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# The impact of Artificial Intelligence on GDP growth in Asia Pacific

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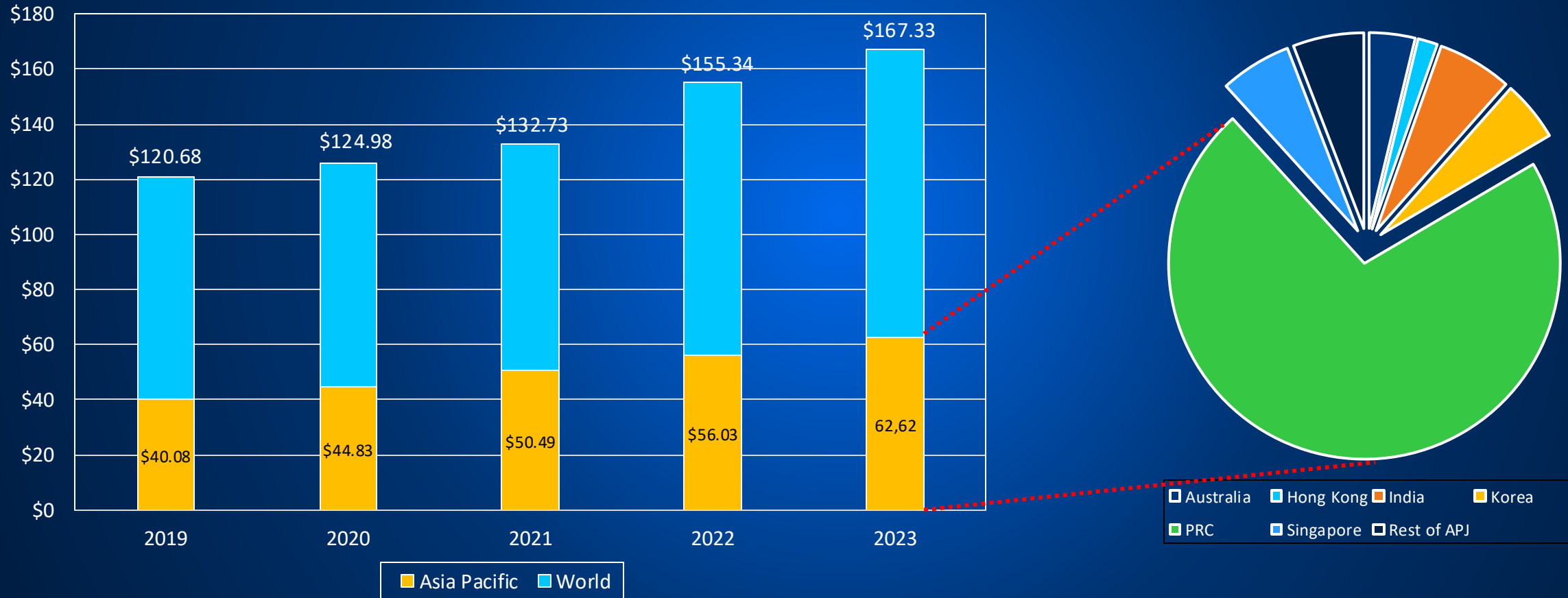


 **Telecom Advisory Services LLC**

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# ARTIFICIAL INTELLIGENCE SPENDING IN ASIA-PACIFIC IS GROWING FASTER THAN WORLD DEMAND, PRIMARILY DRIVEN BY CHINA'S SPENDING

ARTIFICIAL INTELLIGENCE SPENDING (IN USD BILLIONS)



Sources: IDC; Telecom Advisory Services analysis

# THE ECONOMIC CONTRIBUTION OF ARTIFICIAL INTELLIGENCE TO GDP GROWTH IS COMPOSED OF AI SPENDING PLUS ITS ECONOMIC SPILL-OVER EFFECTS

AI spending by  
public and private  
sector

- Revenues generated by AI providers (including revenues of cloud service providers when they offer AI platforms, AI software services, and AI systems integrators)
- Captured in market estimates

Spillover effects

- Benefits of AI in the total economy
- Applications of machine learning: predictive maintenance of equipment in manufacturing, fraud detection in financial services, recommendation systems in retail consumer goods)
- Applications of gen-AI impact: content generation in advertising, creation and translation of content, computer programming, product development, content development in customer facing operations
- Estimated through econometric modelling

**TO ESTIMATE SPILLOVERS, WE DEVELOPED A SYSTEM OF SIMULTANEOUS EQUATIONS THAT MEASURES THE ECONOMIC CONTRIBUTION OF AI AND CLOUD COMPUTING, AS COMPLEMENTARY TECHNOLOGIES**

<b>Aggregate production equation</b>		$GDP_{it} = f(K_{it}, L_{it}, CLOUD_{it}, AI_{it})$
AI equations	Demand equation	$AI_{it} = k(GDP_{pcit}, AI\ ARPU_{it}, HK_{it}, URBAN_{it})$
	Supply equation	$AI\ REVENUES_{it} = v(AI\ ARPU_{it}, GDP_{pcit}, AI\ COMPANIES_{it}, URBAN_{it})$
	Infrastructure production equation	$\Delta AI_{it} = z(AI\ REVENUES_{it})$
Cloud equations	Demand equation	$CLOUD_{it} = g(GDP_{pcit}, CLOUD\ COST_{it}, HK_{it}, URBAN_{it})$
	Supply equation	$CLOUD\ REVENUES_{it} = h(CLOUD\ COST_{it}, GDP_{pcit}, CLOUD\ COMPANIES_{it}, AVAILABILITY\ ZONES_{it}, URBAN_{it})$
	Infrastructure production equation	$\Delta CLOUD_{it} = j(CLOUD\ REVENUES_{it})$

Australia, Bangladesh, China, India, Indonesia, Iran, Japan, Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Sri Lanka, Thailand, Vietnam

Sources: Telecom Advisory Services analysis

# THE TOTAL ECONOMIC IMPACT OF AI IN ASIA-PACIFIC IN 2023, COMPRISING AI SPENDING AND ITS SPILLOVERS ON THE ECONOMY, IS SIZABLE: US\$ 680.34 BILLION

## ASIA PACIFIC: ARTIFICIAL INTELLIGENCE TOTAL ECONOMIC IMPACT (2023)



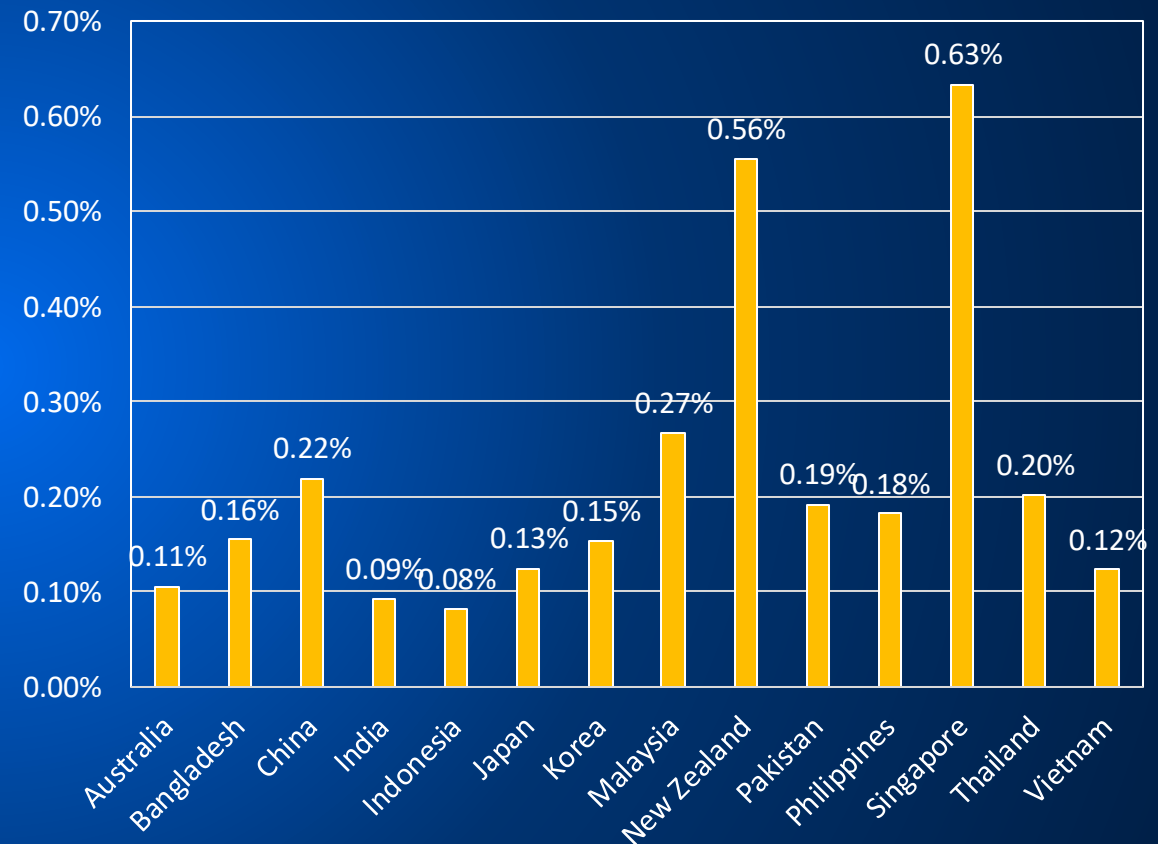
Sources: IDC; Telecom Advisory Services analysis

# CHINA, INDIA AND JAPAN ARE THE COUNTRIES WHERE AI DRIVES THE HIGHEST ABSOLUTE ECONOMIC IMPACT, WHILE CHINA, NEW ZEALAND AND SINGAPORE ARE SPENDING THE HIGHEST RATE OF GDP

## ECONOMIC IMPACT OF AI BY COUNTRY (2023)

Country	Spending (M\$)	Spillover (M\$)	Total (M\$)
Australia	\$ 1,828.91	\$ 24,410.80	\$ 26,239.71
Bangladesh	\$ 678.44	\$ 9,473.68	\$ 10,152.11
China	\$ 39,095.80	\$ 336,295.68	\$ 375,391.48
India	\$ 3,307.94	\$ 82,749.02	\$ 86,056.96
Indonesia	\$ 1,133.90	\$ 28,497.52	\$ 29,631.43
Japan	\$ 5,270.47	\$ 58,533.28	\$ 63,803.75
Korea	\$ 2,630.43	\$ 22,696.06	\$ 25,326.49
Malaysia	\$ 1,068.48	\$ 7,215.83	\$ 8,284.31
New Zealand	\$ 1,408.53	\$ 3,739.80	\$ 5,148.33
Pakistan	\$ 650.75	\$ 6,688.37	\$ 7,339.12
Philippines	\$ 797.01	\$ 8,789.24	\$ 9,586.25
Singapore	\$ 3,180.67	\$ 8,662.67	\$ 11,843.34
Thailand	\$ 1,039.51	\$ 9,911.63	\$ 10,951.14
Vietnam	\$ 530.10	\$ 10,052.61	\$ 10,582.71
<b>Total</b>	<b>\$ 62,620.94</b>	<b>\$ 617,716.20</b>	<b>\$ 680,337.14</b>

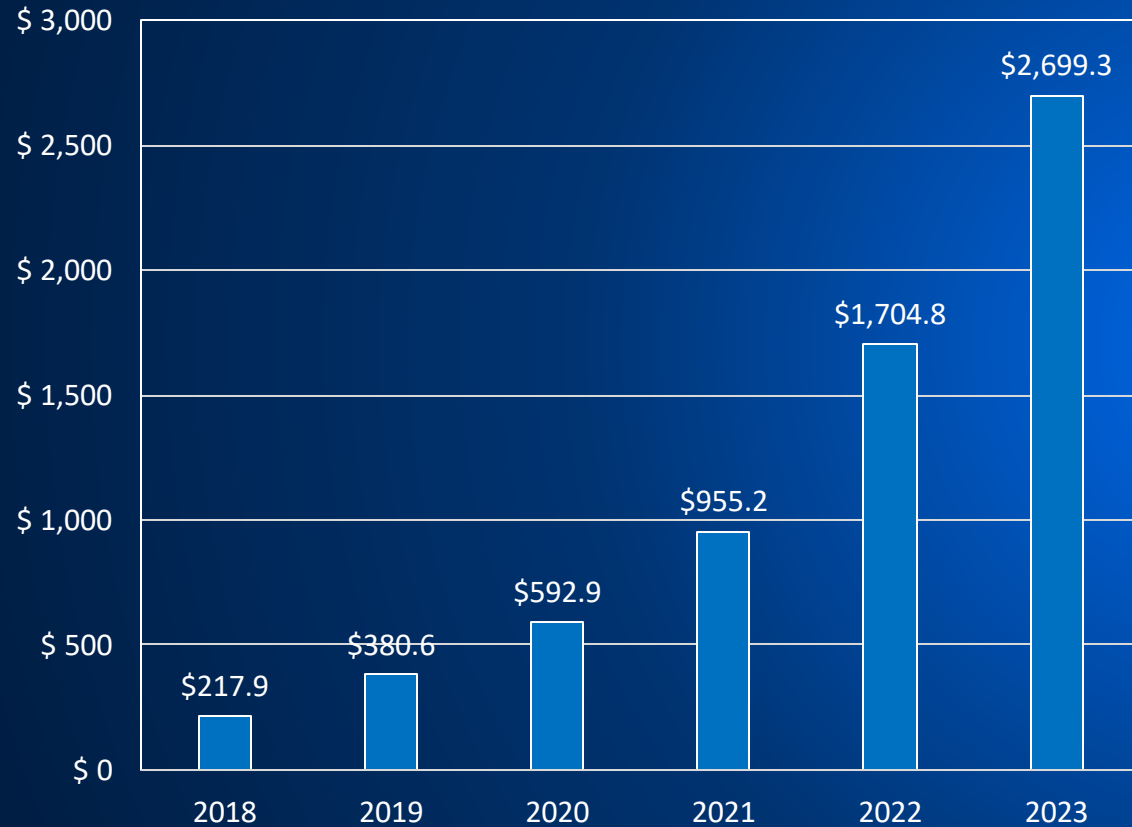
## AI SPENDING AS % OF GDP (2023)



Sources: IDC; World Bank; Telecom Advisory Services analysis

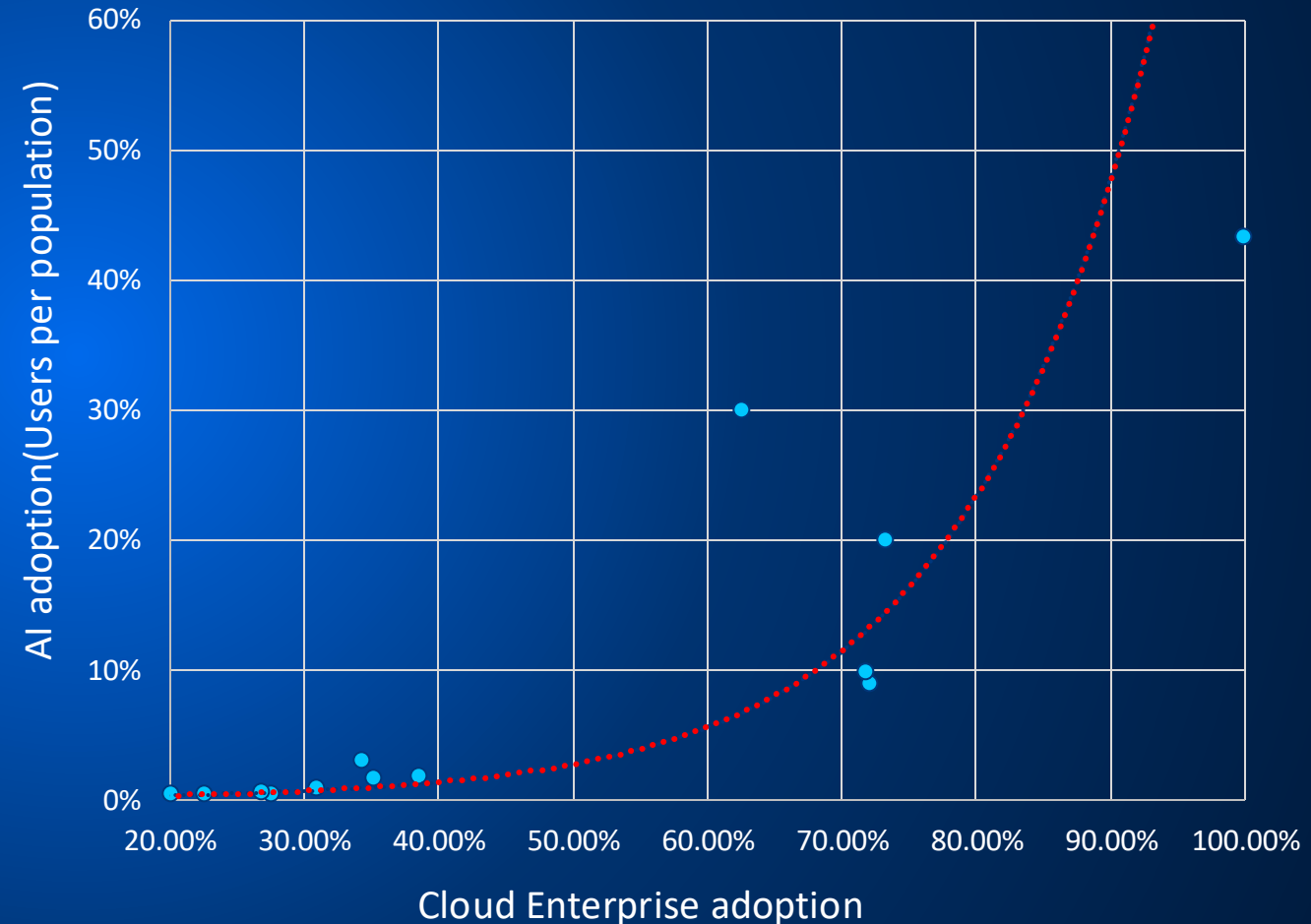
# A PORTION OF AI SPENDING IN ASIA PACIFIC COUNTRIES IS SUPPLIED BY CLOUD SERVICE PROVIDERS, AN INDICATION OF TECHNOLOGICAL COMPLEMENTARITY

## ASIA-PACIFIC: AI SPENDING DELIVERED BY CLOUD SERVICE PROVIDERS (IN US\$ MILLION) (2018-2023)



Source: IDC

## ASIA-PACIFIC: CORRELATION BETWEEN CLOUD COMPUTING AND AI ADOPTION (2023)



Source: IDC; OCDE; Telecom Advisory Services analysis

## POLICY IMPLICATIONS

- AI is already driving a significant contribution to economic growth in Asia Pacific
- Since spillovers are the core of AI's economic contribution, it is critical to maximize its adoption in the production side of the economy
- AI development policies need to recognize the different effects of machine learning and gen-AI across industries
- AI spillovers are dependent on the level of cloud computing resulting from technological complementarities; accordingly, if countries achieve a proactive approach to cloud adoption, they will overperform in terms of AI economic impact





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