

Impact of Google's investment in cloud region in the UK on the US economy

A quick thought experiment

# **Context**

Over the past few years, strong demand for cloud and digital services, including artificial intelligence (AI), from businesses, governments, and policymakers worldwide has sparked a global surge in investment in cloud infrastructure. Such infrastructure developments are significant in scale and require specialist capital inputs and unique technical expertise to implement, which has often meant that such projects involve collaboration and co-investment at a global level. This wave of cooperation and cross-border investment has recently been met with heightened geopolitical and economic uncertainty, as well as increased pressure from policymakers who argue that international trade and foreign investment should generate acceptable returns for their domestic businesses and economies.

To contribute to the understanding of how cross-border collaboration and investment can generate returns for overseas investors and economies, we undertook a quick thought experiment based on a stylized example of a phased 81 MW investment in a cloud region in the United Kingdom (UK). The thought experiment provides insight into the potential channels through which returns to overseas investors and economies could flow. However, the estimated impacts produced through this thought experiment rely on publicly available stylized facts and generic assumptions, which may not be fully applicable to the specific circumstances of this project. This means the estimates should be interpreted as scenarios and cautiously used.

# **Scenario**

This assumes an investment of **81 MW** of data center capacity in the UK over a fouryear horizon, which will enable companies in the United States (US) to generate revenue related to cloud and digital solutions (such as AI).

Disclaimer: The assessments in this report are based on publicly available information or industry benchmarks estimated by Access Partnership. Inputs from Google are indicated, wherever used.

# **Channels of impact**

The value to the US economy is expected to be derived through 2 channels of impact:

- 1. The infrastructure investment in data centers, assuming that 53% of the machine and IT provisioning costs come from the US.
- 2. The ongoing repatriation of profits to the US from the provision of capacity through the UK data center to local and regional customers, of which these repatriated profits are entirely reinvested in the US to generate additional economic activity.

# **Scenario estimates**

The period captured under this scenario is 2023 to 2026. Our employment estimates represent the total number of full-time equivalent (FTE) jobs supported in the final year (i.e., 2026).<sup>1</sup>

Channel	Estimates by scenario (GVA, FTE)	Assumption
1. Impact	Lower-end scenario	Assume an 81 MW data center is
due to	1 percent increase in exports leads	built from 2023 to 2025 and
the invest	to a 0.15 percent increase in GDP	operationalizes at the beginning
ment in	(Source: Effects of export and	of 2026.
data	technology on economic growth:	Assume total IT spending of
centers	Selected emerging Asian	USD 0.8 billion based on
	economies)	estimates provided by Google
		from 2023 to 2026. • For these IT costs, we assume
	GVA: USD 592.3 million	53% of content from the US
	1,300 FTE jobs in 2026	(Source: Which Companies Add
	Upper-end scenario	The Most Value In The
	1 percent increase in exports leads	Semiconductor Industry? (Part
	to 0.17 percent increase in GDP	1)).
	(Source: Impact of Exports on	We assume that no replacement
	Economic Growth: A case of	of IT equipment occurs in this
	Luxemburg)	scenario.
		Assumes the relationship
	GVA: USD 671.3 million	between export and GDP is that
	1,500 FTE jobs in 2026	a 1 percent increase in exports
		leads to a <u>0.15</u> to <u>0.17</u> percent increase in GDP.
		Job estimates are derived
		based on the relationship
		between the economy-wide
		value added and full-time
		employment in the
		manufacturing sector. The ratio
		of sector employment to the
		Gross Value Added (GVA) of the
		manufacturing sector is 4.6,
		based on US <u>employment</u> and
		<u>value added</u> data for 2023.
		These job estimates represent
		average annual employment
		supported across the time
2.	Lower-end scenario	<ul><li>period.</li><li>Vacancy rates of data centers</li></ul>
Z. Reinvest	Net Present Value of 2 years of	(30%) remain constant
ment of	revenues/profits based on a	throughout the period of
repatriate	discount rate of 2.33% (Source:	operation.
d profits	Alphabet's 10-K report)	Assumption of average annual
a profits	πιριιαρεί ο τοτκ τεροίτο	revenue based on our
		benchmarks from other global
		data center builds of USD 3.3

 $<sup>^1</sup>$  All job estimates have been rounded down to the nearest 100 for ease of reporting. Estimates may not sum due to rounding.

million / MW. (Source: Economic costs of data-centers? - Thunder Said Energy)  • Assumes ratio of profit to revenue of 16% based on UK Input-Output table (i.e., Gross Operating Surplus divided by Total Inputs for the ICT sector). (Source: Input-output supply and use tables – summary tables - Office for National Statistics)  • Assumes 46% of profits in the UK are repatriated to the US (Source: The effect of foreign
<ul> <li>Assumes ratio of profit to revenue of 16% based on UK Input-Output table (i.e., Gross Operating Surplus divided by Total Inputs for the ICT sector). (Source: Input-output supply and use tables – summary tables – Office for National Statistics)</li> <li>Assumes 46% of profits in the UK are repatriated to the US (Source: The effect of foreign</li> </ul>
dividend exemption on profit repatriation through dividends, royalties, and interest: evidence from Japan   International Tax and Public Finance)  Assumes 100% of the repatriated profit is reinvested in the US economy.  Job estimates are derived by applying employment multipliers from the US inputout tables to the value of reinvested profits. The estimates capture direct,
indirect, and induced
employment impacts.

 $<sup>^2</sup>$  Our estimate for the number of FTE jobs supported is identical in the lower-end and upper-end scenarios for the reinvestment of repatriated profits. This is because the profits in a given year are multiplied directly by employment multipliers to calculate total job benefits, without applying a net present value adjustment.

 $<sup>^{3}</sup>$  Note that estimates may not sum due to rounding.



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