

## 2. Chain-Volume-Measure calculation

t	GDP (2009's Price) $\sum_i P_{i,2009} Q_{i,t}$ unit: \$	GDP (2010's Price) $\sum_i P_{i,2010} Q_{i,t}$ unit: \$	GDP (2011's Price) $\sum_i P_{i,2011} Q_{i,t}$ unit: \$	GDP (2012's Price) $\sum_i P_{i,2012} Q_{i,t}$ unit: \$	GDP (2013's Price) $\sum_i P_{i,2013} Q_{i,t}$ unit: \$
2009	201	206	215	225	232
2010	204	212	221	230	234
2011	210	223	224	242	245
2012	220	230	244	262	262
2013	225	235	250	266	272

→ CVM GDP<sub>2010→2013</sub> : using 2009 as the starting point.

$$\text{CVM RGDP}_{2009} = 201$$

$$\text{CVM RGDP}_{2010} = (201) \cdot \text{CI}^{2010} \Rightarrow \text{DI}^{2010}$$

$$= 204. \quad \frac{204}{201}$$

$$\text{CVM RGDP}_{2011} = (201) \cdot \text{CI}^{2011} \Rightarrow \text{DI}^{2010} \cdot \text{DI}^{2011}$$

③ Calculate CVM using 2010 as starting point

④ Calculate growth as in

②

$$= 201 (1.068) = 214.5$$

"Job" → ① Do the rest 2012, 2013

② Calculate GDP growth using <sup>2010</sup> fixed Base approach CVM approach