Productivity measurement case study: Courts

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The New Zealand Productivity Commission Research Note 2017/04: Productivity measurement case study: Courts

Te Kōmihana Whai Hua o Aotearoa[1]

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JEL classification:

The Commission – an independent Crown entity – completes in depth inquiry reports on topics selected by the Government, carries out productivity related research and promotes understanding of productivity issues. The Commission aims to provide insightful, well –formed and accessible advice that leads to the best possible improvement in the wellbeing of New Zealanders. The New Zealand Productivity Commission Act 2010 guides and binds the Commission.

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[1] The Commission that pursues abundance for New Zealand

Abstract

- The productivity of the New Zealand court system has not been systematically evaluated in the past.

- This case study develops productivity measures for the courts system between 2011 and 2016 using publicly available data.

  - Outputs are recorded as the volume of "case disposals" as reported by the Courts of New Zealand.

  - Inputs are the major expense categories for courts included in budget appropriations.

- Available data suggest multifactor productivity fell by 19% between 2011 and 2016 while labour productivity fell by 29% during the same time period. However data limitations, particularly relating to inputs, significantly limit the usefulness of the measures (Box 1).

- In addition to improving the quality of input data, productivity measures for the court system could be strengthened by adjusting for changes in quality using indicators such as timeliness.

Box 1   **Productivity measurement case studies**

This case study supplements the New Zealand Productivity Commission's draft inquiry report _Measuring and improving state sector productivity_. The terms of reference for the inquiry ask the Productivity Commission to provide guidance and recommendations on:

- how to measure productivity in "core" public services (health, education, justice, social support) at the sector and service level;

- what role productivity measures should play in public sector performance frameworks; and

- how to develop the culture, capability and systems needed within government agencies to measure, understand and improve productivity.

This paper is one of a series of case studies illustrating how to measure state sector productivity and how to overcome measurement difficulties. The Commission's website provides access to the full suite of case studies.

Readers should not view any of the case studies as a definitive description of productivity in the relevant state sector agency. Rather, the case studies aim to demonstrate different aspects of productivity measurement. The Commission hopes the results of the studies will stimulate further discussion about what is driving the identified productivity trends, how productivity measurement could be improved, and how productivity measures could be incorporated into the wider performance frameworks of state sector organisations.

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Key points

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- In addition to improving the quality of input data, productivity measures for the court system could be strengthened by adjusting for changes in quality using indicators such as timeliness.

1.1   Introduction

This case study develops productivity measures for New Zealand's court system following the approach described in *Measuring and improving state sector productivity draft report*. The approach relies exclusively on publicly available data. A particular focus of this case study is the limitations in existing publicly available data, and how these limitations affect the utility of productivity measures. As noted in *Measuring and improving state sector productivity draft report*, in the case of the court system, these limitations are significant.

This case study begins by examining a range of existing productivity measures for court systems, both in New Zealand and overseas. Sections 1.3 and 1.4 examine the output and input data that is publicly available for the New Zealand court system, and section 1.5 uses this data to develop a set of productivity indexes. Section 1.6 explores different ways that court productivity measures could be adjusted to take account of changes in quality. The paper concludes by discussing the limitations of the approach and setting out the steps needed to develop more robust productivity measures for the court system.

1.2   Existing productivity measures for courts

Currently, there is very little in the way of publicly available research examining efficiency in the New Zealand Court system. One exception is a study by Taylor Duignan Barry (2004) which examined trends in the performance and costs of the courts system (Box 1.1).

Box 1.1   **Indicators of performance and costs in the court system**

Taylor Duignan Barry (2004) examine the performance of the court system using three key indicators that, at the time, were collected by the Ministry of Justice:

- *throughput*, defined as the numbers of cases disposed of by the courts each year;

- *timeliness*, defined as the average time between when a case is lodged and when the case is decided; and

- the *court time spent* (in terms of sitting hours or hearings) per case.

These indicators were able to be calculated for the main jurisdictions of the court system between 1999 and 2004. The available data indicates

> … generally declining levels of throughput, increasing average waiting times and often increasing time spent in processing cases in the District Courts, High Courts and Court of Appeal over recent years. The declining levels of throughput have only partially been accompanied by falling levels of demand.

The authors also considered expenditure in the courts and wider justice system. They found that the most significant item of expenditure in the wider justice system is the (largely private) expenditure on legal services. Public expenditure on Vote Courts grew at 3.6% per annum (after allowing for inflation) during the time period under examination.

Source: Taylor Duignan Barry, 2004

More recently, Toy-Cronin et al, (2017) examined the overall length of cases and issues causing delay, focusing on civil proceedings in the High Court. Their research suggests that cases which exceed two years are probably taking longer than they should, and that 16% of cases exceeded the two-year timeframe. They note however that overall case length provides only limited information about how efficiently cases progress. "Delay can occur in extremely short cases; conversely, for some very long cases the passage of time could not be conceived as delay" (Toy-Cronin et al, 2017, p. i).

As part of their analysis, Toy-Cronin et al (2017) analysed Ministry of Justice data along with a sample of physical court files. They identified discrepancies between the two data sources which led them to question the reliability of Ministry of Justice data for the purposes of public reporting. More broadly, they conclude that there is a need for more and better data about the justice system:

> The larger issue is that New Zealand continues to lack basic information about its civil justice system. This study makes a contribution to increasing this knowledge but it has also highlighted the lack of reliable data that is readily available about who is using our courts, why, whether the litigants are accessing with or without representation, and how cases progress once they are in the system. (p. 117)

The lack of efficiency measures for the courts system occurs despite court services being well-suited to measurement. The primary output of the courts system, cases heard, is easily counted. And because different cases are heard in different types of courts, it is possible to compare similar cases. Also, the presence of multiple courts around the country provides an avenue for comparative analysis.

Chapter 6 of *Measuring and improving state sector productivity draft report* examines why there is so little interest in, or analysis of productivity in the state sector. Important reasons include:

- weak incentives within the public sector financial management system for agencies to seek efficiencies in existing programmes;

- the concepts of 'productivity' and 'efficiency' having negative connotations for some parts of the public sector; and

- low demand from Ministers, and a corresponding disinclination from senior officials to develop and utilise productivity measures.

Court productivity measures in other countries

The following section provides an overview of international practice in measuring court productivity. Overall, in common with the New Zealand experience, systematic measures of court productivity are relatively rare.

The United Kingdom

In the United Kingdom, the Office of National Statistics publishes official productivity statistics for 'Public order and safety'. This category includes the fire service, courts, probation and prisons (Police are excluded). For each of these services, a cost-weighted activity index is created, without quality adjustment. Disaggregated data for individual services within public order and safety are not published.

The outputs of the criminal courts are currently estimated using direct output methods, with the Magistrates' and Crown Courts measured separately. Output data for Crown Courts are broken down into three categories:

- committals for trial;

- cases for sentence; and

- appeals.

Cost weightings are calculated based on the average cost of each type of case in a base year. After base year cost weightings are applied, the three series are weighted together to form one index.

For the Magistrates' Courts a 'weighted caseload' is calculated based on 14 case types – the weights are calculated from a large sample of cases and reflect the average amount of time required to complete each type of case.

Inputs are calculated for fire, courts, probation and prisons. These are then combined in a weighted series (chain-linked using the expenditure weights) to create a single Public Order and Safety input series.

Figure 1.1 shows a sharp decline in productivity for the first ten years of the series, driven largely by input growth that exceeded output growth.

Figure 1.1   UK public order and safety productivity indices and growth rates, 1997–2013

Source: ONS, 2016.

Australia's Report on Government Services

The Report on Government Services (RoGS) is an important source of government performance data in Australia. This annual publication compares the efficiency and effectiveness of Commonwealth and State/Territory government services such as education, health, justice, emergency management, community services and housing.

The Australian court system is included in the RoGS. A selection of efficiency and effectiveness measures are reported for most State and Territory courts and Federal Courts (Table 1.1).

Table 1.1   Court efficiency and effectiveness measures reported in RoGS

Efficiency measures	Effectiveness measures
Cost per finalisation – measured by dividing the total recurrent expenditure within each court by the total number of finalisations.	Judicial officers – the number of judicial officers available to deal with cases in relation to population size.
FTE staff per finalisation – measured by dividing the total number of FTE staff employed by courts by the total number of finalisations.	Attendance – the average number of attendances recorded for those cases that were finalised during the year.
Judicial officers per finalisation – measured by dividing the number of full time equivalent judicial officers within each court by the total number of finalisations (finalisation refers to the completion of a matter so it ceases to be an item of work to be dealt with by the court).	Clearance – an indicator showing changes in a court's pending caseload over the measurement period.
	Backlog – a measure of the age of a court's pending caseload.
	Fees paid by applicants – the average civil court fees paid per lodgement

Source: APC, 2017.

As an example, Figure 1.2 shows the expenditure per case finalisation for Australian civil and criminal courts (family courts, the Federal Circuit Court, and coroners' courts are not included). The report notes several points that need to be considered in interpreting the results for this indicator, including that "some finalisations take a short time and require few resources, whereas other finalisations may be resource intensive and involve complicated trials and interlocutory decisions" and that "a number of factors are beyond the control of jurisdictions, such as geographic dispersion, economies of scale and socioeconomic factors" (APC, 2017, p. 7.36). Importantly, the report notes that the data are comparable *within* jurisdictions over time, but are not comparable *across* jurisdictions.

Figure 1.2   Expenditure per finalisation, civil and criminal courts, 2015/16 AU$
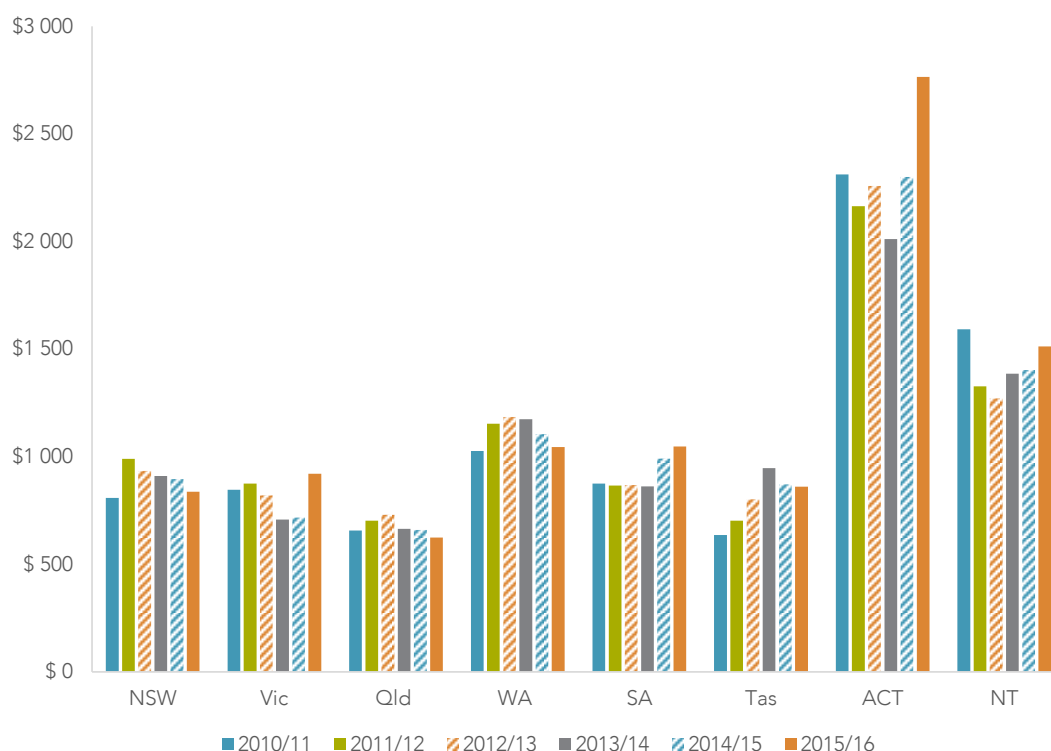
Source: APC, 2017

Notes:

1.   Includes all Australian civil and criminal courts except for family courts, the Federal Circuit Court, and coroners' courts.

There is evidence that the information in RoGS has played a significant role in informing policy development across a broad range of services. In the justice sector for example, RoGS illustrated the significant efficiency gains associated with Victoria's use of electronic courts for minor traffic infringements, which has been adopted by other jurisdictions (APC & NZPC, 2012).

United States

In an examination of district courts in the United States, Young and Singer (2013, p. 57) note that "a comprehensive analysis of the district courts has not emerged. Instead, court "productivity" studies focus nearly exclusively on timeliness measures, such as the time from case filing to disposition or the number of motions that are not resolved within six months."

International comparisons

The World Justice Project's *Rule of Law Index* measures the extent to which legal systems in 113 countries achieve outcomes consistent with four principles.

- Government and its officials and agents as well as individuals and private entities are accountable under the law.

- Laws are clear, publicised, stable, and just; are applied evenly; and protect fundamental rights, including the security of persons and property.

- The process by which the laws are enacted, administered, and enforced is accessible, fair, and efficient.

- Justice is delivered in a timely manner by competent, ethical, and independent representatives who are of sufficient number, have adequate resources and reflect the makeup of the communities they serve.

Although these principles make reference to efficient processes, the accompanying measures are based only on the time it takes to resolve cases – none of the measures show the relationship between

inputs and outputs. New Zealand performs well across all of the measures included in the index, and ranks 8th overall (World Justice Project, 2016).

1.3   Publicly available output data for New Zealand courts

Data on the New Zealand court system is available on the Courts of New Zealand website (Courts of New Zealand, 2017). The data is extracted from the Ministry of Justice's Case Management System (Toy-Cronin, 2017). The following statistics are available for the Supreme Court, Court of Appeal, High Court, District Courts, and Specialist Courts and Tribunals.

- *New business:* New cases entering the court process for the first time or re-entering (eg, after an appeal is granted).

- *Disposals:* Cases leaving the court process, by getting a final outcome (eg, sentence, acquittal, agreed settlement).

- *Active cases:* Cases waiting for a substantive hearing, sentencing (criminal only) or final judgement (non-criminal).

In the case of District Courts, separate statistics are published for each of New Zealand's 58 district courts (on 1 March 2017 New Zealand's district courts were merged into a single entity).

Output selection

Outputs are the final goods or services that are produced by the entity under examination for use by an individual or other organisation. In the case of the court system, *disposals* constitute an appropriate output in that they represent a final outcome (unless the decision is appealed) for a case and they are delivered to an external "customer".

Disposals for different court jurisdictions are set out in Table 1.2. The six years of disposal data that is available provides a good basis from which to construct high-level productivity measures.

Table 1.2   Disposals by court jurisdiction, 2011–2016

	2011	2012	2013	2014	2015	2016
Supreme Court	186	167	127	194	215	192
Court of Appeal	900	783	733	868	692	689
High Court	2 168	8 508	7 601	7 323	7 117	6 649
Total higher courts	*3 254*	*9 458*	*8 461*	*8 385*	*8 024*	*7 530*
District Courts	255 910	240 721	221 702	203 860	200 926	199 349
Disputes Tribunal	18 741	16 664	16 374	14 891	14 737	13 460
Specialist Courts and Tribunals	38 147	54 397	46 430	46 462	45 789	45 887
Total lower courts	*312 798*	*311 782*	*284 506*	*265 213*	*261 452*	*258 696*
Total (higher and lower courts)	**316 052**	**321 240**	**292 967**	**273 598**	**269 476**	**266 226**

Source: Courts of New Zealand, 2017

Notes:

1.   Years are the twelve months ending 30 June of the stated year.

One limitation relating to the output data is a change in the way disposals are classified midway through the available data. The Criminal Procedure Act 2011 came into force on 1 July 2013, and this resulted in several changes in the way data is collected:

> Prior to July 2013, charges were laid summarily or indictably, which effectively determined the path they followed in court. Historical reporting was created based on the pathways that cases

were expected to follow - criminal summary, indictable pre-committal, and indictable post-committal (jury trial). Cases were counted as "new business" and "disposals" within each of these court processes. Transfers into a process were counted as new business, and transfers out as disposals. Reporting was based on parts of the criminal process, and never on the whole.

New reporting reflects a holistic approach, focussed on total criminal cases, and on the subsets with special requirements: District Court jury trials, Youth Court cases and cases to be tried and/or sentenced in the High Court.

A case is now counted as new business when it first comes into the system, that is when charges are filed. It is counted as a disposal only when it has final charge outcomes for all its charges. (Courts of New Zealand, 2017)

The more holistic approach to reporting outputs introduced from July 2013 would be expected to result in relatively fewer disposals, given that cases that were transferred to a different pathway stopped being counted as a disposal. If under the old reporting system a material number of cases were transferred (effectively double counted), then the change to the new reporting approach would show up as a decline in productivity (unless there was a commensurate change in inputs). However, from the publicly available data, it is not possible to determine the materiality of the change in the reporting approach. This case study has not attempted to adjust data to account for the change in the way cases are classified.

Calculating a total output metric

In order to calculate a total output metric, disposals from different courts need to be weighted to reflect their relative value (a simple count of total disposals will likely create a misleading productivity measure).

A recommended approach is to weight outputs based on their production costs – for example if a disposal from the high court costs ten times that of a disposal from a district court, then a weighting would be applied to high court disposals to reflect this. A major shortcoming in the publicly available courts data is that there is no information from which cost weights could be calculated.

Another shortcoming of the data is that there are some inconsistencies in the way disposals for different courts are reported. For example, in 2012, four types of disposal are reported for the Supreme Court, whereas the disposals for 2013 are aggregated into two categories (Table 1.3). These changes would be problematic if the objective was to develop productivity measures for specific types of disposals, or if there was a need to stratify measures for specific types of output.

Table 1.3   Supreme Court disposals, 2012 and 2013

2012		2013	
Applications for leave – Civil	51	Applications for leave	106
Applications for leave – Criminal	68	Appeals	21
Civil Appeals	23		
Criminal Appeals	25		

Source: Courts of New Zealand, 2017

1.4   Publicly available input data

Inputs, in the context of productivity measurement, represent the direct and indirect factors that are involved in the production of outputs – in this instance court disposals.

There are three broad categories of inputs.

- **Labour:** people involved in the production of outputs, both directly (eg, judges) and indirectly (eg, administrative and security staff, who contribute to the functioning of the court system).

- **Capital:** the use / consumption of capital in the production of the output.

- **Intermediate goods and services:** other goods or services consumed as inputs in the production of the output, for example electricity.

The Commission was unable to source comprehensive input data from publicly available sources. The best available data is the annual budget appropriation for Vote Courts. The appropriations provide estimated actual expenditure for each financial year.

A major limitation with this input data, is not all of the appropriation categories can be matched to different types of disposals. For example, there is a single appropriation for *Judges' Salaries and Allowances.* As a consequence it is not possible to identify how the cost of that input is used across different types of courts.

A second complication in using budget appropriations as the input data for courts, is that it is difficult to match appropriations to court disposals. Some appropriation categories are clearly not an input into court disposals – for example *Collection and Enforcement of Fines and Civil Debts Services.* These categories have been excluded from this analysis.

For other categories, for example *Coroners Salaries and Allowances*, it is not possible to determine what share of the appropriation is allocated to coronial services that contribute to court disposals (as much of the work performed by coroners is unrelated to court cases). To address this issue, this case study has selected the five largest categories from the budget appropriation that are relevant to court disposals, and excluded smaller categories (Table 1.4).

Table 1.4   Real expenses ($000) from court budget appropriations, 2011–2016

	2011	2012	2013	2014	2015	2016
District Court Services	194 176	203 190	218 939	225 314	212 305	214 885
Higher Court Services	66 917	67 004	68 534	68 378	69 173	69 740
Specialist Courts, Tribunals and Other Authorities Services	87 531	88 683	89 681	88 972	85 366	85 485
Family Court Professional Services	48 038	43 950	38 033	32 892	25 002	23 741
Judges' Salaries and Allowances	105 382	109 796	108 901	113 075	119 098	125 425
Total	**502 044**	**512 623**	**524 088**	**528 631**	**510 944**	**519 276**

Source: New Zealand Treasury, 2011 – 2016.

Notes:

1.   Adjusted for inflation using the Consumers Price Index (2011 dollars).

1.5   Potential productivity measures

The input and output data described in the preceding section can be used to create a ratio analysis which tracks over time the ratio of outputs over inputs. Figure 1.3 shows a multifactor and labour productivity index for courts.

- *Multifactor productivity* reflects the efficiency with which a combination of productive inputs is used to produce outputs. In this example, the inputs are the (inflation-adjusted) five largest expense categories in the budget appropriation for the operation of courts. The output is the total number of disposals across all courts.

- *Labour productivity* reflects the amount of output produced from each unit of labour employed. In this example, the input is the budget appropriation *Judges' salaries and allowances* (adjusted for inflation). The input data is significantly incomplete, as it only captures salaries and allowances for

judges. Data for other labour such as administrative and security staff are not available. The output is the total number of disposals across all courts.

Figure 1.3   Multifactor and labour productivity indexes
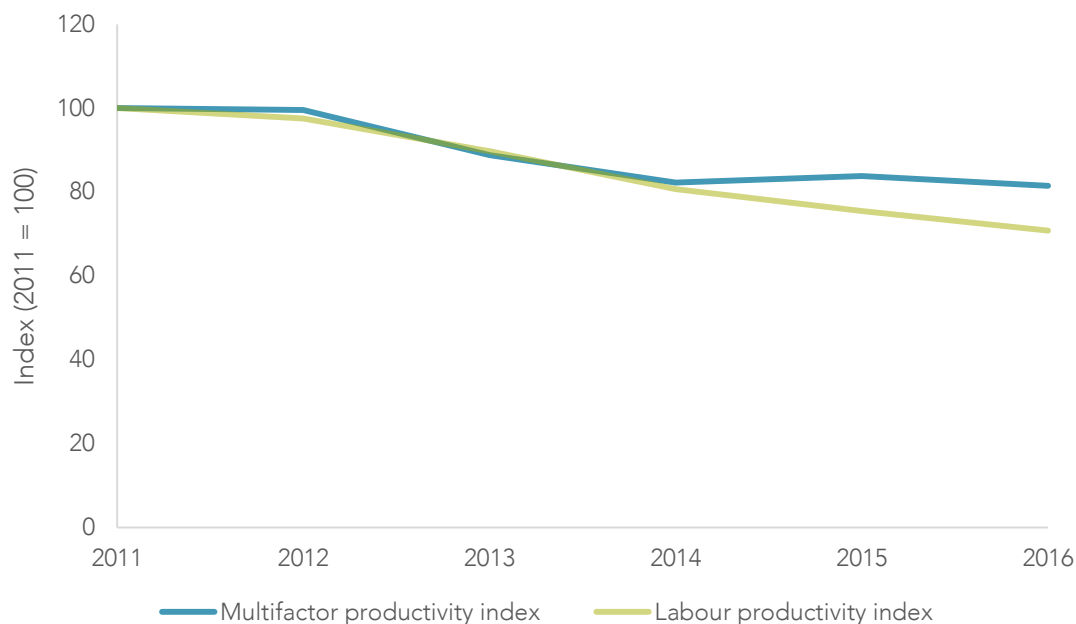
As noted above, a major limitation in the available data is the absence of sufficient detail to enable outputs to be cost-weighted. Hence in both indexes presented in this analysis, all court disposals are assumed to be of an equal value.

The productivity indexes shown in Figure 1.3 (and below in Figure 1.4) only identify *changes* of productivity; they do not address the issue of the absolute *levels* of productivity since all measures have been based on an index set at 100 in 2011. It is conceivable that productivity *growth* could appear poor when compared to other sectors, while at the same time *levels* of productivity remain above average.

Productivity measures disaggregated by court jurisdiction

The budget appropriations for Vote Courts include separate categories for the provision of services from the following courts:

- *Higher Court Services* (Supreme Court, Court of Appeal, and High Court).

- *District Court Services* (District Courts, Youth Court, and Family Court).

- *Specialist Courts, Tribunals and Other Authorities Services* (Environment Court, Employment Court, Māori Land Court, Māori Appellate Court, Disputes Tribunals, Tenancy Tribunal, Liquor Licensing Authority, the Waitangi Tribunal, Coroners and a range of other tribunals and authorities).

The budget appropriation documents provide little detail about what specific services these categories relate to. It is clear however, they do not represent the full range of inputs for each type of court –Judges' Salaries and Allowances, for example, are not included as they are contained in a separate appropriation category.

Productivity indexes based on these inputs and the disposals of the relevant courts are set out in Figure 1.4.

Figure 1.4   Productivity indexes for higher courts, district courts, and specialist courts
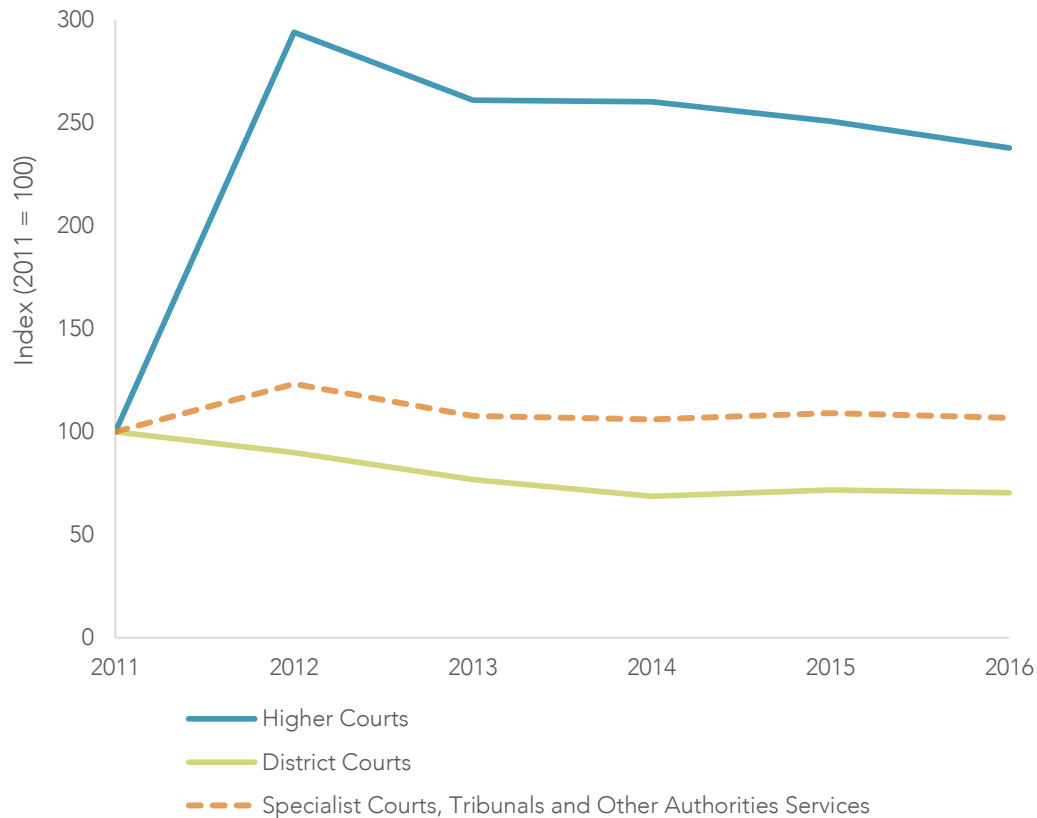
- Total disposals for higher courts increased from 3 254 in 2011 to 9 458 in 2012, while the budget appropriation for higher courts was effectively unchanged. This shows up as a significant jump in productivity. In subsequent years the number of disposals has gradually declined, while inputs have gradually increased.

- Productivity in specialist courts increased in the first year of the series, and has been relatively unchanged subsequently.

- Productivity for district courts declined in the first three years of the series before stabilising.

1.6   Quality adjustments

The productivity measures in the previous section take no account of potential changes in the quality of the outputs from the court system. Young and Singer (2013) argue that productivity measures should incorporate dimensions of quality:

> … efficiency-only measures of court productivity fail to account for the quality of justice that results from adjudication… Criminal defendants and civil litigants alike anticipate that they will be able to tell their story to an unbiased judge; will be treated in a dignified way and on equal footing with opposing parties; will receive a timely decision that substantially accords with the relevant facts and applicable law; and will receive a thoughtful and reasoned explanation for that decision… A comprehensive analysis of federal district court productivity must transcend pure efficiency measures and account as well for the court's unique role as a public forum for dispute resolution and its ability to provide accurate results and a visibly fair process for all parties. (Young and Singer, 2013, p. 67; 69)

As noted in chapter 5 of *Measuring and improving state sector productivity draft report,* there are two general approaches to adjusting for changes in the quality of the output of public services:

- Implicit quality adjustment (stratification): This approach groups outputs so that only products and services of the same specification are compared over time or in space (Schreyer, 2012).

- Explicit adjustment: Explicit approaches to quality adjustment are based on measures that adjust outputs for changes in outcomes.

In the case of the New Zealand Court System, case disposals could be stratified by the type of court where they are heard. However, as noted earlier, more detailed input data would be required in order to do this. Furthermore, if more granular data was available, case disposals could be stratified on the basis of case complexity. Toy-Cronin et al (2017) note that High Court Judges now classify cases as either complex or ordinary (the classification is based on a Judge's opinion of whether intensive case management is required).

Explicit adjustments could also be used to capture changes in the quality of court outputs. The following section discusses available quality data that could be used.

Timeliness measures

Waiting times for trials or other timeliness measures are potential quality metrics that could be incorporated into a productivity measure. Waiting times are not a comprehensive measure of quality, however they are widely acknowledged to be an important metric:

> Delay haunts the administration of justice. It postpones the rectification of wrong and the vindication of the unjustly accused… [P]ossibilities for error multiply rapidly as time elapses between the original fact and its judicial determination. If the facts are not fully and accurately determined, then the wisest judge cannot distinguish between merit and demerit. If we do not get the facts right, there is little chance for the judgment to be right. (Texas Supreme Court, cited in Ostrom and Hanson, 1999, p. 2)

> Delays in the court process are a key obstacle in accessing justice. Delay creates costs; not only in the loss of time but also financial and psychological costs. These costs are borne by the litigants, the economy, and the public purse. (Toy-Cronin, 2017, p. i)

Information on waiting times to trial/defended hearing is published for the High Court (Table 1.5). Waiting times are calculated for active cases where a hearing date has been decided. Waiting times are recorded in days (including weekends) and are calculated from the date the hearing is requested until the future scheduled date.

Table 1.5   High court waiting times, 2011–2016

	High Court Jury Trial Waiting Time for Scheduled Hearing		High Court Civil Proceeding Waiting Time for Scheduled Hearing	
	Average days	Median days	Average days	Median days
2011	428	396	305	300
2012	324	311	294	286
2013	353	327	299	294
2014	360	346	245	218
2015	375	336	281	273
2016	381	314	305	299

Source: Courts of New Zealand, 2017.

Some data on the timeliness of the court system is also publicly available in Ministry of Justice Annual Reports. From 2014, Annual Reports have included the average age of cases for several court jurisdictions (Table 1.6). Other performance indicators relating to timeliness that are reported in Ministry of Justice Annual Reports include the number of cases that are stayed for undue delay, and for some courts, the percentage of cases that are disposed within a certain timeframe (eg, the percentage of Māori Land Court applications disposed within 12 months).

Table 1.6   Average age of cases (days), 2014–2017

	2014	2015	2016	2017
District Court criminal cases	110	113	115	126
Subset of district court jury trials	361	346	319	325
Family court	246	248	245	245
District Court Civil	193	197	188	219
Disputes tribunal	72	77	79	77

Source: Ministry of Justice, 2014; 2015; 2016; 2017.

Survey data

Ministry of Justice Annual Reports also include satisfaction measures based on surveys of court users and the general public. For example, survey results in the 2016 Annual Report include:

- Percentage of people who agree that criminal court processes treat victims with respect, as measured by the Public Perceptions Survey.

- Percentage of people who agree that New Zealand's criminal court system is technologically up to date, as measured by the Public Perceptions Survey.

- The proportion of people who were very or fairly satisfied with court services and facilities, as measured by the Court User Survey.

In theory, such measures could be used as explicit quality adjustors in a productivity measure. However, Bouckaert and Van de Walle (2003) note that satisfaction measures are not always a good indicator of quality due to:

- differences in producer and consumer views on quality;

- changes in consumer expectations; and

- variations related to service characteristics (eg, satisfaction levels often depend on whether respondents have sympathy for what the agency in question does).

Satisfaction indicators have not typically been used as quality adjustors in other studies of public sector productivity. The UK Office of National Statistics does note that such survey results could be used as an additional data source to 'triangulate' productivity results (ONS, 2007).

1.7   Conclusion

This case study has developed productivity measures for the New Zealand Court system based on publicly available data. There are some significant limitations with the available data, and accordingly the results should be seen as the best that can be produced within these limitations.

Some relatively straightforward improvements in the available data would significantly increase the robustness of the productivity measures developed in this case study. Most importantly, more disaggregated input data should be made available. This would allow inputs to be more accurately matched to the outputs of New Zealand's courts, enable outputs to be cost-weighted, and enable separate analysis of different court jurisdictions. For example, a productivity measure could be developed specifically for the High Court.

One way that input data could be improved would be for the Treasury and the Ministry of Justice to introduce more detailed budget appropriation categories for Vote Courts. For example, the existing appropriation category *Judges' Salaries and Allowances*, could be separated into appropriations for

each court jurisdiction (for example, *Judges' Salaries and Allowances, High Court*). However detailed appropriations can limit flexibility in shifting resources to respond to shifts in demand.

A more straightforward approach would be for the Ministry of Justice and the judiciary to proactively collect and publish more and better data about the courts system. As shown in the Productivity Commission's case study into measuring productivity for the early childhood education sector (Green, 2017), releasing input information (albeit patchy) is already an established practice for the Ministry of Education.

The Commission understands that the Ministry of Justice already holds a considerable amount of data regarding the operation of the court system, and that it uses this data to generate its own internal measures of court performance. However there are some legal barriers and constitutional considerations that make it difficult to access this data. Resolving these issues, would allow the Ministry of Justice to disseminate efficiency and other performance information more widely. Greater data availability would also increase the transparency of the courts system, making it easier for researchers and other interested parties to understand the operation of the court system.

There is also scope to improve productivity measures for the courts through the introduction of quality adjustments. Identifying a metric that can capture the quality of court services is not straightforward. However the Ministry of Justice already collects a range of data, including data on the timeliness of court processes, which are intended to capture different dimensions of quality.

A final step involved in improving the productivity measures developed for the court system relates to their interpretation and use. *Measuring and improving state sector productivity draft report* (and other authors) note that independent corroborative evidence should be sought on government productivity, as part of a process of 'triangulation', recognising the limitations in reducing productivity to a single number. In this case, an important part of the process of triangulation would be to examine the impact of the introduction of the Criminal Procedure Act 2011. As noted earlier, the Criminal Procedure Act 2011 came into force midway through the time series of this study (1 July 2013). This case study has not attempted to analyse the potential impact of the Act on court productivity metrics.

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