition that is given to procurement from other departments, its position in the organisation's hierarchy, and its involvement in strategic planning (Thai and Piga, 2007[47]).

Indirect outcomes stemming from procurement are perhaps easier to measure at an aggregated level than direct outcomes, because of the generic nature of indirect objectives. For example, if an indirect outcome that a government sought to achieve from public procurement was to reduce CO_2 emissions from government activity, it is conceivable that procurement's contribution towards that goal could be measured. However, direct outcomes are much more likely to be specific to the procurement in question (e.g. a procurement process to deliver equipment that would enable cancer treatment seeks to achieve an outcome of reducing the rate of cancer mortalities, which cannot be easily aggregated against many diverse objectives).

Impacts

An outcome is a finite and often measurable change, with a pre-defined reach and scope. Impact can be conceptualised as the longer term effect of an outcome (Harding, 2014[48]). For example, a tender for prisoner education services may seek to deliver outcomes of improving numeracy and literacy of a certain cohort of citizens, yet the impact may be reducing crime or returning individuals to the workforce. Similarly, the outcome of a tender may be restricted to empowering an SME to deliver a public service, yet a wider impact may be enabling the SME in question to develop a good or service to export to overseas markets.

In some cases, impacts take years, if not decades, to materialise. Therefore, outcomes may simply be proxies for longer-term outcomes. Because data on performance does not always demonstrate causality between outputs, outcomes and impacts, government is often unable to definitively say how their activities contributed to improvements (Compassion Capital Fund National Resource Centre, 2010[49]).

Enablers/Conditions

While countries have developed KPIs that touch on many of the above areas, there are many factors that are highly influential in the successful functioning of a procurement system that are much more intangible and harder to measure. They are the constant factors that make up the public procurement environment. Policy makers may seek to change these factors in order to affect changes in the system. The examples listed in Figure 3.3 include control/risk management factors, policy, legislation, the functioning of the e-procurement platform and the skills of the procurement workforce.

Some of these enabling factors can be changed or improved through the investment of time or resources, which would be represented as an input in the performance assessment. If, for example, the government is undertaking an improvement programme to enhance the e-procurement system, or a broad training initiative to develop a new skillset, these would be one-off inputs aimed at enhancing the efficiency and effectiveness of the system. During a 'steady-state' running of the system, maintenance of the e-procurement platform or the provision of regular training courses would also be seen as inputs. Conversely, over investment in certain factors could impede overall performance. For

example, increasing the focus on compliance in transactions in order to contain fraud and corruption may distract from a focus on outcomes or efficiency (Kumar, Nair and Piecha, 2015[24]).

Much of the work done by policy makers, particularly the development of the procurement workforce and the identification and elimination of risks in the procurement system, is extremely valuable. Yet the absence of reliable indicators impedes governments' ability to demonstrate the value in a quantifiable way.

3.2. Assessing public procurement's productivity in Finland

3.2.1. Some measurement of CPB activity is already in place, though measuring productivity of central-level procurement will require further data gathering

Applying the structured performance assessment to Finland requires an understanding of which of the indicators for measuring the efficiency and effectiveness of the public procurement system (listed in 1.2) could be measured by the Finnish government, depending on their context and the data that is currently available. As discussed in section 2.3.2, efforts to measure national productivity will be hampered by the lack of visibility into local and regional purchasing activity. However, attempting to measure public procurement performance at the central level will be more achievable.

In Table 3.1 below, the productivity indicators have been mapped against the current availability (and likely future availability) of the data that would enable the indicators to be put into use in Finland. Where this data is not available, this represents an opportunity for the central government to consider the importance of measuring the relevant aspect of system performance, and if necessary take steps to begin collecting that information.

It is likely that, even where the data is available, there may be issues with its completeness, consistency or accuracy. This data can be improved over time through tactics such as communicating to contracting authorities and suppliers how the data will be used and published, communicating the importance of having the right data, or by publishing a list of the contracting authorities that are the best and worst performing at data collection and input. Similarly, collecting data on activity at the federal-level is likely to be more achievable than for local and regional activity. Therefore, achieving national measurement may be an iterative journey.

Table 3.1. Applicability of performance indicators to the Finnish public procurement system

	Objective	Data requirements		Applicability in Finland
Measuring CPB Performance in Finland				
Economic impacts	***Inputs – General***			
	Overall inputs required of CPB	Staffing levels; cost of running CPB; breakdown of time spent on different activities	✓	Internal data on staffing can be used to establish overall CPB inputs, and division of inputs by activity
	Inputs – Framework Agreements (FA)			
	Cost of establishing FAs	Cost and time of staff (inside and outside of CPB) spent on establishing and managing FAs	✓	Direct costs and employee time spent establishing and managing FAs can be established from existing data
	Increased competition in FAs	Numbers of bids submitted for different stages of each FA (including call-off stage)	✓	Data held internally on bids received for different stages of FAs over time. Requires data on call-off phase participation from contracting authorities where required.
	SME participation in FA tenders	Number of bids submitted for different stages of each FA by businesses categorised as SMEs	✓	Can be established, provided size of business is captured as part of tender information
	Inputs – Capability building and consulting services			
	Spend/time on advisory services and resources	Staffing levels related to advisory services; additional costs for providing such resources and tools	✓	Direct costs and employee time spent delivering consulting/advisory services to CAs can be established from existing data
	Training spend	Cost of providing training courses, and amount of employee time consumed in delivering training	✓	Direct costs and employee time spent delivering training to CAs can be established from existing data
	Outputs – FAs			
	FA hard savings	Cost of goods and services agreed in FA (or cost paid by CAs in second stage) versus market rate for CA or centrally agreed rate, depending on methodology	✓	Savings methodology already developed and applied by Hansel
	FA time savings	Average time spent by CA personnel to establish a contract for the relevant good or service	✓	Time spent by CAs conducting tenders established by academic work in 2009; baseline could be updated to account for technology changes
	FA customer satisfaction	Survey results from users of FAs from within CAs	✓	Customer satisfaction surveys on FAs and additional services are already in place
	Efficiency in second-stage FA processes/ through dynamic purchasing system (DPS)/other instruments – businesses	Assessment of time taken for businesses (averaged across several business profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS	✗	Data is not currently held on the time taken by businesses to respond to FA tenders or in using DPS or other efficiency tools

	Objective	Data requirements		Applicability in Finland
	Efficiency in second-stage FA processes/DPS/other instruments – CAs	Assessment of time taken for contracting authorities (averaged across several CA profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS	✗	Data is not currently held on the time taken by contracting authorities to purchase from FAs manually or by using DPS or other efficiency tools
	SME success	Ratio of SMEs that are successful in FA tender. For multi-stage FA, assessment of success at 1) initial tender stage and 2) call-off stage (and number and value of contracts awarded to SMEs)	✓	Can be established, provided size of business is captured as part of tender information
	Innovative procurement	Ratio of goods and services purchased that meet innovation criteria (e.g. purchased through PCP, first introduction into domestic market etc).	✓	Measurement has been established to ensure 5% of tenders are innovative, to meet the national target. However, further work required to a) clarify whether 5% represents value or quantity and b) to extend measurement to understand the impact of innovative procedures
	Outputs – Capability building and consulting services			
	Spend under advisory services	Information on contracting authority projects (e.g. type of procurement, spend level) that have received support from CPB	✓	Data already reported by Hansel on value of projects supported through advisory services
	Satisfaction with advisory services	Survey response from relevant CAs	✓	Survey already conducted of CA satisfaction with advisory services
	Qualified/certified personnel	Levels of certification in procurement professionalisation of workforce versus overall workforce numbers	✗	No register of qualifications or certification for procurement personnel, though Hansel provide support to Haus training courses.
Environmental impacts	Reduction in energy consumption	Comparison between energy consumption of historical goods and services from FAs and new goods and services selected using MEAT or other criteria	✗	Requires understanding of energy usage of previous goods and services throughout lifecycle, as well as usage of current goods and services (e.g. electricity required to power previous lightbulbs versus current lightbulbs)
	Reduction of CO_2 emissions	Comparison between CO_2 emissions from historical goods and services from FAs and new goods and services selected using emissions as criteria	✗	Requires understanding of CO_2 emissions of previous goods and services throughout lifecycle, as well as emissions of current goods and services (e.g. emissions from previous vehicle fleet compared to current fleet). Current measurement purely involves calculation of spend through 'green' contracts
	Improvement in air/water quality	Comparison between impacts on air/water quality of historical goods and services from FAs and new goods and services selected using environmental considerations as criteria	✗	Requires understanding of impacts of previous goods and services on air and water quality, as well as impact of current goods and services

	Objective	Data requirements		Applicability in Finland
Social impacts	Transparency in use of FAs	Proportion of FA tender documents that are shared openly in a format allowing review and analysis	✓	Data available on extent to which information on FAs is shared publicly, including information on call-offs (and in what format)
	Open and inclusive procurement	Proportion of centralised tenders (and second-stage processes) that use open procedures as opposed to restricted or closed tenders	✓	Data available on types of procedure used for different phases of FA tenders
	Stakeholder perception and involvement	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to FA performance	✗	Beyond current CA audience, other stakeholder groups aren't currently surveyed on centralised procurement performance
	Use of social criteria in FAs	Ratio of FAs pursuing social objectives (and where possible, aggregation of social outcomes secured through FAs)	✓	Information available on which current FAs include clauses/criteria related to delivering social outcomes
	Skills/jobs creation	Number of jobs/training courses/qualifications generated through FAs (note: specifically generated through contract clauses)	✓	Information available on which current FAs include clauses/criteria related to creating jobs or delivering training
Measuring National Procurement System Performance in Finland				
	Inputs			
Economic impacts	Cost and time of procurement processes	Time taken (and any associated overt costs, not including employee salaries) by government personnel, including non-procurement roles, to undertake procurement activity	✗	Data not currently available on cost and time for conducting tenders beyond Hansel activity (except for small sample conducted by academic study in 2009); measuring total inputs will require an estimation of total cost and time across the system
	SME participation	Number of bids submitted for government tenders by businesses categorised as SMEs	✓	Information is collected through central tendering platform (and sub-central if possible) that could be used to assess the number of SMEs participating across all tenders
	Business perceptions on cost and time of participating in government tenders	Survey responses, including quantitative results, on time taken (and resources engaged) in responding to government tenders	✗	Requires a broad sample of business sizes and tender types to gain an understanding of inputs required of businesses when participating in public tenders
	Overall inputs of national procurement system	Data/estimates on number of personnel in each contracting authority engaged in procurement activity, and value of procurement spend at each contracting authority	✗	Requires an understanding of government spending across different institutions and at central, regional and local levels, as well as the procurement personnel landscape nationally
	Business participation and competition	Average number of bidders per tender; ratio of tenders that are open procedures versus limited tenders and direct awards	✓	Information on central-level procurement should be available from national tender platform, provided information on direct awards is systematically collected
	E-procurement inputs	Direct costs for purchasing, upgrading or maintaining e-procurement system; personnel costs associated with system management and maintenance	✓	Handi project can provide a central and detailed view of e-procurement system and personnel costs

	Objective	Data requirements		Applicability in Finland
	Outputs			
	Government customer satisfaction	Survey results from teams within CAs that use procurement services on service/efficiency/effectiveness provided by public procurers	✗	Surveys of recipients of procurement services within contracting authorities are not currently conducted
	SME success	Ratio of SMEs that are successful in government tenders, and number and value of contracts awarded to SMEs	✓	Can be established by combining the information from the contract notice portal with the information from the business register on the e-Tendering platform
	E-procurement time savings	Assessment of time taken for contracting authorities and businesses to conduct tender procedures with and without use of different digital procurement functionalities	✗	Data is not currently held on the time taken by contracting authorities to conduct tenders manually versus using different digital functionality (except on processing digital invoices). Once a benchmark is established on time taken to complete different types of tender, new measurements can be taken after improvements/simplifications have been made
	Use of whole of life costing	Ratio, value and number of contracts awarded following a procedure containing life-cycle costing award criteria	✓	Information is available from contract award notices that could indicate how widely whole of life costing or MEAT criteria are used across the system but the information is not yet analysed for this purpose
	Cost and time reduction resulting from process simplification	Measurement of time taken by government and business personnel to complete tender procedures both before and after efforts to improve or simplify processes (e.g. use of model contracts)	✗	Once a benchmark is established on time taken to complete different types of tender, new measurements can be taken after improvements/simplifications have been made
Environmental impacts	Reduction in energy consumption	Comparison between energy consumption of historical goods and services bought by government and new goods and services selected using MEAT or other criteria	✗	Requires understanding of energy usage of previous goods and services throughout lifecycle, as well as usage of current goods and services (e.g. electricity required to power previous lightbulbs versus current lightbulbs)
	Reduction of CO_2 emissions	Comparison between CO_2 emissions from historical goods and services bought by government and new goods and services selected using emissions as criteria	✗	Requires understanding of CO_2 emissions of previous goods and services throughout lifecycle, as well as emissions of current goods and services (e.g. emissions from previous vehicle fleet compared to current fleet). Current measurement purely involves calculation of spend through 'green' contracts

	Objective	Data requirements		Applicability in Finland
	Improvement in air/water quality	Comparison between impacts on air/water quality of historical goods and services bought by government and new goods and services selected using environmental considerations as criteria	✗	Requires understanding of impacts of previous goods and services on air and water quality, as well as impact of current goods and services
Social impacts	Transparency in government contracting	Proportion of government tender documents that are shared openly in a format allowing review and analysis	✓	Data available on extent to which information on government tenders is shared publicly, versus amount of spending that does not gain public visibility
	Open and inclusive procurement	Proportion of government tenders that use open procedures as opposed to restricted or closed tenders	✓	Data available on how many procedures are conducted by open/restricted/negotiated procedures
	Stakeholder perception and involvement	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to public procurement	✗	Other stakeholder groups are surveyed infrequently, yet not regularly enough to enable a comparison or trend analysis
	Use of social criteria in government contracts	Ratio of public contracts pursuing social objectives (and where possible, aggregation of social outcomes secured through public contracts)	✗	Information not easily available on number of government contracts that include clauses/criteria related to delivering social outcomes
	Skills/jobs creation	Number of jobs/training courses/qualifications generated through public procurement (note: specifically generated through contract clauses)	✗	Information not easily available on number of government contracts that include clauses/criteria related to creating jobs or delivering training

Source: Based on data provided by Finland; (The World Bank, 2017[50]) (OECD, 2016[11]).

3.2.2. Applying the structured performance assessment to public procurement in Finland

In order to assess how the productivity framework might apply to Finland in more detail, this section assesses Finland's ability to measure each area of the framework. It also provides, where relevant, suggestions on how performance in each area may be enhanced.

Strategy

As discussed in section 2.2.1, the government's economic strategy identifies procurement as a lever for achieving several economic objectives. Public procurement could be used to target a number of challenges in order to make economic gains. For example, procurement could play a role in achieving the following four high-level strategic objectives targeted by the Finnish government:

Figure 3.4. Strategic Objectives of Public Procurement in Finland

Source: (Prime Minister's Office of Finland, 2015[30]); (Ministry of Economic Affairs and Employment of Finland, 2017[51]).

At present, Finnish procurement officials are not given clear instructions on how these objectives can be achieved through public procurement. Setting clear strategic objectives is important for decisions made further down the chain, such as how different evaluation criteria should be prioritised or whether investment in new technologies is worthwhile. Further work can be done to build a clear connection between the objectives above and the daily work carried out by public procurement practitioners.

Inputs

As discussed in section 2.2.2, Hansel holds a large amount of data on the cost and time resources required to carry out their operations. Less information is held on wider inputs

across the national procurement system. This may change should legislative changes give Hansel greater access to data on procurement activity. Along with the gains in digitalisation brought about by the Hansel programme, more data should be available on procurement activity such as the level of competition for public tenders. It remains to be seen whether the data is captured in such a way as to allow SME participation to be measured.

The 2009 academic research carried out on the impact of centralisation on the efficiency of public procurement in Finland conducted benchmarking to identify the time and cost required to conduct a tender exercise. This provides an indication of the efficiencies that can be gained for government from reducing the number of procurement procedures carried out (Karjalainen, 2009[36]). This is now a somewhat out-of-date reference point, and it does not allow a more detailed analysis according to the size of the agency, or the value and complexity of the tender process. Therefore, estimating process inputs across contracting authorities may require further analysis.

One blindspot in Finland's ability to measure inputs relates to the resources consumed by the private sector when participating in public tenders. Studies to date have concentrated on measuring the impact of public procurement on contracting authorities. The impact of changes to public procurement regulation, policy or process on businesses is still unknown. The suite of information held on the efficiency of business participation should be expanded, either through empirical studies or perception-based surveys.

Outputs

Hansel also have a great deal of data on the direct outputs of centralised tender activity, including an indication of the savings achieved and contracting authorities' satisfaction with Hansel's products and customer service. FA consumption is measured in detail, yet improving the ARPU model used to estimate the extent of maverick buying by contracting authorities has been identified by Hansel as an area that requires refinement.

There are other input costs quantified by Hansel, such as the cost of conducting consulting or advisory services, which are not direct inputs to the execution of procurement procedures. Instead, they seek to increase outputs or improve outcomes for procurement activities carried out by contracting authorities. Beyond measuring the total value of procurements supported by these services and the customer's satisfaction with the service (both of which are currently measured by Hansel), it is still difficult to quantify the benefit that this service achieves. Many of the outcomes, such as improved risk management, the development of skills or the transfer of knowledge, are somewhat intangible.

Anecdotally, wherever contracting authorities continue to demonstrate low levels of capability or fail to adhere to legislation or policy, such interventions are worthwhile. Yet the efficiency and effectiveness of these services can be enhanced through technology and effective organisational structures. By reducing the inputs required from such interventions while increasing their impact and therefore increasing the efficiency or effectiveness of public procurement, Hansel can improve the broader productivity equation.

Outcomes

It is not possible to build a connection between public procurement activity and the impact that the activity has on the delivery of public services from the data that is

currently held centrally. It is a challenging exercise, regardless of data availability, but is only possible through the development of a methodology that connects public procurement to the services it delivers.

In the areas of green procurement and procurement for innovation, there is an attempt to quantify the size of public procurement spend that is dedicated towards achieving these objectives. In the case of green procurement, these considerations have been incorporated into all Hansel FAs. However, the relative impact on environmental factors such as CO_2 emissions is not yet quantified. Procurement for innovation is treated as an isolated 'pot' of government spend, as opposed to a more widely-adopted approach. Similarly, there is not yet a tangible connection between innovation spend and the outcomes that it has achieved.

Isolated case studies may serve as a useful starting point for communicating the impact and benefits of these initiatives. For them to take root more broadly, these efforts must be systematically measured, and their implementation supported beyond Hansel's central activity.

Impacts

Efforts to expand the digitalisation of procurement activity and the inter-connectedness of systems across government will enhance the Finnish government's ability to measure the longer-term impacts of government policy across multiple areas. The impacts of multiple policy areas can be challenging to disentangle, which emphasises the need for enhanced analytics through Business Intelligence tools, something that Hansel has already invested in. Reviewing this data in isolation can result in an incomplete view of impacts. Therefore, it is vital that data is shared across different parts of government to ensure that the full effects of government policy can be assessed.

Enablers/Conditions

As discussed in 3.1.1 above, these are the environmental factors that determine how the public procurement system operates. Investments in these factors in order to bring about changes or improvements may be seen as inputs. The benefits of the Handi programme, for example, have been assessed and they include a 20 minute reduction in processing time for every supplier invoice. Once aggregated across central government, these benefits are likely to outweigh the expected investment in the programme.

The benefits of other investments, such as a DPS or changes to the tender process through the introduction of an ESPD, should also be assessed in this light. A holistic assessment must also include the ongoing impact of these initiatives on the business community.

Annex A. Case Study on use of public procurement to lift productivity: Chile

The broad use of FAs across Chile, coupled with a strongly centralised use of e-procurement, has presented ChileCompra with a great deal of data from which performance assessments can be carried out. The ability to link to a supplier registry means that the impact of public procurement on supplier groups can also be assessed. The next frontier of analysis for ChileCompra may be the effectiveness of the broader system, and their efforts to build capability within contracting authorities. This case study reviews the focus areas of ChileCompra and their ability to measure their impact on public procurement in Chile.

The case study of Chile represents an opportunity to test the framework developed to assess public procurement's productivity in Finland on a country with a different system and a different context. A greater degree of centralisation in the use of the electronic system means that Chile holds more data and has more control and visibility over a greater proportion of government spending than Finland. This presents an opportunity to assess whether this added visibility presents additional opportunities to measure the efficiency and effectiveness of the national system.

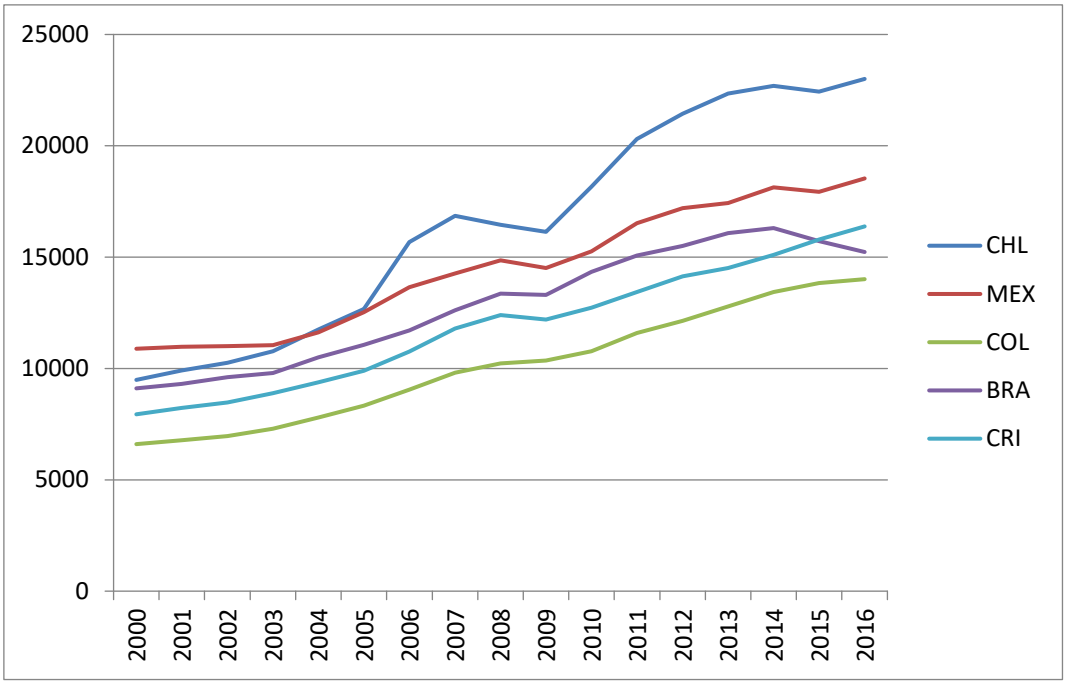
The 2017 OECD review of public procurement in Chile, in particular the use and management of FAs, presented a number of recommendations aimed at helping the public and private sectors to extract more benefit from FAs. While this case study does not seek to provide a holistic update on the implementation of those recommendations, there is recognition of some of the steps taken since that review to improve efficiency and effectiveness.

The case study could benefit from data already held by the OECD which was collected during the course of the previous review. Some of the data has been updated to provide a more up-to-date picture. While this case study provides a 'lighter touch' version of the Finland case study, it still provides a high-level assessment of how the Chilean system, and ChileCompra in particular, is positioned to conduct ongoing monitoring and evaluation of the system.

Investment and productivity are the keys to boosting economic growth in Chile

The Chilean economy has been one of the fastest-growing in the OECD in recent decades. It has, however, demonstrated frailties in recent years, particularly in relation to the fluctuation of global commodity prices, in particular copper, on which the Chilean economy is somewhat reliant. There are risks to long-term growth prospects, such as the decline in infrastructure investment, lower export prospects and low confidence in the business sector. Yet the growth of recent years has left Chile in a strong economic position, as shown in Figure A A.1.

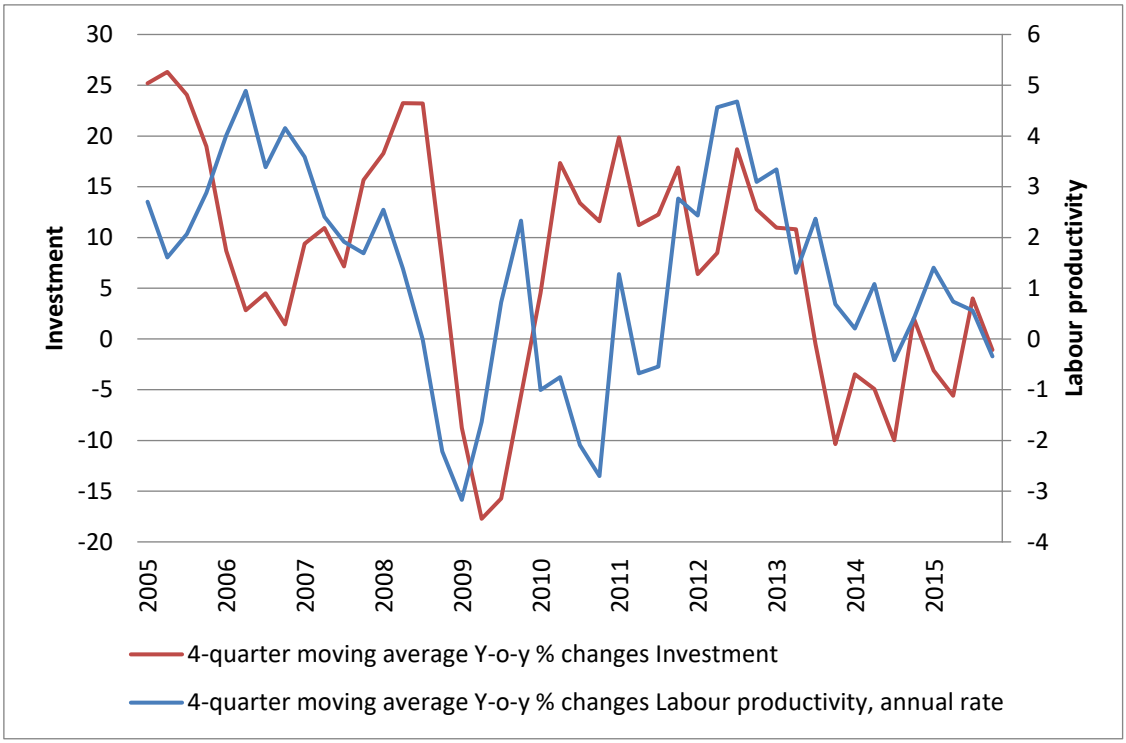
Figure A A.1. GDP per capita growth across Latin American OECD countries



Source: (OECD, 2018[52]).

More restrictive lending conditions and lower business confidence have also held back investment. Private consumption growth has also declined significantly, reflecting weaker real income growth and a deterioration of consumer confidence. As growth slows, the labour market has weakened and unemployment is drifting up. Both investment and labour productivity have reduced over recent years, as shown in Figure A A.2 below.

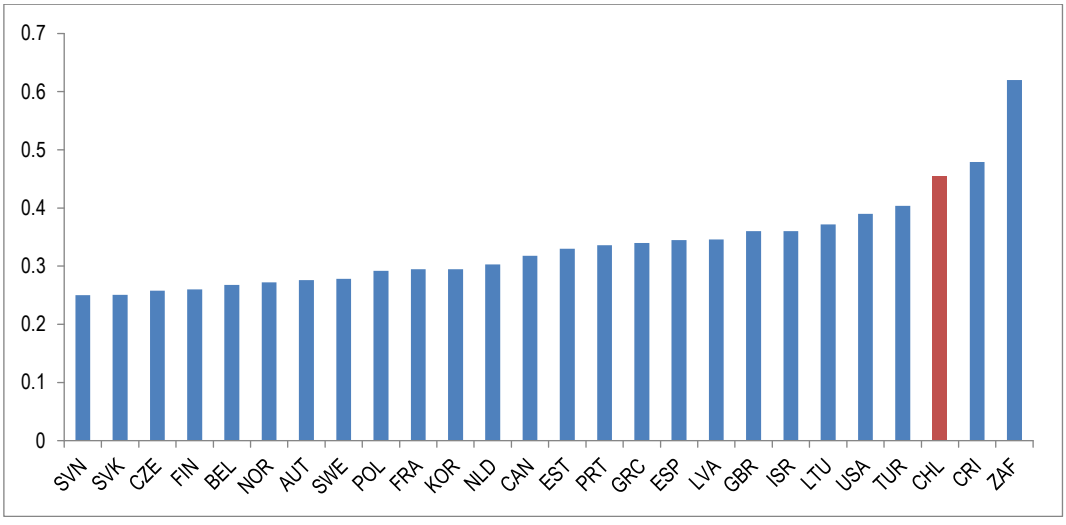
Figure A A.2. Low rate of productivity and investment growth in Chile



Source: (OECD, 2016[53]).

Declining productivity gains are limiting prospects for incomes to rise and for better-quality jobs to emerge (OECD, 2017[54]). Broader social issues also contribute to future economic challenges, such as high levels of income inequality and low levels of female employment (OECD, 2018[55]). Figure A A.3 below demonstrates Chile's performance on income inequality compared to other OECD countries.

Figure A A.3. Income inequality in OECD and partner countries



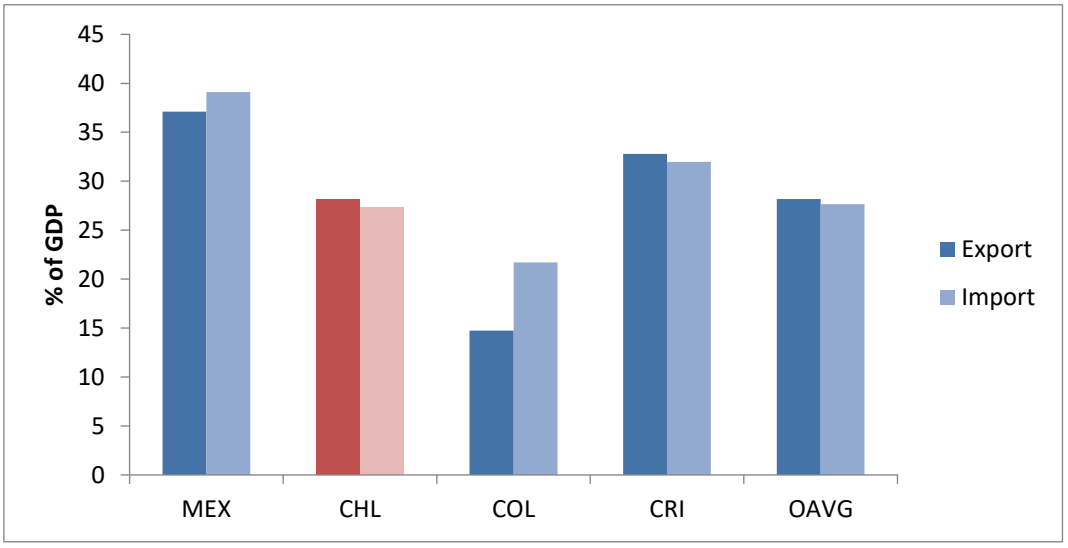
Source: (OECD, 2017[54]).

Addressing these challenges will require Chile to address stagnant productivity and the persistently high inequality. Two of the areas identified as enablers for improving Chile's medium to long term growth prospects are boosting productivity and improving fiscal management. Measures to boost productivity were introduced in 2016, which was named the "Year of Productivity" in Chile. Actions were intended to improve access to financing, increase exports of services, and simplify regulatory procedures to strengthen entrepreneurship and investment.

Approaches to increase productivity and improve public spending in Chile must go hand in hand. Additional social and education expenditure, notably through ongoing education reform, will support inclusive growth overtime. However, boosting productivity would raise incomes for all Chileans and help financing high-quality public services, education and health. Fiscal improvements in coming years should improve room for investments in health, education and infrastructure over the medium term.

When compared to some of their regional neighbours, it is clear that exports play less of a role in the Chilean economy. Supporting Chilean businesses to become more competitive, innovative and productive could boost their global competitiveness and increase the role of exports in the economy. Putting in place policies that constantly promote activities in which firms and workers are competitive would help reap additional gains from trade (OECD, 2017[56]). The current landscape across several comparison Latin American countries is provided in Figure A A.4.

Figure A A.4. Imports and Exports as a Proportion of GDP



Source: (OECD, 2018[57]).

OECD research indicates that an ambitious reform agenda could increase GDP per capita by over 5% in ten years and lower inequality, notably through better-quality jobs. Such a reform agenda should target increasing the competitiveness of the private sector, by taking steps such as (OECD, 2018[55]):

- Increasing incentives to encourage innovation;
- Simplifying administrative procedures, such as licenses and permits;
- Improving labour market regulations; and

- Raising social spending to increase employability through increased training.

The Economic Survey of Chile, released by the OECD in 2018, underlined that efforts to increase productivity should be supported by introducing changes to how regulations are developed and monitored. Firstly, stakeholders should be further involved in the design of regulations through early consultation procedures. Secondly, productivity assessments should be expanded to ensure that regulations systematically receive *ex ante* and *ex post* evaluations (OECD, 2018[55]).

As discussed earlier, public procurement has a significant role to play in managing public finances and driving economic activity. In Chile in 2011, public procurement accounted for almost 7% of GPD (OECD, 2011[58]). Public procurement is also significant at the central level. For example in 2014, USD 1.8 billion was spent through centralised FAs developed by ChileCompra, the Chilean CPB. The number of transactions through the online catalogue, ChileCompra Express, makes it the largest virtual store in the country, almost equivalent in size to all private electronic commerce industry in Chile (OECD, 2017[35]).

A strategic plan for public procurement in Chile was developed in 2002 to initiate a reform of procurement practices. One of the main objectives of the reform was for procurement to contribute to economic growth in the following ways (Gobierno de Chile - Ministerio de Hacienda, 2002[59]):

- **Economic Growth Contribution:** "New efficient saving policies and methods to contract goods and services allow for assured fiscal discipline and increased availability of resources for social expenditure and other purposes. Planned and announced procurement results in clear signals to the market, reduces risk and promotes suppliers to provide more innovation and investment. Competitiveness in domestic production and trade can be strengthened by introducing new techniques applicable to both contracting modalities and technical requirements imposed by the Government, thus improving associated products and services."

Yet Chile, like all other OECD countries, has not yet developed a comprehensive method of assessing procurement performance. Therefore, boosting productivity and inclusive growth in Chile will require not only a strengthening of the impact assessments applied to procurement policy and regulation, but also a greater understanding of how the power of public procurement can be better leveraged for economic gain.

The re-alignment of ChileCompra's strategy towards achieving public value and efficiency

The structure and direction of central purchasing activity in Chile were re-set during reform efforts launched in 2002. At the time, public procurement accounted for USD 7 billion of public spending annually through more than 1.4 million transactions. The manual nature of procurement at the time meant that tender opportunities amounted to USD 12 million in newspaper advertising. The perception of the Chilean central purchasing body at the time was that of a highly bureaucratic, inefficient and overstaffed body. Cases of corruption did occur, though they were uncommon and isolated. Information and support for procurement professionals was sparse and varied, with procurement regulations incoherent and dispersed. The low uptake of e-procurement and the resulting lack of publicly available also resulted in a growing sense that government spend was not transparent or accountable (Larraín, n.d.[60]).

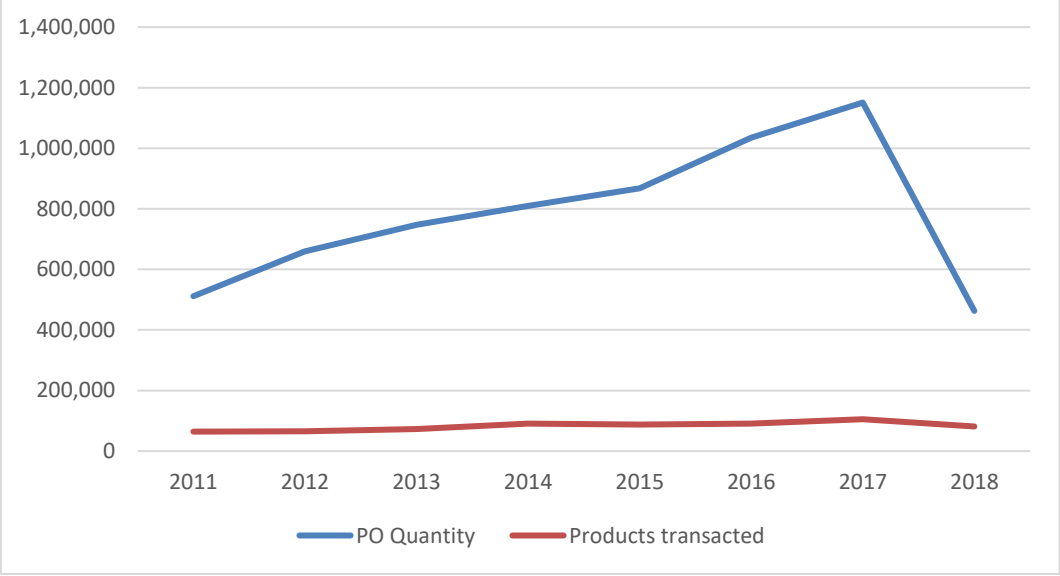
The strategy gave e-procurement a leading role in efforts to overcome corruption, deliver savings by increasing competition and efficiency, and establish an environment conducive to investment in order to maximise Chile's free trade agreements. This would be supported by the rationalisation of the institutions responsible for leading and coordinating public procurement activity, a proliferation of the use and uptake of procurement technologies by suppliers and contracting authorities, and by developing a modern, common and simple legal framework.

ChileCompra's role as the central purchasing agency in Chile was re-aligned to focus on the implementation of collaborative procurement instruments for the benefit of contracting authorities. Its main duties are to:

1. Provide support to public entities in carrying out procurement processes;
2. Implement, operate and maintain the e-procurement system, allowing public entities to conduct online procurement operations;
3. Manage the registry of suppliers;
4. Purchase goods and services on behalf of one or more public entities; and
5. Implement and manage FAs.

FAs (Convenios Marco) were instituted by ChileCompra in 2003. Law n° 19 886 on Public procurement states that ChileCompra is responsible for implementing, awarding and managing these agreements. The use of FAs by contracting authorities is mandated by the procurement law, and it has been further supported by investment in the e-procurement system as the vehicle for the use of FAs. ChileCompra Express was developed to allow contracting authorities to access all goods and services available under FAs. The Figure below represents the uptake of FAs by contracting authorities over time.

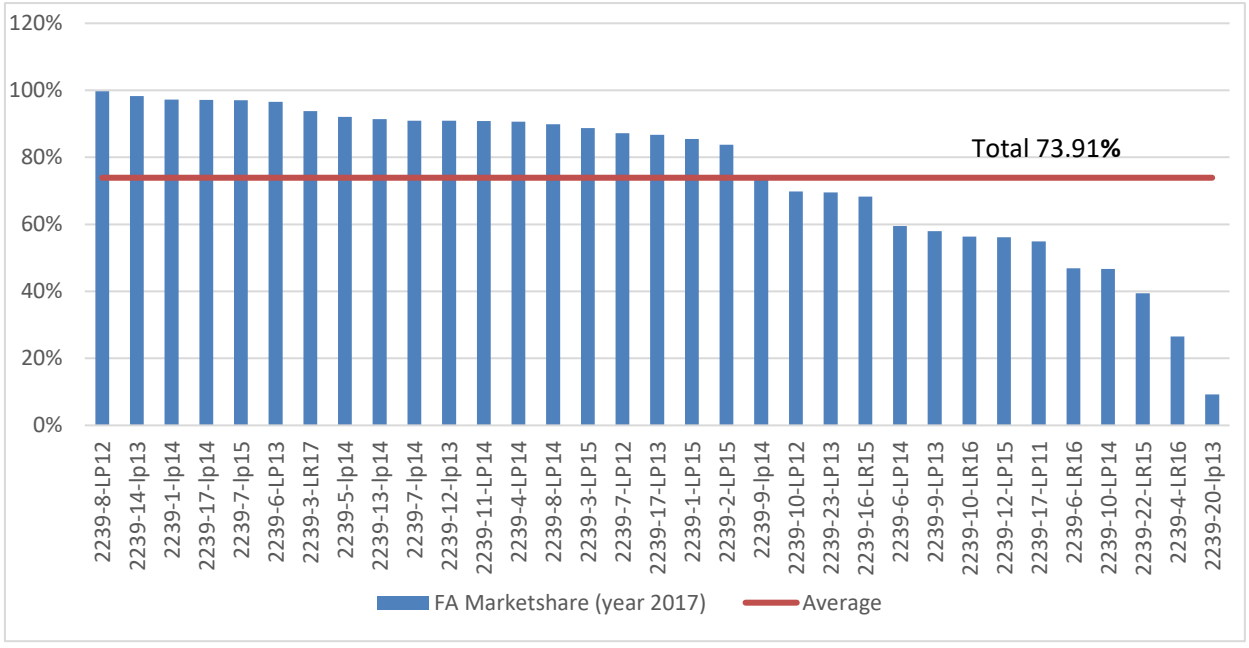
Figure A A.5. Uptake of FAs by contracting authorities



Note: Data for 2018 is for January to May only.
*Source:*Based on data provided by ChileCompra.

Increasing the coverage and use of FAs leads to a greater potential for generating price savings and process savings (as discussed in section 2.2.2 above in relation to Finland) through consolidation of demand. Contracting authorities in Chile are obliged to use ChileCompra FAs, while other entities such as municipalities, can voluntarily participate should they wish to. The army and police forces are also obliged to use the FAs however there are some exceptions, which are decided by individual contracting authorities on a case-by-case basis. Mandated contracting authorities do have an opportunity to opt out of FAs should they identify similar goods and services with more competitive conditions outside of FAs. This may be difficult for contracting authorities to achieve in most cases, yet coverage of FAs across mandatory institutions does vary significantly, as shown in

Figure A A.6. Coverage of the Framework Agreements 2017

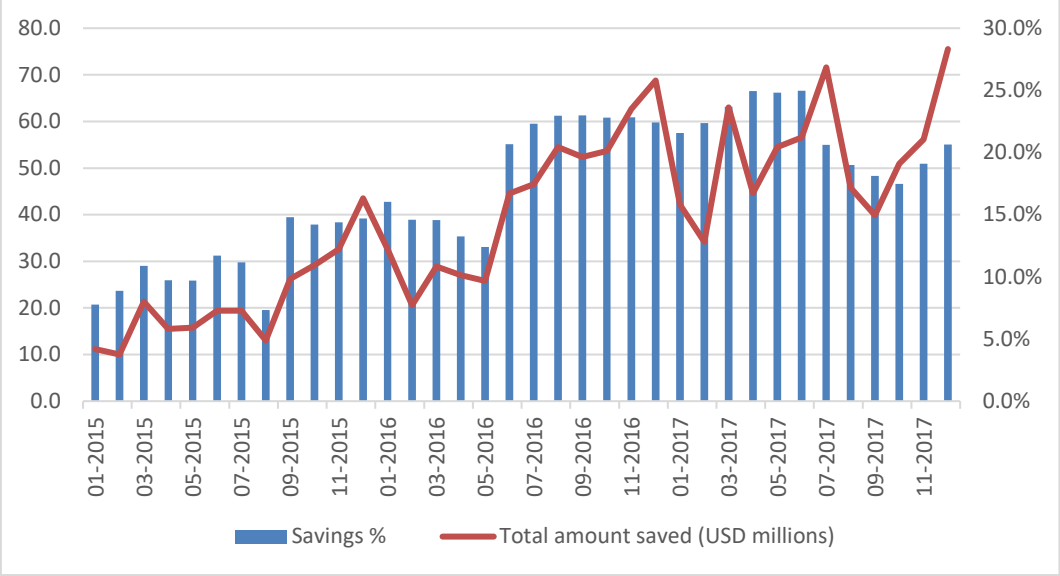


Source: Based on data provided by ChileCompra.

In areas of Chile where FAs are available they are used in 73.91% of procurements (on average) so in those areas the FAs meet the requirements of contracting authorities. Although reaching 100% of coverage of needs may be unrealistic, there has been a consistent trend upwards in usage for some categories such as data centre and associated services which has gone from 17.85% in 2014 to 54.90% in 2017.

ChileCompra calculates price savings based on the difference between the price proposed by bidders awarded under FAs, and the average price proposed by at least three suppliers outside the procurement instrument. According to ChileCompra, in 2017 the savings generated from the use of FAs amounted to USD 1 410 million (ChileCompra, 2018[61]). Process savings are calculated by estimating the difference between costs related to the issuance of a purchase order from one of ChileCompra's FAs and the costs generated by the issuance of a public tender or direct award procedure. This assessment only takes into account the process costs borne by buyers and does not include suppliers.

Figure A A.7. ChileCompra Price Savings



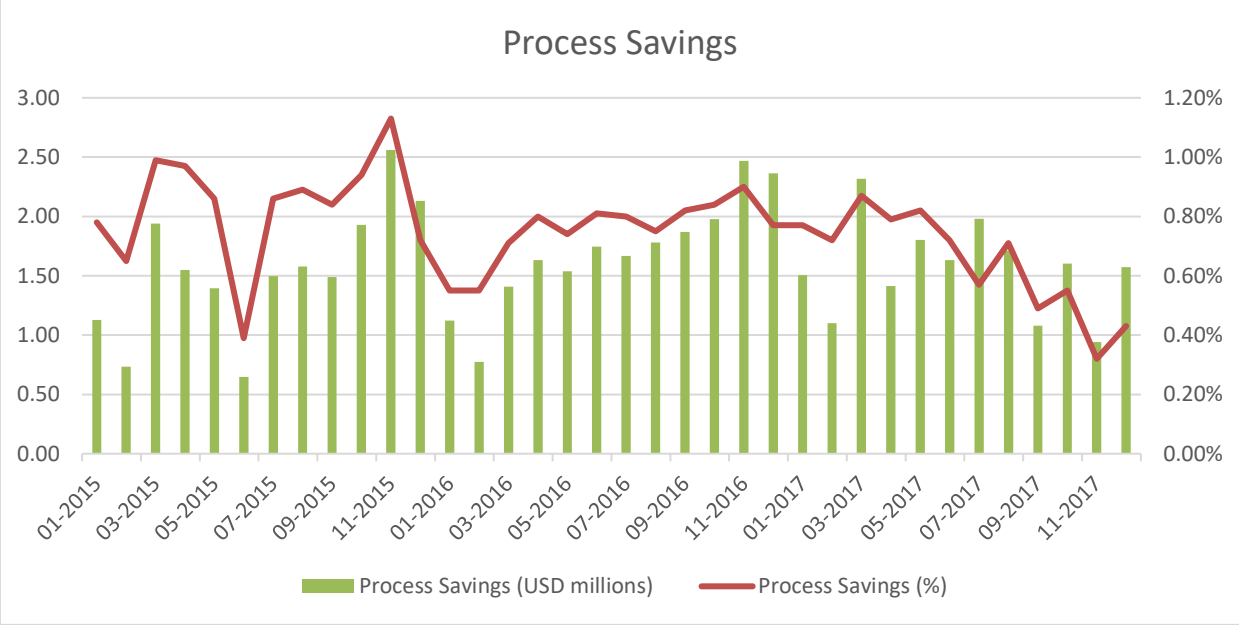
Source: Based on information provided by ChileCompra.

Table A A.1. ChileCompra Total and Average Savings amounts

ITEM	2015	2016	2017**
Savings average	11.7%	19.5%	21.2%
Total amount transacted (USD millions)	2 197	2 661	2 999
Total amount saved (USD millions)	257	518	635

Source: Based on information provided by ChileCompra.

Figure A A.8. ChileCompra Process Savings



Source: Based on information provided by ChileCompra.

One of the two primary objectives for FAs in Chile at the time of their creation was to "*increase public expenditure savings and efficiency by accessing the best market available prices*", supported by secondary objectives including assuring "*quality procurement of goods and services by obtaining the most appropriate supplies to deliver excellence public services*".

These objectives can often conflict with the policy objective of an inclusive and open approach that encourages broad participation in FAs by Chilean suppliers of all sizes. The OECD's 2017 review of FAs in Chile analysed the number of businesses transacting through ChileCompra FAs and identified an increase of 180% from 2010 to 2015. Distributing revenue across a large number of suppliers avoids the concentration of spend in a small number of large companies, and spreads the economic benefits of government spending more broadly.

However, the OECD review also found that 61% of the businesses that participated in ChileCompra FAs did not 'transact' with, or were not successful in obtaining revenue from, a contracting authority customer to the FA. This is important, given that the level of commitment from the demand and the supply sides to the use of FAs will affect its functioning as it provides an indication of the likelihood of effective trade activities between the parties. Considering their inherent revenue uncertainty, the effectiveness of FAs for both sides will depend on this commitment.

When demand side commitment is weak, and contracting authorities are not required to purchase available products through a FA, the attractiveness of this instrument to suppliers may be limited. When the supply side commitment is weak, and does not entail mandatory acceptance of orders, efficiencies for the contracting authorities may be questioned. ChileCompra acknowledged this issue and, following the publication of the OECD's report, made a number of changes to their FAs to better align with the objectives

of increasing the efficiency of government spending. These improvements do highlight the importance of collecting data on FA usage and ongoing performance management.

There are limitations of ChileCompra Express' ability to fully execute this function at present. The system does not seamlessly integrate information on the execution of orders. For example, the OECD review found that in 2014, more than 800 000 purchase orders were issued by Chilean contracting authorities under FAs. However, almost 15% of the orders (8.75% in terms of value) were not correctly identified in the system, leaving a void of information on a large portion of spend activity. In 2017 the amount of unidentified purchase orders decreased to 0.6% overall (approximately 7 000 over 1.1 million purchase orders). The unidentified purchase orders are equivalent to USD 134 million and account for approximately 5% of the transacted total amount under FAs for the 2017 year.

Information on how suppliers carry out orders and supplier performance assessments must be provided by contracting authorities voluntarily. A penalties system is in place where suppliers are unable to fulfil their commitments under FAs. If a purchase order has not been satisfactorily executed, a contracting authority would apply penalty, yet there are no guarantees that ChileCompra will be notified of the sanction or the underlying reasons. Incorporating this information into the system more systematically would improve visibility of supplier performance.

Widespread use of Mercado Publico ensures good visibility of government procurement activity

Beyond FAs, ChileCompra has a broader role to play in identifying opportunities to consolidate demand and collaboratively purchase. In doing so, it is supported by data collected through the national e-Procurement platform, Mercado Publico.

Purchases by total amount transacted from the FA catalogue account in 2009 accounted for 21% of all transactions on Mercado Publico, The amount transacted from the FA catalogue account increased in 2017 to 47%. The remaining amount comprised non-FA procurement activities carried out by contracting authorities.

The following functionalities are available in Mercado Publico for the benefit of contracting authorities and suppliers:

- An electronic catalogue for products and services provided through FAs;
- A national supplier registry, which holds documents detailing a business' legal and commercial grounds for participating in public tenders;
- The open data platform, linked to the e-procurement platform via application programming interfaces (APIs), collects data on purchases, tenders, and direct awards for review and analysis by citizens and civil society;
- Modules enabling payments, complaints and contract management;
- Tenders notification by email and RSS.

The new open-data platform was launched in 2017. Further adjustments will be made to the system in 2018 to achieve the Open Contracting Data Standard (OCDS), the standard developed by the Open Contracting Partnership (OCP). The standard encourages the use of systems that publish shareable, reusable, machine readable data, enabling data to be benchmarked across jurisdictions and analysed using BI tools.

The transition to OCDS represents a significant enabler in the use and analysis of procurement-related information. Given that the functionality of the system enables the processing of payments, the management of contracts, and holds comprehensive information on suppliers and the products and services purchased by government, the dataset has the potential to enable broad and detailed analysis on government spending and its impact on suppliers. This is, however, reliant on the completeness and accuracy of the dataset, which is in turn reliant on the use of the system by public procurement officials.

Chilean public procurement law states that every government purchase within the scope of the law must be published, evaluated and awarded through the national e-procurement platform. The scope of the law extends to public entities of the State Administration. Public enterprises may voluntarily use the national e-procurement platform. Therefore, ChileCompra operates under the assumption that 100% of national procurement activity within the scope of the law takes place through Mercado Publico. In 2018, a connection was developed between Mercado Publico and the Chilean national financial management system or Sistema de Información de Gestión Financier del Estado ("SIGFE"). This will enable government spending to be tracked from the procurement process through to the payment of supplier invoices within the finance system. It will also strengthen ChileCompra's ability to monitor payments to suppliers that do not relate to procurement activity conducted within Mercado Publico. A further enhancement would involve building a connection with the SIGFE, thereby expanding the visibility of public finances to include the initial budgeting process.

The digitalisation of offer evaluation in the Mercado Publico system means that the criteria through which offers are evaluated across Chile can be analysed centrally. Public procurement law states that awarding criteria must include economic and technical criteria for the evaluation of tenders, and the system can be used to monitor to what extent this is adhered to. The table below shows an analysis of the weighting given to price as an evaluation criterion in all bids across 2014.

Table A A.2. Weighting given to price in tender evaluations in 2014

Bid Amount	Average	Median	Standard deviation	Maximum	Minimum
<=$4.5 Million	45.63	40	17.61	99	1
$4.5 Million - $45 Million	40.05	40	18.64	99	1
>$45 Million	39.90	40	21.38	99	1
Total	44.12	40	18.29	99	1

Source: Data provided by ChileCompra.

Information held in the system also allows ChileCompra to review procurement performance at a contracting authority level. Each institution can be assessed according to a number of factors, including whether they have completed an annual procurement planning exercise, the number of claims for payment or irregularities reported by suppliers, and the extent to which certain categories of purchases (such as airline tickets) are bought sufficiently in advance to ensure value for money.

Anecdotal evidence indicates that around 15 000 individuals conduct procurement to some extent across Chile. ChileCompra seeks to improve the procurement practice of these broadly dispersed public officials by providing training and support. For example, in order to simplify and standardise the format of tender documents, ChileCompra

developed the electronic model tender documents. Their use by contracting authorities remains voluntary.

Support given by ChileCompra to contracting authorities takes several different forms, for example:

- Provision of learning resources, including guides, videos, and directives;
- Physical offices throughout the country;
- Web resources including courses, advice and templates;
- Manuals on using FAs and carrying out procurement planning;
- Development of applications for tracking payments to suppliers; and
- A help desk for both buyers and vendors on using the e-procurement platform and giving buyers legal guidance on purchasing processes.

More formal classroom and online training is given to procurement officials to prepare them for written examinations in order to achieve a "Certification in Competences for Public Procurement". A new model for certification and examination was developed by ChileCompra's educational and training area which is focused on the core competencies required of staff working in procurement. Procurement officials take an accreditation test twice a year and once they have passed they are able to access the platform. This enables the measurement of the knowledge of procurement officials every three years on procurement law and the operation of the e-Procurement platform. Different qualifications are available to many of the different roles associated with public procurement, including supervisors, operators, lawyers, and auditors.

The courses are not currently mandatory, though that is expected to change to ensure all procurement professionals achieve the necessary qualifications. In 2017, ChileCompra conducted classroom training for 12 300 public officials at a cost of USD 100 000, reaching an additional 2 400 through online activities (costing approximately USD 80 000).

Another layer of monitoring is carried out by the ChileCompra Observatory. Their role is advisory and involves the identification of improvement opportunities in Chilean public procurement. They monitor current activity to identify risks and manage claims and complaints. In order to prioritise their investigations and analysis, a risk matrix was developed based on a compendium of findings obtained over three years of analysis of the procurement practices of purchasing institutions. Monitoring is therefore carried out based on a number of factors:

- Every FA purchase that qualifies as a special procedure given it exceeds approximately USD 77 000;
- Detection of systematised, recurrent negative behaviours by buyers;
- Claims and complaints made by businesses;
- Procurement activities that fall into the relevant sections of the risk matrix based on the likelihood of a risk event emerging and its potential impact; and
- Events in the Mercado Publico platform, that (based on the actions of the procurement professional) trigger an early alert, notifying the ChileCompra Observatory that advice must be given to take steps to avoid poor practice while the tender is still underway.

In January 2015, ChileCompra set up a hotline which is available to all users, to (anonymously if they wish) report on any situations that they believe threaten the probity, transparency or integrity of a procurement process.

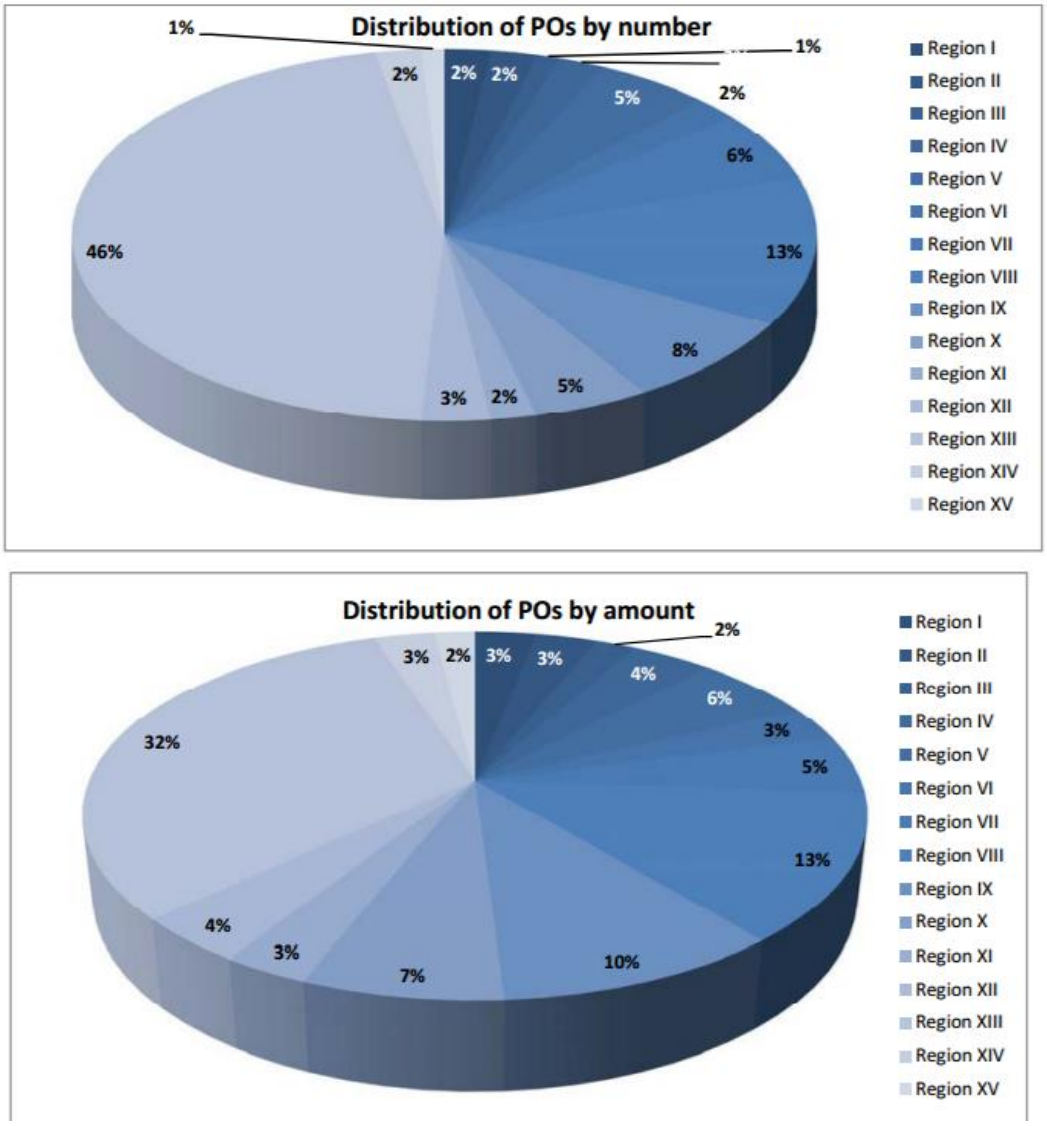
Empowering businesses towards increased efficiency and productivity

As mentioned above, inclusivity towards suppliers has been a key facet of ChileCompra's approach towards FAs. 90% of the companies that sell their products and services are micro or small enterprises. Moreover, these companies account for 45% of public-procurement transactions, over five times the participation rate of these companies in the Chilean economy (8%). The combined participation of micro, small and medium-sized enterprises makes up 60% of total transactions (Inostroza, 2016[62]).

The collection of detailed information on the businesses engaged in FAs has enabled ChileCompra to conduct detailed analysis of the distribution of government revenue and tailor policy and procurement strategies as a result. This has enabled the development of a supplier registry, "Chileproveedores", and the power to do so was granted to ChileCompra by law. The supplier registry contains information about the ownership structure of each business, their commercial, legal and financial status, and all other information needed to verify their fitness to provide services through a government contract.

By connecting information between suppliers and government tenders (including FAs), ChileCompra is able to measure the regional distribution of businesses that are successful in winning government contracts. This has enabled them to identify that, for example, orders under FAs signal geographical heterogeneity in terms of the needs of contracting authorities in Chile. As shown in the graphs in Figure A A.9 below, the metropolitan area of Santiago (region XIII) generates almost half of national orders in terms of number, which reflects the concentration of contracting authorities in the capital. However, Bio-Bio (region VIII), whose area is less than 25% of the Magallanes area (region XII), orders three times the amount of products under the same FA.

Figure A A.9. Distribution of purchase orders from FAs across regions of Chile



Source: OECD Analysis based on information provided by ChileCompa (2012-15).

When looking at supplier distribution, only 22% of suppliers operate in all 15 regions, and most operate in only a few regions. Furthermore, almost 40% of suppliers operate in only one region (Figure 2.8), and this trend can be observed both for goods and services. Supported by more detailed analyses on suppliers' distribution, these elements could provide insights into the market structure, and the need for contracting authorities to allow for a tailored regional structure of tenders.

This analysis supports ChileCompra's investment in further initiatives to train businesses all over Chile to be more effective at responding to public tenders, particularly SMEs. A training plan is developed centrally and carried out by regional ChileCompra offices. The effectiveness of the training in encouraging market participation and successfully responding to tenders is gauged through a user satisfaction survey, and an analysis of the rate of new suppliers participating in tenders and their ongoing participation.

According to ChileCompra's own analysis, they tackle around 87% of the problems faced by SMEs when accessing opportunities published on Mercado Público. This is credited to the ongoing work to reduce information asymmetries, entry barriers and market failures that often affect smaller firms, which is in turn supported by the ability to analyse participation in order to identify and remove barriers (Inostroza, 2016[62]).

Certain social policies and objectives can also be monitored and enhanced with information collected in the procurement system. The prospect of shrinking labour forces over the next 20 years is a common challenge across G20 countries due to an ageing population and low fertility rates. This underpins the economic case for greater gender equality in the labour market to help drive productivity and economic development (OECD/ILO/IMF/World Bank, 2014[63]). According to a study by the Chilean government, for every 100 000 women entering the labour force, Chile's GDP could increase by up to 0.65% (Inostroza, 2016[62]).

In terms of company ownership, in Chile only 36% of companies selling products and services to the government are owned by women, and these businesses only represent 26% of public procurement transactions. These findings led to the modification of public procurement regulations to ensure that gender considerations could be included in selection criteria. In addition, specialised training programmes were developed for women entrepreneurs on how to submit bids for public procurement. A certification system was developed to go beyond the issue of women-owned businesses. Sello Empresa Mujer (Women Supplier Certification) is a certification given to women-led enterprises or those with more than 50% of female workers, which helps procurement officials to identify and reward businesses that have these characteristics (Inostroza, 2016[62]).

Assessing public procurement's productivity in Chile

As with Finland, applying the structured performance assessment to Chile requires an understanding of which of the indicators for measuring the efficiency and effectiveness of the public procurement system (listed in 1.2) could be measured by the Chilean government, depending on their context and the data that is currently available.

In Table A A.3 below, the productivity indicators have been mapped against the current availability of the data that would enable the indicators to be put into use in Chile. It is likely that, even where the data is available, there may be issues with its completeness, consistency or accuracy. This data can be improved over time through tactics such as communicating to contracting authorities and suppliers how the data will be used and published, communicating the importance of having the right data, or by publishing a list of the contracting authorities that are the best and worst performing at data collection and input. Where this data is not available, this represents an opportunity for the Chilean government to consider the importance of measuring the relevant aspect of system performance, and if necessary take steps to begin collecting that information.

Table A A.3. Applicability of performance indicators to the Chilean public procurement system

	Objective	Data requirements		Applicability in Chile
Measuring CPB Performance in Chile				
Economic impacts	***Inputs – General***			
	Overall inputs required of CPB	Staffing levels; cost of running CPB; breakdown of time spent on different activities	✓	Internal data on staffing can be used to establish overall CPB inputs, and division of inputs by activity
	Inputs – FAs			
	Cost of establishing FAs	Cost and time of staff (inside and outside of CPB) spent on establishing and managing FAs	✓	Direct costs and employee time spent establishing and managing FAs can be established from existing data
	Increased competition in FAs	Numbers of bids submitted for different stages of each FA (including call-off stage)	✓	Data held internally on bids received for different stages of FAs over time. Requires data on call-off phase participation from contracting authorities where required.
	SME participation in FA tenders	Number of bids submitted for different stages of each FA by businesses categorised as SMEs	✓	Can be established, provided size of business is captured in supplier registry
	Inputs – Capability building and consulting services			
	Spend/time on advisory services and resources	Staffing levels related to advisory services; additional costs for providing such resources and tools	✓	Direct costs and employee time spent delivering consulting/advisory services to CAs can be established from existing data
	Training spend	Cost of providing training courses, and amount of employee time consumed in delivering training	✓	Direct costs and employee time spent delivering training to CAs can be established from existing data
	Outputs – FAs			
	FA hard savings	Cost of goods and services agreed in FA (or cost paid by CAs in second stage) versus market rate for CA or centrally agreed rate, depending on methodology	✓	Chilean savings methodology compares FA price with at least three suppliers outside the FA.
	FA time savings	Average time spent by CA personnel to establish a contract for the relevant good or service	✓	ChileCompra methodology on process savings calculates time difference between call-off from FA and a public tender or direct award procedure by a contracting authority
	FA customer satisfaction	Survey results from users of FAs from within CAs	✓	Surveys are conducted monthly.
	Efficiency in second-stage FA processes/ through dynamic purchasing system (DPS)/other instruments – businesses	Assessment of time taken for businesses (averaged across several business profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS	✗	Data is not currently held on the time taken by contracting authorities to purchase from FAs manually or by using DPS or other efficiency tools
	Efficiency in second-stage FA processes/DPS/other instruments – contracting authorities	Assessment of time taken for contracting authorities (averaged across several CA profiles) to compete in initial and call-off stages of tender with and without efficiency tools such as DPS	✗	Data is not currently held on the time taken by contracting authorities to purchase from FAs manually or by using DPS or other efficiency tools.

	Objective	Data requirements		Applicability in Chile
	SME success	Ratio of SMEs that are successful in FA tenders. For multi-stage FA, assessment of success at 1) initial tender stage and 2) call-off stage (and number and value of contracts awarded to SMEs)	✓	Can be established by referencing company information from supplier registry
	Innovative procurement	Ratio of goods and services purchased that meet innovation criteria (e.g. purchased through PCP, first introduction into domestic market etc)	✓	Case studies are collected on one-off innovation projects, making it possible to assess the proportion of innovative procurement projects
	Outputs – Capability building and consulting services			
	Spend under advisory services	Information on contracting authority projects (e.g. type of procurement, spend level) that have received support from CPB	✗	Data not collected on the value of projects carried out by contracting authorities that receive advice and support from ChileCompra
	Satisfaction with advisory services	Survey response from relevant CAs	✓	Data is collected on CA satisfaction with help desk services
	Qualified/certified personnel	Levels of certification in procurement professionalisation of workforce versus overall workforce numbers	✓	Data available on competence levels and qualifications of procurement professionals that have undertaken ChileCompra certification
Environmental impacts	Reduction in energy consumption	Comparison between energy consumption of historical goods and services from FAs and new goods and services selected using MEAT or other criteria	✗	Requires understanding of energy usage of previous goods and services throughout lifecycle, as well as usage of current goods and services (e.g. electricity required to power previous lightbulbs versus current lightbulbs)
Environmental impacts	Reduction of CO_2 emissions	Comparison between CO_2 emissions from historical goods and services from FAs and new goods and services selected using emissions as criteria	✗	Requires understanding of CO_2 emissions of previous goods and services throughout lifecycle, as well as emissions of current goods and services (e.g. emissions from previous vehicle fleet compared to current fleet). Current measurement purely involves calculation of spend through 'green' contracts
Environmental impacts	Improvement in air/water quality	Comparison between impacts on air/water quality of historical goods and services from FAs and new goods and services selected using environmental considerations as criteria	✗	Requires understanding of impacts of previous goods and services on air and water quality, as well as impact of current goods and services
Social impacts	Transparency in use of FAs	Proportion of FA tender documents that are shared openly in a format allowing review and analysis	✓	Data available on extent to which information on FAs is shared publicly, including information on call-offs (and in what format)
Social impacts	Open and inclusive procurement	Proportion of centralised tenders (and second-stage processes) that use open procedures as opposed to restricted or closed tenders	✓	Data available on types of procedure used for different phases of FA tenders
Social impacts	Stakeholder perception and involvement	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to FA performance	✗	Beyond current CA audience, other stakeholder groups aren't currently surveyed on centralised procurement performance

	Objective	Data requirements		Applicability in Chile
	Use of social criteria in FAs	Ratio of FAs pursuing social objectives (and where possible, aggregation of social outcomes secured through FAs)	✓	Information available on which current FAs include clauses/criteria related to delivering social outcomes, for example those with Women Supplier Certification
	Skills/jobs creation	Number of jobs/training courses/qualifications generated through FAs (note: specifically generated through contract clauses)	✗	No information currently captured on the FAs that include clauses/criteria related to creating jobs or delivering training
Measuring National Procurement System Performance in Chile				
	Inputs			
Economic impacts	Cost and time of procurement processes	Time taken (and any associated overt costs, not including employee salaries) by government personnel, including non-procurement roles, to undertake procurement activity	✓	Data available on average time to conduct tender, which is used for calculating process savings
Economic impacts	SME participation	Number of bids submitted for government tenders by businesses categorised as SMEs	✓	Link between e-procurement and supplier registry can monitor SME participation in any national tenders
Economic impacts	Business perceptions on cost and time of participating in government tenders	Survey responses, including quantitative results, on time taken (and resources engaged) in responding to government tenders	✗	Requires a broad sample of business sizes and tender types to gain an understanding of inputs required of businesses when participating in public tenders
Economic impacts	Overall inputs of national procurement system	Data/estimates on number of personnel in each contracting authority engaged in procurement activity, and value of procurement spend at each contracting authority	✓	Could be assessed, using estimated size of procurement workforce as well as procurement spend from national budgeting system
Economic impacts	Business participation and competition	Average number of bidders per tender; ratio of tenders that are open procedures versus limited tenders and direct awards	✓	Information on procurement activity should be available from national tender platform, provided information on direct awards is systematically collected
Economic impacts	E-procurement inputs	Direct costs for purchasing, upgrading or maintaining e-procurement system; personnel costs associated with system management and maintenance	✓	Detailed view of e-procurement system and personnel costs available centrally
Economic impacts	***Outputs***			
Economic impacts	Government customer satisfaction	Survey results from teams within CAs that use procurement services on service/efficiency/effectiveness provided by public procurers	✗	Surveys of recipients of procurement services within contracting authorities are not currently conducted
Economic impacts	SME success	Ratio of SMEs that are successful in government tenders, and number and value of contracts awarded to SMEs	✓	Can be measured by linking e-procurement system with supplier registry
Economic impacts	E-procurement time savings	Assessment of time taken for contracting authorities and businesses to conduct tender procedures with and without use of different digital procurement functionalities	✗	Data is not currently held on the time taken by contracting authorities to conduct tenders manually versus using different digital functionality (except on processing digital invoices). Once a benchmark is established on time taken to complete different types of tender, new measurements can be taken after improvements/simplifications have been made (for example, project

	Objective	Data requirements		Applicability in Chile
				to digitalise tenders under 7 000)
	Use of whole of life costing	Ratio, value and number of contracts awarded following a procedure containing life-cycle costing award criteria	✓	Use of different evaluation criteria and weightings can already be measured through the system
	Cost and time reduction resulting from process simplification	Measurement of time taken by government and business personnel to complete tender procedures both before and after efforts to improve or simplify processes (e.g. use of model contracts)	✗	Once a benchmark is established on time taken to complete different types of tender, new measurements can be taken after improvements/simplifications have been made
Environmental impacts	Reduction in energy consumption	Comparison between energy consumption of historical goods and services bought by government and new goods and services selected using MEAT or other criteria	✗	Requires understanding of energy usage of previous goods and services throughout lifecycle, as well as usage of current goods and services (e.g. electricity required to power previous lightbulbs versus current lightbulbs)
	Reduction of CO_2 emissions	Comparison between CO_2 emissions from historical goods and services bought by government and new goods and services selected using emissions as criteria	✗	Requires understanding of CO_2 emissions of previous goods and services throughout lifecycle, as well as emissions of current goods and services (e.g. emissions from previous vehicle fleet compared to current fleet). Current measurement purely involves calculation of spend through 'green' contracts
	Improvement in air/water quality	Comparison between impacts on air/water quality of historical goods and services bought by government and new goods and services selected using environmental considerations as criteria	✗	Requires understanding of impacts of previous goods and services on air and water quality, as well as impact of current goods and services
Social impacts	Transparency in government contracting	Proportion of government tender documents that are shared openly in a format allowing review and analysis	✓	Data available on extent to which information on government tenders is shared publicly, versus amount of spending that does not gain public visibility
	Open and inclusive procurement	Proportion of government tenders that use open procedures as opposed to restricted or closed tenders	✓	Data currently available from e-procurement system on types of procedure used for all procurement procedures
	Stakeholder perception and involvement	Survey responses from different segments of society (e.g. businesses, civil society, NGOs) related to public procurement	✗	Beyond current CA audience, other stakeholder groups aren't currently surveyed on national procurement performance
	Use of social criteria in government contracts	Ratio of public contracts pursuing social objectives (and where possible, aggregation of social outcomes secured through public contracts)	✓	For certain social objectives, such as advancing female employment, it may be possible to evaluate the use of Women Supplier Certification to evaluate tenders through the e-procurement system
	Skills/jobs creation	Number of jobs/training courses/qualifications generated through public procurement (note: specifically generated through contract clauses)	✗	Information not easily available on number of government contracts that include clauses/criteria related to creating jobs or delivering training

Source: Based on information collected from ChileCompra (OECD, 2016[11]); (The World Bank, 2017[18]).

Applying the structured performance assessment to public procurement in Chile

In order to assess how the productivity framework might apply to Chile in more detail, this section assesses Chile's ability to measure each area of the framework at a high-level. It also provides, where relevant, suggestions on how performance in each area may be enhanced.

Strategy

The depth of data held by Chile on procurement nationally enables procurement impact to be measured on a greater scale than is possible in most other OECD countries. For example, the ability to measure the distribution of successful tenderers across different regions, company sizes and sectors presents a powerful opportunity.

By establishing targets for public procurement activity that link closely to Chile's economic challenges, ChileCompra could bring the potential impacts of public procurement to the fore. Targeting secondary objectives such as employee wages, innovation and the green economy, or encouraging the participation of foreign firms in public tenders, could all be enablers towards overcoming the economic challenges described above.

Inputs

ChileCompra clearly holds a great deal of data on the cost and time applied to its own work, including a breakdown of the different activities such as training, tendering and management of FAs. National inputs can be inferred using estimates that have already been gathered, including:

- The estimated size of the national procurement workforce (which could be supplemented with estimated salaries);
- The extent of competition and business participation generated in public tenders;
- The budget that is dedicated to public spending and can be classed as 'public procurement'; and
- The average time taken to conduct a direct award or tender process.

Being able to measure these elements puts Chile in the unique position of being able to flesh out the costs (in direct cost, time and other resources) applied to delivering public procurement activities each year on a national scale. This also includes the resources applied to upskilling and accrediting procurement professionals, and investments made to technology and other process improvements in order to increase the efficiency of procurement procedures.

Outputs

Measuring the outputs of the national procurement system requires an understanding of whether public procurement activity met or achieved expectations in terms of achieving value for money and delivering public services. Data held in the Chilean e-procurement system will enable the measurement of savings from FAs. It may also enable the outputs of procurement activities carried out by contracting authorities, such as agreed unit prices and the achievement of environmental and social criteria, to be measured at a national level.

For ChileCompra, it would also be beneficial to understand the how improvement opportunities, including delivering training and enhancing the e-procurement system,

impact the system's efficiency. This could possibly be achieved through ongoing measurement of national outputs over time in order to measure changes.

Outcomes

It is not yet possible to build a strong connection between public procurement activity and the impact that the activity has on the delivery of public services from the data that is currently held centrally. Much of the measurement taking place in Chile is of the inputs and outputs associated with procurement processes. There are exceptions, such as projects that use innovative procurement to introduce new ways of delivering public services; however outcomes of these projects are reported as individual case studies.

The measurement of outcomes is not always an area of focus for countries, given that procurement is seen as an activity that is required by legislation, as opposed to one that can add value. It is not clear to what extent the approach to design contracts according to the 'outcomes' delivered is commonplace in Chile. If not, a change of mind-set may be required in order to encourage the measurement of value beyond the initial tender process.

Impacts

Efforts to expand the digitalisation of procurement activity and the inter-connectedness of systems across government will enhance the Chilean government's ability to measure the longer-term impacts of government policy across multiple areas. The impacts of multiple policy areas can be challenging to disentangle. Reviewing this data in isolation can result in an incomplete view of impacts. Therefore, it is vital that data is shared across different parts of government to ensure that the full effects of government policy can be assessed.

Enablers/Conditions

Chile has invested in process changes, updates to the regulatory framework, and the digitalisation of certain parts of the procurement process in order to improve the enabling environment for public procurement. Those investment can be considered one-off 'inputs', but their impact on the efficiency and effectiveness of the procurement system needs to be measured over time.

For example, Chile invested in a project to simplify and streamline the public procurement legal framework. The success of those efforts, and the impact of the investment on overall productivity, can be measured according to changes in the timeframes required to complete a procurement process, supplier participation, or the rate at which suppliers fail due to not complying with the process.

References

Banks, G. (2018), *The policy evaluation challenge*. [8]

Boland, T. and A. Fowler (2000), "A Systems Perspective of Performance Management in Public Sector Organisations", *International Journal of Public Sector Management*, Vol. 13 (5), pp. 417- 446, https://doi.org/10.1108/09513550010350832. [45]

ChileCompra (2018), *About Chile Compra*. [61]

Churchill, F. (2017), *Outcomes-based contracting 'a really powerful mechanism' - Supply Management*, Supply Management, https://www.cips.org/supply-management/news/2017/june/outcomes-based-contracting-a-really-powerful-mechanism-/ (accessed on 15 May 2018). [22]

Coglianese, C. (2012), *Measuring Regulatory Performance: Evaluating the Impact of Regulation and Regulatory Policy*, OECD, Paris, https://www.oecd.org/gov/regulatory-policy/1_coglianese%20web.pdf (accessed on 17 April 2018). [6]

Compassion Capital Fund National Resource Centre (2010), "Measuring Outcomes", in *Strengthening Nonprofits: A Capacity Builder's Resource Library* , http://strengtheningnonprofits.org/resources/guidebooks/measuringoutcomes.pdf (accessed on 07 May 2018). [49]

Connor, J. and T. Kalliokoski (2014), "The Finnish Asphalt Cartel Court Decision on Damages: An Important EU Precedent and Victory for Plaintiffs", *CPI Antitrust Chronicle*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2423789 (accessed on 09 May 2018). [42]

Department of Finance, N. (n.d.), *Identifying and structuring programme and project benefits*, https://www.finance-ni.gov.uk/articles/identifying-and-structuring-programme-and-project-benefits (accessed on 13 March 2018). [21]

Freeman, M. and P. Beale (1992), "Measuring Project Success", *Project Management Journal*, Vol. 23(1), pp. 8–17, https://www.pmi.org/learning/library/measuring-success-business-venture-5351 (accessed on 13 March 2018). [19]

Gobierno de Chile - Ministerio de Hacienda (2002), *Public Procurement System Strategic Plan 2002-2004*, http://www.chilecompra.cl/wp-content/uploads/2016/11/strategic-plan-public-procurement-system-2002-2004-2.pdf (accessed on 05 June 2018). [59]

Hansel (2016), *Annual Report 2016*, https://annualreport2016.hansel.fi/year-2016/from-the-managing-director/ (accessed on 02 May 2018). [31]

Harding, A. (2014), *What is the difference between an impact and an outcome? Impact is the longer term effect of an outcome.*, London School of Economics and Political Science, http://blogs.lse.ac.uk/impactofsocialsciences/2014/10/27/impact-vs-outcome-harding/ (accessed on 07 May 2018). [48]

Hoxha, S. and I. Duli (2014), *Designing a public procurement compliance and performance monitoring system in Kosovo*, http://www.worldbank.org/content/dam/Worldbank/Event/ECA/public-procurement-forum10-eca/tr-procurement-kosovo.pdf (accessed on 17 April 2018). [12]

Infrastructure and Projects Authority (2017), *Guide for Effective Benefits Management in Major Projects: Key benefits management principles and activities for major projects*, UK Government, https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/671452/Guide_for_Effective_Benefits_Management_in_Major_Projects.pdf (accessed on 27 February 2018). [20]

Inostroza, T. (2016), *Including SMEs and women in public procurement in Chile*, International Trade Forum, http://www.tradeforum.org/news/Including-SMEs-and-women-in-public-procurement-in-Chile/ (accessed on 07 June 2018). [62]

Karjalainen, K. (2009), *Challenges of Purchasing Centralization - Empirical Evidence from Public Procurement*, Helsinki School of Economics, https://aaltodoc.aalto.fi/bitstream/handle/123456789/11525/a344.pdf?sequence=1&isAllowed=y (accessed on 04 May 2018). [36]

Karjalainen, K., T. Kivioja and S. Pellava (2008), *Cost impact of joint purchases: clarifying the cost savings of government procurement*, Helsingin kauppakorkeakoulu, https://aaltodoc.aalto.fi/handle/123456789/11026 (accessed on 03 May 2018). [37]

Kosovan Public Procurement Regulatory Commission (2014), *Designing a public procurement compliance and performance monitoring system in Kosovo*, http://www.worldbank.org/content/dam/Worldbank/Event/ECA/public-procurement-forum10-eca/tr-procurement-kosovo.pdf (accessed on 15 May 2018). [23]

Kumar, A., A. Nair and J. Piecha (2015), "Measuring Efficiency in International Public Procurement", *Journal of Public Procurement*, Vol. 15/3, pp. 365-389, http://ippa.org/images/JOPP/vol15/issue-3/Article_5_Kumar-et-al.pdf (accessed on 17 April 2018). [24]

Kuntahankinnat (2017), *Kuntahankinnat Services Brochure*, https://sway.com/Ps5ptDNcsoFaEZmw (accessed on 02 May 2018). [32]

Larraín, C. (n.d.), *Chile's e-Procurement System: Transparency, efficiency and PPP*, http://siteresources.worldbank.org/INTEGOVERNMENT/Resources/702478-1129947675846/orrego_eProcurement.pdf (accessed on 05 June 2018). [60]

Lempinen, H. (2013), *Design Framework for Performance Management Systems: An Ensemble Approach*, Aalto University School of Business, http://epub.lib.aalto.fi/pdf/diss/Aalto_DD_2013_100.pdf (accessed on 03 May 2018). [38]

McKinsey (2017), "Government Productivity", https://www.mckinsey.com/~/media/McKinsey/Industries/Public%20Sector/Our%20Insights/The%20opportunity%20in%20government%20productivity/Executive%20summary%20Government%20productivity%20unlocking%20the%2035%20trillion%20opportunity.ashx (accessed on 14 March 2018). [5]

McKinsey & Company (2017), *Government Productivity Unlocking the $3.5 Trillion Opportunity - Executive summary*, http://www.mckinsey.com/. [1]

Ministry of Business Innovation and Employment (2015), *Our purpose*, http://www.mbie.govt.nz/about/who-we-are/our-purpose (accessed on 12 April 2018). [33]

Ministry of Economic Affairs and Employment of Finland (2017), *Guide to socially responsible public procurement*, http://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/160318/TEM_oppaat_12_2017_guide_to_socially_responsible_EN_web_21112017.pdf?sequence=1&isAllowed=y (accessed on 14 February 2018). [51]

Ministry of Finance (2016), *Budget Review 2017*, http://vm.fi/documents/10623/1982710/Budget+review+2017/9a163ffc-c71b-4487-8088-c6b8f0706b33?version=1.0 (accessed on 13 April 2018). [27]

Ministry of Finance; Hansel Oy (2017), *Handbook on Government Procurements*, http://vm.fi/documents/10623/4040240/Valtion+hankintak%C3%A4sikirja+2017/868b80fa-c2de-4328-ae93-36b17968f780?version=1.0 (accessed on 12 April 2018). [34]

OECD (2018), *Gross domestic product (GDP)* (indicator), https://dx.doi.org/10.1787/dc2f7aec-en (accessed on 18 December 2018) [52]

OECD (2018), *OECD Economic Surveys: Chile 2018*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-chl-2018-en. [55]

OECD (2018), *OECD Economic Surveys: Finland 2018*, OECD Publishing, Paris, http://dx.doi.org/10.1787/eco_surveys-fin-2018-en. [25]

OECD (2018), *Trade in goods and services* (indicator), http://dx.doi.org/10.1787/0fe445d9-en. (accessed on 18 May 2018) [57]

OECD (2017), *Chile - Economic forecast summary*, OECD Publishing, Paris, http://dx.doi.org/10.1787/888933631323. [54]

OECD (2017), *Compendium of Productivity Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/22252126 (accessed on 10 April 2018). [26]

OECD (2017), *Government at a Glance - 2017 edition*, https://stats.oecd.org/Index.aspx?DataSetCode=GOV_2017 (accessed on 11 September 2017). [17]

OECD (2017), *Government at a Glance 2017*, OECD Publishing, Paris, http://dx.doi.org/10.1787/gov_glance-2017-en. [16]

OECD (2017), "Making trade work for all", *OECD Trade Policy Papers*, No. 202, OECD Publishing, Paris, https://dx.doi.org/10.1787/6e27effd-en. [56]

OECD (2017), *Public Procurement in Chile: Policy Options for Efficient and Inclusive Framework Agreements*, OECD Public Governance Reviews, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264275188-en. [35]

OECD (2017), *Small, Medium, Strong: Trends in SME Performance and Business Conditions*, OECD Publishing, Paris, https://www.oecd-ilibrary.org/docserver/9789264275683-en.pdf?expires=1523633866&id=id&accname=ocid84004878&checksum=10CDA5C637E3C01EC52E628A725A9D57 (accessed on 13 April 2018). [9]

OECD (2017), "Understanding public sector productivity", OECD, Paris, https://one.oecd.org/document/GOV/PGC(2017)10/en/pdf (accessed on 10 April 2018). [3]

OECD (2016), *Economic Surveys of Finland*, https://www.oecd.org/eco/surveys/Overview-OECD-Finland-2016.pdf (accessed on 10 April 2018). [29]

OECD (2016), "Government at a Glance: Country Fact Sheet - Finland", http://www.oecd.org/gov/govataglance.htm (accessed on 11 April 2018). [4]

OECD (2016), *Methodology for Assessing Procurement Systems (MAPS)*, http://www.oecd.org/governance/ethics/Methodology-Assessment-Procurement-System-Revised-Draft-July-2016.pdf (accessed on 17 April 2018). [11]

OECD (2016), *OECD Economic Outlook, Volume 2016 Issue 1*, OECD Publishing, Paris, https://dx.doi.org/10.1787/eco_outlook-v2016-1-en. [53]

OECD (2015), *Government at a Glance 2015*, OECD Publishing, Paris, http://dx.doi.org/10.1787/gov_glance-2015-en. [15]

OECD (2015), *OECD Recommendation of the Council on Public Procurement*, http://www.oecd.org/gov/ethics/OECD-Recommendation-on-Public-Procurement.pdf. [2]

OECD (2015), *OECD Regulatory Policy Outlook 2015*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264238770-en. [7]

OECD (2014), "Factsheet on how competition policy affects macro-economic outcomes", https://www.oecd.org/daf/competition/2014-competition-factsheet-iv-en.pdf (accessed on 06 December 2017). [40]

OECD (2012), "Discussion Paper on Public Procurement Performance Measures", No. GOV/PGC/ETH(2013)1, OECD Publishing, Paris, http://www.oecd.org/gov/ethics/Discussion%20paper%20on%20public%20procurement%20performance%20measures%20GOV_PGC_ETH_2012_1.pdf (accessed on 20 April 2018). [13]

OECD (2011), *Government at a Glance 2011*, OECD Publishing, Paris, https://dx.doi.org/10.1787/gov_glance-2011-en. [58]

OECD (2009), *Indicators of Procurement Risk*, OECD, Paris, https://www.oecd.org/governance/procurement/toolbox/search/indicators-procurement-risk.pdf (accessed on 07 May 2018). [39]

OECD (2008), *Compendium of Productivity Indicators*, http://www.oecd.org/sdd/productivity-stats/40605524.pdf (accessed on 13 April 2018). [44]

OECD/ILO/IMF/World Bank (2014), *Achieving stronger growth by promoting a more gender-balanced economy*, G20, Melbourne, https://www.oecd.org/g20/topics/employment-and-social-policy/ILO-IMF-OECD-WBG-Achieving-stronger-growth-by-promoting-a-more-gender-balanced-economy-G20.pdf (accessed on 07 June 2018). [63]

Patrucco, A., D. Luzzini and S. Ronchi (2016), "Evaluating the Effectiveness of Public Procurement Performance Management Systems in Local Governments", *Local Government Studies*, Vol. 42/5, pp. 739-761, http://dx.doi.org/10.1080/03003930.2016.1181059. [46]

Performance.gov (n.d.), *Category Management*, https://www.performance.gov/CAP/CAP_goal_7.html (accessed on 12 April 2018). [10]

Phillips, L. (2018), *Improving the Performance of Sub-national Governments through Benchmarking and Performance Reporting*, http://dx.doi.org/10.1787/22265848. [28]

Prime Minister's Office of Finland (2015), *Strategic Programme of Prime Minister Juha Sipilä's Government*, Finnish Government Publications, Helsinki. [30]

Public Spend Forum (2016), *How to Measure Public Procurement Performance With the Right Metrics - Public Spend Forum*, https://www.publicspendforum.net/blogs/ash-bedi/2016/12/18/how-to-measure-public-procurement-performance-and-metrics (accessed on 18 April 2018). [14]

Thai, K. and G. Piga (2007), *Advancing Public Procurement: Practices, Innovation and Knowledge Sharing*, PrAcademics Press, Boca Raton, Florida, http://ippa.org/images/BOOKS/IPPC2/Chapter_1.pdf (accessed on 16 April 2018). [47]

The World Bank (2017), *The Public Procurement Monitoring System of Montenegro*, http://documents.worldbank.org/curated/en/960331498841094381/pdf/P162277-06-30-2017-1498841092593.pdf (accessed on 31 August 2018). [18]

The World Bank (2017), *The Public Procurement Monitoring System of Montenegro*, http://documents.worldbank.org/curated/en/960331498841094381/pdf/P162277-06-30-2017-1498841092593.pdf (accessed on 16 May 2018). [50]

VTT Technical Research Centre of Finland (2017), *Measuring innovation procurement in Finland*, http://eafip.eu/wp-content/uploads/2015/12/2_V.Valovirta.pdf (accessed on 09 May 2018). [43]

Yle Uutiset (2013), *Asphalt cartel firms ordered to pay 40m euros in damages*, yle.fi, https://yle.fi/uutiset/osasto/news/asphalt_cartel_firms_ordered_to_pay_40m_euros_in_damages/6958316 (accessed on 09 May 2018). [41]

Productivity in Public Procurement

A Case Study of Finland: Measuring the Efficiency and Effectiveness of Public Procurement

OECD
BETTER POLICIES FOR BETTER LIVES