



Welsh Economy
Research Unit
Yr Uned Ymchwil
i Economi Cymru

The impact of Dŵr Cymru Welsh Water on the Welsh economy

Report: February 23rd 2023

Highlights

- An analysis of Dŵr Cymru's procurement database and a further analysis of their major tier 1 contractors was used to derive estimates of the economic impact of Dŵr Cymru on the Welsh economy.
- Dŵr Cymru operational and capital spending during the 2021/22 financial year was estimated at £684m.
- Of this total, direct wages and salaries accounted for £165m, supporting an estimated 3,465 full-time equivalent (FTE) jobs.
- Non-staff expenditure was estimated at almost £520m. Almost 62% (just over £320m) was to Tier 1 firms with a base of operations in Wales.
- Of the £320m of Tier 1 supply chain spending in Wales, the survey estimated that £242m was retained in Wales. Adding the spending on Welsh domiciled Dŵr Cymru wages and salaries brings the total spending retained in Wales to almost £400m (58% of total expenditure).
- Adding to 3,465 Dŵr Cymru jobs in Wales, an estimated 2,770 jobs are estimated to be supported in Tier 1 supplier firms working on Dŵr Cymru contracts.
- When adding in further indirect and offsite economic impacts, the total economic impacts of Dŵr Cymru are estimated to be over £1bn of spending, supporting over £0.5bn of GVA and more than 9,000 FTE jobs.

	Spending (£m)	Gross Value Added (£m)	Employment (FTE)
Dŵr Cymru Direct	684	245	3,465
Estimated Tier 1 Direct		104	2,770
Further indirect/other supplier impacts	394	206	2,910
Total economic impact	1,079	556	9,145
Multipliers (total impact / DWR CYMRU direct impact)	1.58	2.27	2.64

- Each £1m of Dŵr Cymru direct spending on staff and suppliers is estimated to support a further £0.58m of output in other Welsh sectors of the economy.
- Each £1m of Dŵr Cymru direct GVA is estimated to support a further £1.27m of GVA elsewhere in the economy.
- Each direct Dŵr Cymru FTE job, supports an estimated further 1.64 jobs elsewhere in the Welsh economy.
- Comparison of the findings of the current report with a prior analysis of Dŵr Cymru activity undertaken in 2013 revealed that the employment directly and indirectly supported by Dŵr Cymru has grown by close to 50% while the real growth in GVA directly and indirectly supported was in excess of 20%.
- The reveals the embeddedness of Dŵr Cymru in terms of its purchasing linkages, with this reinforced by skills and knowledge integrated in local HQ-type functions. The analysis suggests Dŵr Cymru anchors other anchor companies in Wales.

Contents

Highlights	2
Contents	3
1. Introduction	4
Background	4
This report	4
Structure of this report	5
2. Examining the impact of Dŵr Cymru: data and methods	6
Research parameters	6
Spending information – data sources	7
Survey information	7
Analysis of spending	8
Estimating impact	9
3. An economic profile of Dŵr Cymru	10
Headlines	10
Supply chain spending	11
Spending retained in Wales	12
4. Economic impact?	14
Key results	14
Impacts in context	16
5. Conclusions	17
6. Appendix	18

1. Introduction

Background

There have been a series of previous investigations that have sought to estimate how utility firms in Wales work to support activity in other Welsh industries through their supply chain spending. Prior work has been developed in the context of historical trends in privatisation of electricity, gas and water utilities and then how changes in the structure of activity within these firms has impacts on the Welsh economy. The map of utility activities in Wales has changed dramatically since the 1990s and now with few major utilities headquartered in the region, and with increasing levels of overseas ownership. However, Dŵr Cymru has retained a strong Welsh presence in terms of headquarter functions and also has more unique operating basis as a not for profit organisation.

In 2013-2014 the Welsh Economy Research Unit of Cardiff Business School completed an analysis of the spending patterns of Dŵr Cymru and how their business activity supported other industries in the Welsh economy. The current report represents an update on this earlier research. While similar methods are employed to track the regional significance of Dŵr Cymru spending it was possible in this iteration of the work to use more disaggregated data on the direction of spending by different types of firms and to focus more on the impact of spending with tier 1 suppliers.

This report

This study then works to quantify the economic benefits (in particular in terms of gross value added and employment) that Dŵr Cymru has on the regional economy through;

- its spending across different industries in Wales, estimating supply chain impacts, and with the analysis seeking to examine economic impacts of spending across different sectors of the Welsh economy.
- separately analysing the Dŵr Cymru contribution to regional wages and salaries and to model the effects of household spending related to Dŵr Cymru wages directly and along supply chains.
- examining the sectors of the economy that benefit most from Dŵr Cymru spending and to identify expenditure areas where Dŵr Cymru is more dependent on goods and services imported into the regional economy from the rest of the UK.
- comparative analysis of the economic contribution of Dŵr Cymru with other sectors of the regional economy, and to consider the relative size of multiplier impacts associated with the organisation's activity.

Structure of this report

The report is structured as follows. Section 2 of the report outlines the data used and the methods employed in completing the analysis. We seek here in particular to explain how we estimate the indirect economic effects in Wales of Dŵr Cymru spending and the spending of its staffs.

Section 3 seeks to present a picture of the direct economic activity in Wales that is supported by Dŵr Cymru.

Section 4 provides the modelled assessment of wider regional economic effects associated with Dŵr Cymru activity. At the outset it is important to note that the quantitative analysis of spending will not pick up on all the ways through which the Welsh economy benefits from having a large headquartered facility of a utility in its midst. For example, the approach taken here will not include the social and private returns to the training and education provided by the company, and we did not collect information on this issue. Neither does the approach here explore how the activities of Dŵr Cymru in safeguarding reservoirs support regional exports through activities such as tourism. It is likely then that the analysis here takes a conservative rendering of economic impact.

The final section concludes and provides a commentary, based on the preceding analysis of sections 3 and 4 on how Dŵr Cymru contributes to meeting the current socio-economic needs of Wales. In concluding we also seek to compare the contribution of Dŵr Cymru to other industry sectors in the regional economy.

2. Examining the impact of Dŵr Cymru: data and methods

This section outlines the methods used in estimating the economic impact of Dŵr Cymru on the Welsh economy. The research method involved several stages of analysis which will be explained below. However, prior to the analysis the scope and time period of study were established.

Research parameters

The first stage of the research involved establishing parameters for the research. This included determining the appropriate period of study and the spending to be included within the study. This project was undertaken during the latter part of 2022 and early 2023. The reference year established for the majority of the data employed was 2021/22.

Following from the prior analysis of Dŵr Cymru undertaken in 2013, and an initial review of the current scale, scope and pattern of expenditures over time, the relevant spending included in this study incorporates both operational and capital expenditures.

For many organisations, capital expenditure will vary significantly from year to year. This means that any single of year data might not be representative of future years. In these cases, the operational expenditures are the most appropriate spending impact indicator. In the case of Dŵr Cymru the distinction between operational and capital expenditure is much less clear. There are fairly constant levels of capital expenditures each year and with long term spending programmes with external (tier 1¹) contractors, including those contracts to maintain and update their assets around Wales.

As a result, relevant spending for this project is defined as the sum of operating plus capital spend for the financial year 2021/22.

A final consideration relates to the geographical boundaries of the research. The Dŵr Cymru area of responsibility does not coincide with the Welsh political boundary. Dŵr Cymru's area extends into England, whilst some parts of mid/north east Wales are served by other water companies. However, the economic modelling framework to assess the impacts of Dŵr Cymru spending is only available for political Wales. There are limited robust means available to regionalise the model for the water company area itself. Therefore, this project represents an attempt to examine Dŵr Cymru impacts at a political Wales level.

¹ We accept term tier 1 suppliers can be used to describe several different types of firm. In this case we assume tier 1 includes larger firms using different business models to deliver significant infrastructure projects, and who may either directly employ staff or subcontract elements of work to other suppliers.

Spending information – data sources

The first stage of the analysis involved quantifying Dŵr Cymru spending by item and source (in or outside Wales). This direct spend is of key importance to the analysis. The spend consists of both wage and non-wage (supplier) spending relating to both operational and capital expenditures (see above). This process was accompanied by a dialogue with Dŵr Cymru procurement and finance staff to give a fuller explanation of spending patterns.

As also noted above, Dŵr Cymru spending involves large scale ‘purchasing’ from external (tier 1) contractors. Many of these contractors are from the broadly defined construction or water and waste treatment sectors of the economy. The importance of spending with these tier 1 businesses was identified early in the project in consultation with Dŵr Cymru. These businesses are a crucial conduit for assessing local economic impacts. To gain insights on the scale and characteristics of the supply chain firms, a sample survey was undertaken with the larger Dŵr Cymru contracts.

The initial analysis was undertaken using the Dŵr Cymru purchasing database. This contained information by supplier name and contract value for almost 1,800 suppliers. An analysis ordered by contract value identified that over 80% of the spending was with 125 suppliers, or around 8% of all suppliers initially identified. The contract value for these 125 firms was £500,000 or above. The remaining (over 90%) suppliers on the database had contract values of less than £500,000,

Additional information was then provided by Dŵr Cymru on this sample to identify those suppliers with operations based in Wales, noting that some of these will have a headquarters outside Wales, and to further indicate operational or capital expenditure. This information was important in establishing the initial allocation of Dŵr Cymru spend to sectors within and outside Wales. The allocations derived from this database (representing around 80%) of spend were then applied to total spending. This assumed that the sample was representative of the total. This was considered to be a reasonable assumption as the remaining contracts were smaller, and potentially more likely to be with Welsh-based firms, hence the estimates of ‘local spend’ can be considered as conservative.

Survey information

A short survey was designed to capture key information from selected tier 1 suppliers, with survey resources targeted on major suppliers to achieve the most complete coverage of expenditures. From the sample of 125 suppliers, 82 were identified for a survey. These were identified by Dŵr Cymru by considering whether they could potentially have local sub supply chains linked to their activities. Just over 50 surveys were completed, with varying levels of detail provided by respondents. However, many contained good quality information that was incorporated into the analysis, and critically this included information for some of the largest businesses.

This survey sought details from the companies regarding on the scale of their Dŵr Cymru related work, the number of their employees involved in this work, as well as information on their own sub-contractors. In addition, financial information was sought on the spending patterns of the tier 1 contractors (items of expenditure and whether within or outside Wales). This survey information was used to provide an estimate of spending and employment directly supported by Dwr Cymru within the tier 1 suppliers in Wales. The analysis of tier 1 spending within the Welsh economy was used to estimate the impacts further down the supply chain (see later). This information obtained from the sample was assumed to be representative of all tier 1 suppliers. Whilst the larger tier 1 firms may have different spending profiles to smaller suppliers, the sample contained a mix of suppliers undertaking different activities, and with information collected representing the majority (around 65%) of tier 1 employment. That noted, the figures derived later in the report should be considered as best estimates rather than precise values.

In addition to the supplier database, other spend items were separately identified from other Dŵr Cymru sources. Importantly these included energy costs and labour costs, which were both identified via the Dŵr Cymru financial accounts.

The final key information related to the number of direct Dŵr Cymru employees. This data was provided by the Dŵr Cymru Human Resources team, and included an analysis of employees by job title, and residence (in Wales or outside Wales), as well as the numbers of full-time, part-time and casual workers. This information was used to estimate Dŵr Cymru's (direct) full-time equivalent (FTE) employees.

Analysis of spending

The key data related to Dŵr Cymru direct spending, and the spending and employment profiles of the tier 1 suppliers (including their direct employment, use of sub-contractors and other supplier spending), was allocated to industries of the Welsh economy.

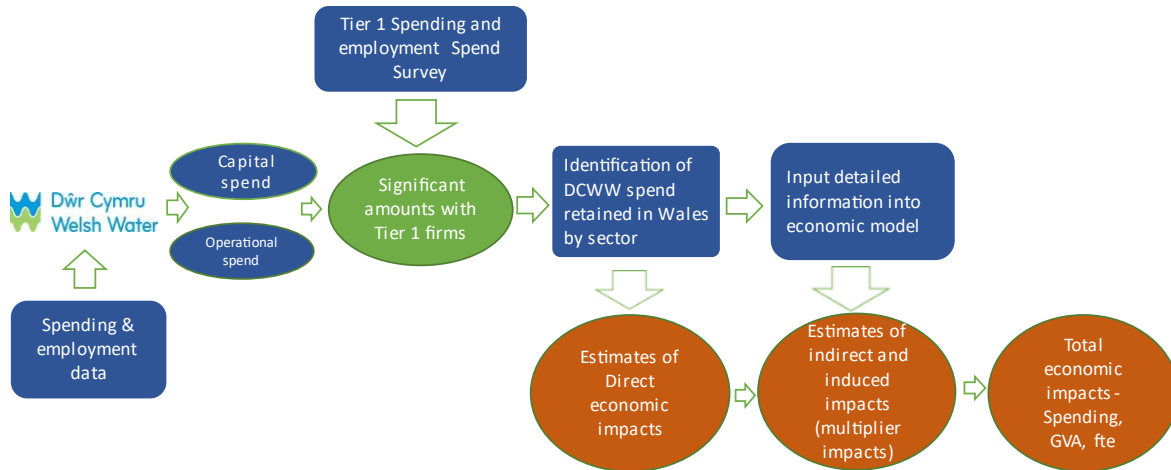
Some further adjustments were made to the data to revisit the allocation of spending within and outside Wales, as spending within Wales determines the scale and nature of economic impacts. For example, some Welsh based suppliers were distributors of items required by Dŵr Cymru. In these cases, where it was likely that the items were manufactured outside Wales, only a proportion of spend was allocated as being retained in Wales to represent the margin.

Another major element of spend relates to staff wages and salaries. As previously noted, information was provided on domicile for staff. It is likely that the majority of staff will be drawn from the immediate Wales region. A small percentage of staff were expected to live outside of Wales, particularly as the Dŵr Cymru area extends into England.

Estimating impact

Figure 1 summarises the data sources and methods for estimating impact. The analysis of spending facilitates the estimation of the scale and scope of Dŵr Cymru direct impacts. These impacts will be explained in terms of output/spending, gross value added (GVA) and employment, in full-time equivalent (FTE) jobs. This analysis also enables the direct scale of tier 1 GVA and employment to be estimated.

Figure 1: Outline of data and method



In order to estimate the impacts that arise further along the supply chain (indirect effects), and the impacts that result from the wage spending of Dŵr Cymru direct employees, tier 1 contractors and other supply chain firms (induced-income effects), an economic model of the Welsh economy is used. The analytical framework for the estimation of these multiplier impacts is provided by the Welsh Input-Output (I-O) Tables. The development of these tables is part of an on-going research project to map, in financial terms, the purchasing and sales interactions between different sectors of the economy. A summary of the I-O tables and method is given in the Appendix. The purchasing linkages of Dŵr Cymru with the other sectors of the Welsh economy, once identified, can be traced through the various supply chains within Wales.

The results from this economic modelling exercise can also be presented in terms of jobs, output and GVA.

3. An economic profile of Dŵr Cymru

This section outlines the scale of Dŵr Cymru as a business. The key headline data will be presented in terms of revenues and spending, together with the direct employment. The nature of Dŵr Cymru's spending is critical to the analysis of economic impact, and this section will provide a detailed analysis of expenditures within and outside Wales and by sector of the economy.

Headlines

The key headline data is presented in Figure 2. Total revenue for the 2021/22 financial year was just over £790m, almost 80% of which was derived from the household market, with the remaining revenue being non-household, third party and other revenue.

Operating and capital expenditures for the 2021/22 financial year summed to almost £685m, with £165m of this total accounted for by Dŵr Cymru's staff costs, linked to an estimated almost 3,500 FTEs. The non-staff spending for the year was almost £520m. Dŵr Cymru is one of the largest employers in Wales outside of the public sector. For example, comparator organisations in the public sector in Wales would be Swansea University or Cwm Taf Health Trust both with around 4,000 employees. There are few private sector businesses that are registered in Wales that employ higher numbers than Dwr Cymru. Figure 2 suggests that sales per employee in Dwr Cymru are close to £230,000.

Figure 2: Headline data 2021/22

Categories	£m
Revenue (£m)	793.2
Operating expenditure	395.1
Capital expenditure	289.0
Total Expenditure	684.1
<i>of which</i>	
Direct Staff costs	165.0
Non staff expenditure	519.1
Direct employees (FTEs)	3,465

Supply chain spending

Figure 3 provides a further disaggregation of the non-staff expenditure to tier 1 suppliers within or outside Wales. This initial geographical allocation was made using information supplied through the Dŵr Cymru database. Of interest here is the large proportion of spending that is estimated to be in the Welsh economy as opposed to outside. Given the small size of the Welsh economy this local spending propensity is relatively high. Figure 3 reveals that around 62% of non-staff spending is in Wales. Interestingly the earlier economic impact analysis completed in 2013 suggested the similar figure was closer to 41%.

Figure 3: Dŵr Cymru Non-staff expenditure

Categories	£m
Dwr Cymru spend within Wales	321.4
Dwr Cymru spend outside Wales	197.7
Total non-staff expenditure	519.1

Figure 4 shows the distribution of this initial allocation of the £321m tier 1 spending in Wales by sector. The vast majority of tier 1 spending in Wales was with construction and water/waste treatment related sectors (77%). This spending comprises Welsh-based managing contractors, or national managing contractors who have an office in Wales. As noted earlier, the survey of suppliers also sought to establish the extent of local (Welsh) sourcing by some of the managing contractors who do not have a base in Wales. Other sectors with significant local spends include engineering, testing and equipment hire, with other spending on service sector activities as well as manufactured goods.

Figure 4: The distribution of Dŵr Cymru Tier 1 spend in Wales by sector £m and % (total estimated £321m)

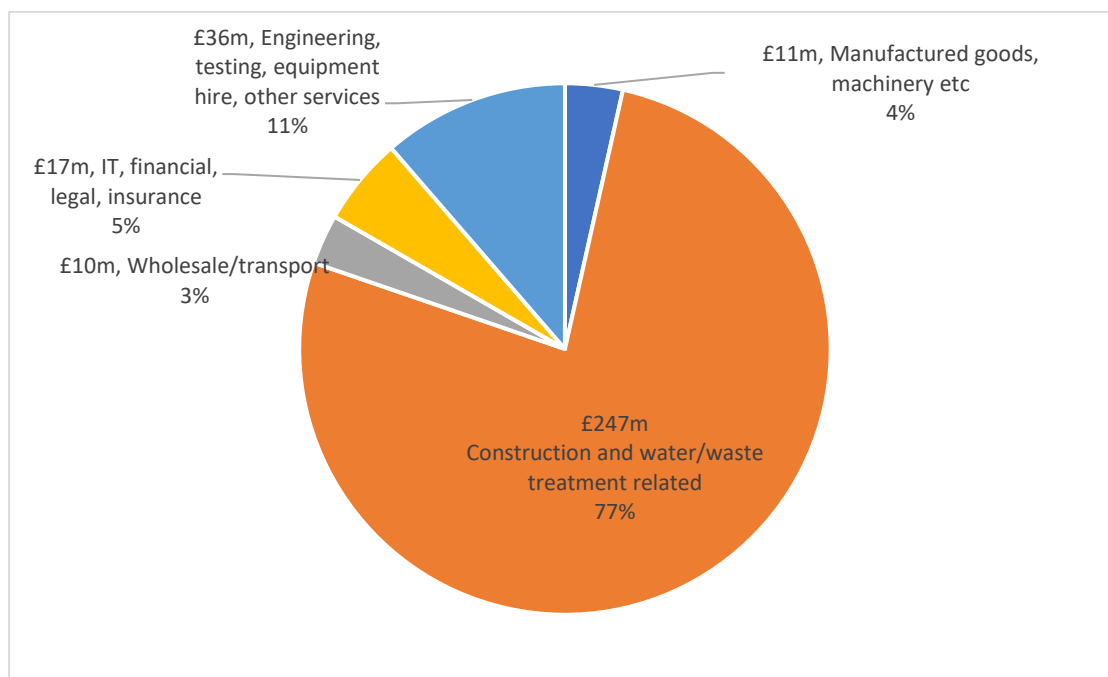
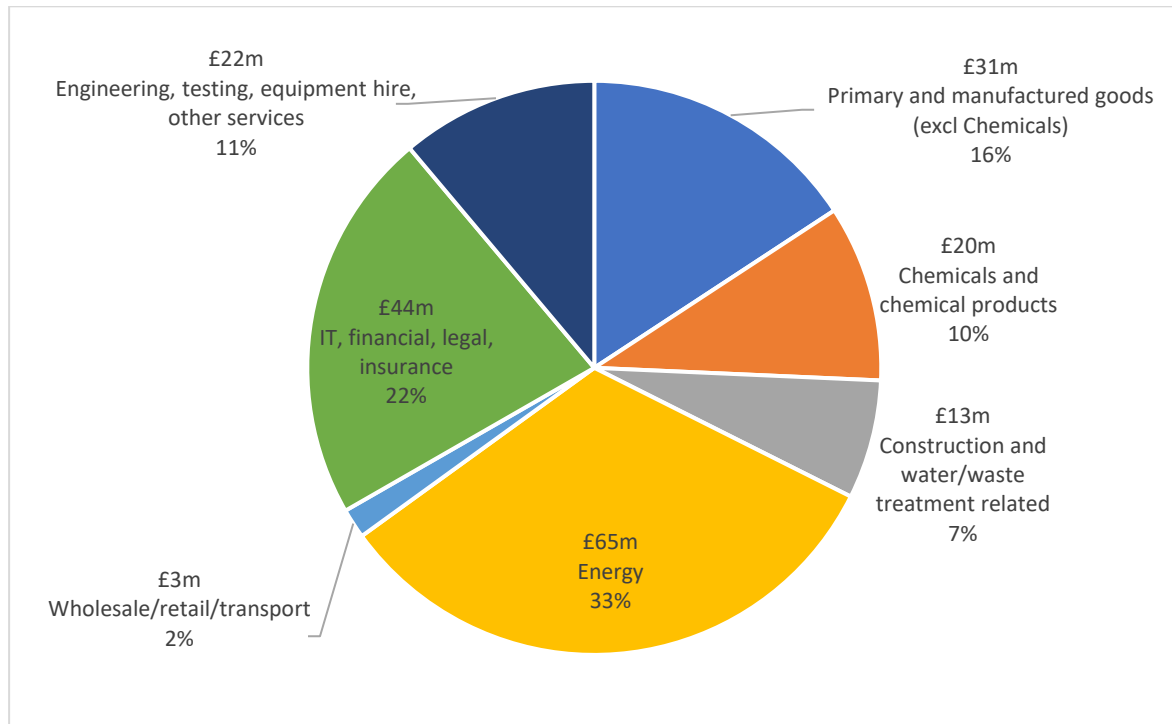


Figure 5 reveals a more varied distribution of the spending with firms outside Wales. The largest external to Wales spend was on Energy (£65m). The other larger spending sectors were in the services sectors including IT, financial and legal services and insurance (22%), and other sectors including primary and manufactured goods, engineering and equipment hire and chemicals.

Figure 5: Distribution of Dŵr Cymru Tier 1 spend outside Wales by sector, £m and % (total estimated £198m).



Spending retained in Wales

The focus here is on spending retained in Wales but it is important to recognise that Dŵr Cymru supports employment and GVA in the wider UK economy through its purchasing.

Figure 6: Spending retained in Wales.

Categories	£m
Dŵr Cymru Spend within Tier 1 suppliers in Wales	321.4
<i>Of which, spend retained in Wales by Tier 1 suppliers (including tier 1 wages/salaries). Plus an adjustment for Dŵr Cymru tier 1 spending outside Wales that is returned to Wales via sub-contractor and supplier spending.</i>	242.3
Plus Dŵr Cymru direct staff costs in Wales	156.8
Total expenditure retained in Wales	399.1
As share of total expenditure	58%

Figure 6 provides further analysis of the £321m of Dŵr Cymru tier 1 spend allocated to Wales. Using data obtained from the survey responses from selected tier 1 suppliers, an estimated more than £240m of this spending was retained in Wales in 2021/22. As noted in the Figure, part of these monies relates to the wages and salary costs of tier 1 employees, with the rest relating to their own purchase of supplies and spending with sub-contractors. In addition, this also includes a small allocation of spending that is returned to Wales from the tier 1 suppliers based outside Wales via spending on Welsh based sub-contractors or suppliers.

By adding the spending on direct staff costs in Wales, to the spending retained in Wales by tier 1 suppliers, an estimated total of almost £400m spending is estimated to be retained in Wales. This represents 58% of total expenditure.

It was not possible to develop a detailed disaggregation of the location of spending within Wales in terms of geography. However, the scope of the capital works of Dŵr Cymru, and the location of their facilities suggests that the business supports employment in many different parts of Wales. This would make a contrast with other large private sector employers particularly in manufacturing sectors where direct employment tends to be more concentrated in just a few locations.

4. Economic impact?

As revealed earlier, this impact assessment captures the overall regional impacts of Dŵr Cymru spending, from both capital and operational elements of activity.

The impacts are reported in terms of spending (or output) generated across Wales, the proportion of this that is GVA, and the total FTE jobs that are connected to these elements of Dŵr Cymru activity.

GVA can be defined as the sum of incomes from employment, mixed (self-employment) income and company profits, and is the best measure of the true 'worth' of economic activity to Wales (it is related to the oft-reported UK-national measure GDP). It is a subset of spending/output, hence they are not additive.

Key results

Figure 7 summarises the findings from the previous analysis. The presentation of the results differs slightly to those of the previous 2013 impact report. The methodology adopted for the present study enabled the separate estimation of the economic activity directly supported within the tier 1 supplier firms in Wales.

The top row of Figure 7 shows the direct impacts of Dŵr Cymru as a business. This includes the operational and capital expenditure total of £684m, as well as FTE employment of almost 3,500. The estimate for onsite Dŵr Cymru GVA given here is effectively the sum of gross wages and the surplus of total income received during the year over total expenditure, with an adjustment for grants and contributions. The figures here would equate to estimated GVA per FTE in Dŵr Cymru of a little over £70,000. This is relatively high. For comparison purposes GVA per employment in the capital intensive machinery manufacturing sector in Wales in 2020 was estimated at a little over £81,000, and in the education sector a little over £40,000. Important here in relatively high GVA per FTE numbers for Dŵr Cymru is the level of earnings paid to staff.

The direct spending linked with the tier 1 firms is captured within the £684m of Dŵr Cymru spending so is not reported separately to avoid double counting.

An estimated 2,770 FTEs are estimated to be directly supported in Wales in tier 1 firms. Of these 2,770 FTEs, more than 1,800 FTEs were 'counted' from the survey information received, with the remaining employment estimated for firms not covered by survey responses. In summary, the surveys were used to derive the average gross wage per tier 1 FTE. Tier 1 wage costs were estimated from the sample, and then scaled up to represent total gross wages for the all the tier 1 firms based in Wales. Estimated total gross wages for tier 1s were divided by average wage per FTE in tier 1s to estimate total tier 1 FTEs. The GVA estimated to be linked to this employment in tier 1 firms is £104m. This figure is conservative, being derived from the estimated gross wages and salaries of tier 1 firms. Whilst some of these firms were headquartered in Wales, other tier 1 firms based in Wales had headquarters outside Wales. In this case all surpluses have been allocated as outside Wales.

Figure 7: The regional economic impact of Dŵr Cymru

	Spending (£m)	Gross Value Added (£m)	Employment (FTE)
Dŵr Cymru Direct	684	245	3,465
Estimated Tier 1 Direct		104	2,770
<i>Further Indirect/offsite impacts</i>			
Primary & Manufacturing	43	16	240
Utilities & Construction	189	86	810
Wholesale/retail/transport/accommodation and food service	53	28	890
Financial/legal/telecoms	69	48	230
Engineering/testing/rental and leasing activities	16	11	200
other private services	7	5	200
Public Services & Other	17	12	340
Sum of indirect/other supplier impacts	394	206	2,910
Total Impact	1,079	556	9,145
Multipliers (total impact / Dŵr Cymru direct impact)	<i>1.58</i>	<i>2.27</i>	<i>2.64</i>

The lower section of the table presents the further supply chain offsite impacts. These are modelled estimates derived from the input-output analysis. However, from the surveys, just over 1,280 FTEs were reported as sub-contractors to tier 1 firms. Most of the remaining activity reported in the lower section of the table will be supported by the wage spending of Dŵr Cymru direct employees, those employees within tier 1 firms and further down the supply chain (induced-income effects). This links to the relatively high number of FTEs within the wholesale/retail etc sectors of the economy.

The total economic impact of Dŵr Cymru can be derived by summing the direct impacts and the indirect supplier effects. In total, Dŵr Cymru supports over £1bn of spending/output, which is connected to over £0.5bn of GVA and more than 9,000 FTE jobs in Wales.

The final row of data in Figure 7 shows the estimated multiplier values. These are derived by dividing the total impact figures by the Dŵr Cymru direct values. These figures show that:

- Each £1m of Dŵr Cymru direct spending on staff and suppliers supports a further £0.58m of output in other Welsh sectors of the economy.
- Each £1m of Dŵr Cymru direct GVA supports a further £1.27 of GVA elsewhere in the economy.
- Each direct Dŵr Cymru FTE job, supports a further 1.64 jobs elsewhere in the economy.

Impacts in context

There are a number of points to be made about the economic impact reported in the previous section. It has already been noted that there are few non-public sector businesses that support direct employment levels similar to Dŵr Cymru. It is also noted that employment in some of the largest private sector employers in Wales, particularly in manufacturing, has been under considerable pressure, particularly since BREXIT.

The report has also hinted at the importance of headquartered businesses. There has been a persistent debate in Wales in that externally owned and controlled businesses, usually headquartered elsewhere may not embed themselves in the local economy and community and could relocate more easily from Wales as the political or socio-economic environment changes. A corollary of low levels of embeddedness can also be a focus on more 'routine' business activities, with higher skilled jobs placed closer to HQ functions elsewhere. The analysis in this part of the report provides evidence of embeddedness of Dŵr Cymru in terms of its purchasing linkages, but with this being reinforced by skills and knowledge integrated in local HQ-type functions. Put simply there are relatively few large (employing over 3,000) private sector businesses in Wales that have these characteristics and this ability to support so much indirect activity. While such firms are typically categorised as anchor companies, our analysis suggests that Dwr Cymru anchors other anchor companies.

In terms of the GVA and employment directly and indirectly supported in Wales by Dŵr Cymru activity (£556m). It is perhaps worth trying to relate this to the size of GVA attributable to some parts of the Welsh economy. Latest figures for 2020 suggest that total Welsh GVA was of the order of £67bn, such that activity supported by Dŵr Cymru makes up a little under 1% of Welsh economic activity. In 2020 the whole of the Water Supply and Sewerage sector in Wales supported directly around 4,500 jobs, such that Dŵr Cymru with 3,465 jobs attributable to its activities directly, makes up over three quarters of the sector in Wales. In terms of the direct GVA supported (£245m) this would put Dŵr Cymru on a par with Welsh whole sectors such as manufacture of drinks, printing, electrical equipment, which each individually directly supported between £200-300m of GVA in £2020.

5. Conclusions

It was noted at the outset of this report that the quantitative assessment is only partial in developing an understanding of the economic impact of Dwr Cymru. The main business of Dŵr Cymru is to ensure a safe and reliable drinking water supply, and to deal with wastewater so as to protect the environment. This means that added to impacts counted in Section 4 of this report, it is necessary to consider difficult to measure and important impacts in respect of environmental safeguarding, protecting biodiversity, education and the support of recreation, with Dŵr Cymru assets supporting significant tourism revenues, and thereby Welsh export activity. Moreover, Dŵr Cymru supports significant levels of research in Wales both as a funder and a collaborator on bids and initiatives with the higher education sector.

A further point here relates to the specific operating model of Dŵr Cymru. The not for profit status means that funds are reinvested in the business in Wales which might otherwise be distributed to shareholders.

This noted, the report reveals that Dŵr Cymru directly and indirectly supports high levels of economic activity in Wales. Some aspects of the method employed in the present report vary from those used in the 2013 economic impact report. That noted this report would evidence some increase in economic effects linked to Dŵr Cymru activity. For example:

- In 2013 it was estimated that Dŵr Cymru directly and indirectly supported 6,100 FTEs in Wales, and with this report suggesting this has grown to 9,145 FTEs by 2021-22. Growth here of close to 50%,
- Similarly the 2013 report suggested every £1m of GVA directly generated by Dŵr Cymru supported a further 0.84m of GVA elsewhere in the Welsh economy, and with this report suggesting the figure supported is closer to £1.27m.
- In 2013 the total GVA impact of Dŵr Cymru activity was estimated at £363m but with this growing to £556m in 2021-22. Clearly there is a strong element of inflation here, but even allowing for this it is estimated that this represents real growth in GVA directly and indirectly supported of in excess of 20%.

The increase in economic activity being supported by Dŵr Cymru is a strong indicator of its embeddedness and commitment to the Welsh economy.

6. Appendix

The analysis of indirect and induced effects in this report has made use of economic data contained within the Welsh Input-Output Tables. The Welsh Input-output project as a whole has been in progress since 1993.

Tables have been published for each of the years 1994 to 1996, and for 2000, 2003, 2007 and 2019. The 2019 iteration of the tables was employed in the analysis contained in this report.

The Welsh Input-Output tables reveal the different industries that make up the Welsh economy, and show how they fit together in terms of their sales and purchasing patterns. Each industry in Wales relies to a greater or lesser extent on local, regional, national and then international markets. Each industry also uses labour inputs, and imports goods and services. The Input-Output tables then allow comparisons between industries in terms of their pattern of resource use, and the sectoral and geographical destinations of their outputs, including the level of export activity.

The Tables can be used to identify sectors which are important to the local economy by virtue of their spending, employment, exports, or local linkages and consequent economic activity supported directly and indirectly in the Welsh economy. Then the Input-Output framework should also be seen as a detailed statement of account, with tables allowing reconciliation of the supply of, and demand for, goods and services in Wales.

In this report the Input-Output tables were used to estimate the total economic activity supported by Dŵr Cymru spending. For example, an increase in demand for the goods produced by the construction sector in Wales driven by Dŵr Cymru demands, would lead to an increase in the spending of the construction sector.

However, as the industry increases its spending, their suppliers in Wales will also have an increase in demands for their goods, and then also the suppliers to the suppliers experience extra demands, and so on (indirect effects). The shock of the increase in final demand ripples through the Welsh supply chain. Moreover, as a result of these supply chain effects, the level of income in the economy will increase, and a portion of this income will be spent on Welsh goods and services leading to further increases demand. This is termed an induced income (or household) effect.



Welsh Economy Research Unit

Cardiff Business School

Cardiff University,
Aberconway Building,
Colum Drive,
Cardiff CF10 3EU

For enquiries or to find out more please get in touch:

mundaymc@cf.ac.uk

<https://www.cardiff.ac.uk/research/explore/research-units/welsh-economy-research-unit>

<https://twitter.com/CUWERU>