



Strategy for Inclusive Growth: Sectoral Policy, Education Reform and SMEs Development

Magda Kandil

THE EGYPTIAN CENTER FOR ECONOMIC STUDIES

ECES, 2012

Introduction

At first, the presentation aims at assessing sectoral contributions to economic activity to identify sectoral policies which aim at increasing the job content of growth.

Secondly, it explores the gap between the education outcome and labor demand to identify necessary education reforms towards closing imbalances in the job market.

Finally, it focuses on SMEs development to increase the level of their participation in the growth process.

Part 1: Sectoral Policies

Macro-Level Overview

Sectoral-Level Overview

Shares in Aggregate

Elasticity of Employment to Sectoral Output

Productivity Indicators

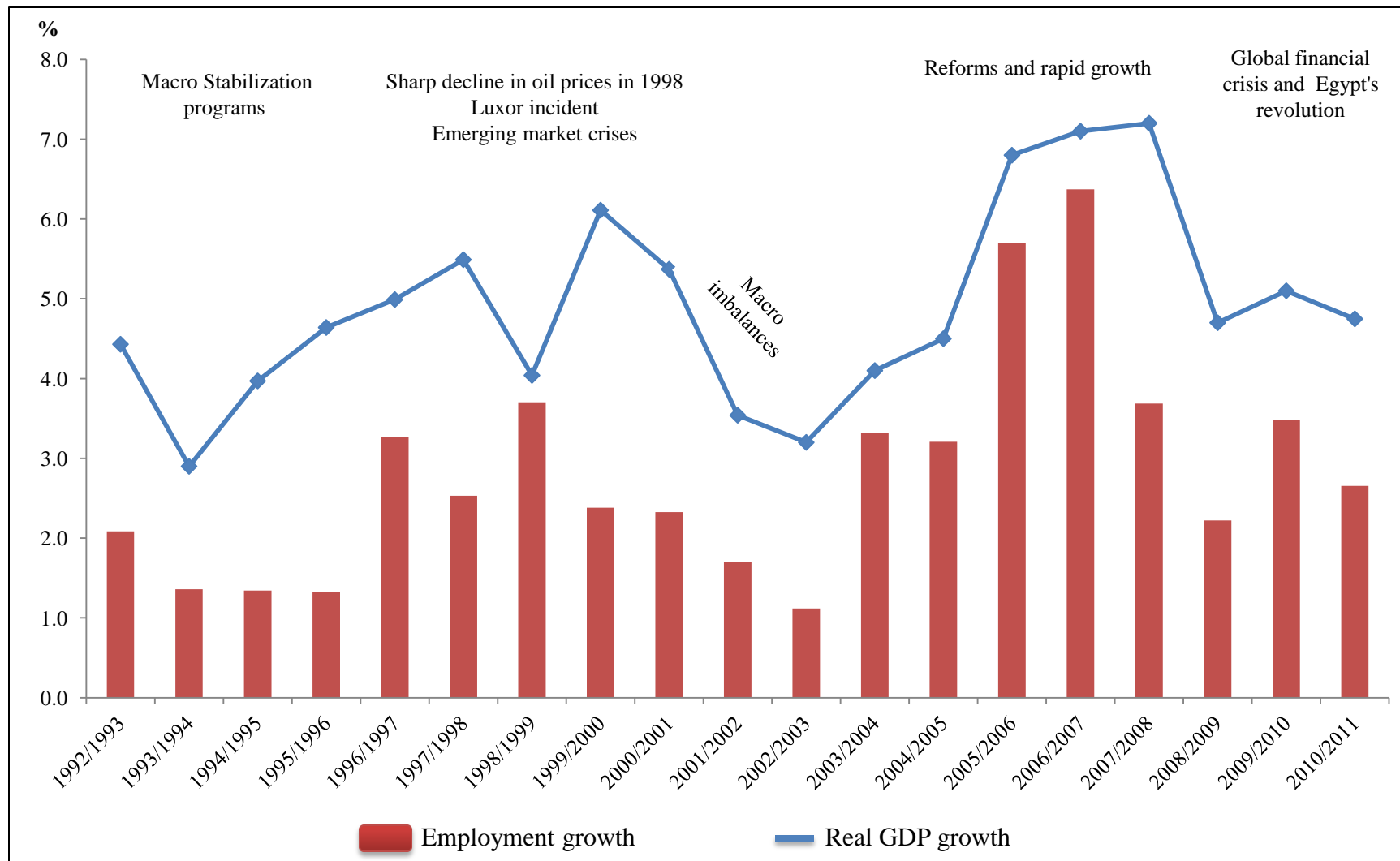
Contributions to growth

Analysis by sector

Agriculture	Manufacturing	Petroleum & Electricity	Construction	Production services	Social services
Agriculture	Manufacturing	Petroleum Products	Construction	Transport and storage	Housing and property
	Mining	Electricity		Communications	Public utilities
				Suez Canal	Educational, health services
				Trade, Finance & Insurance	Other services
				Tourism	

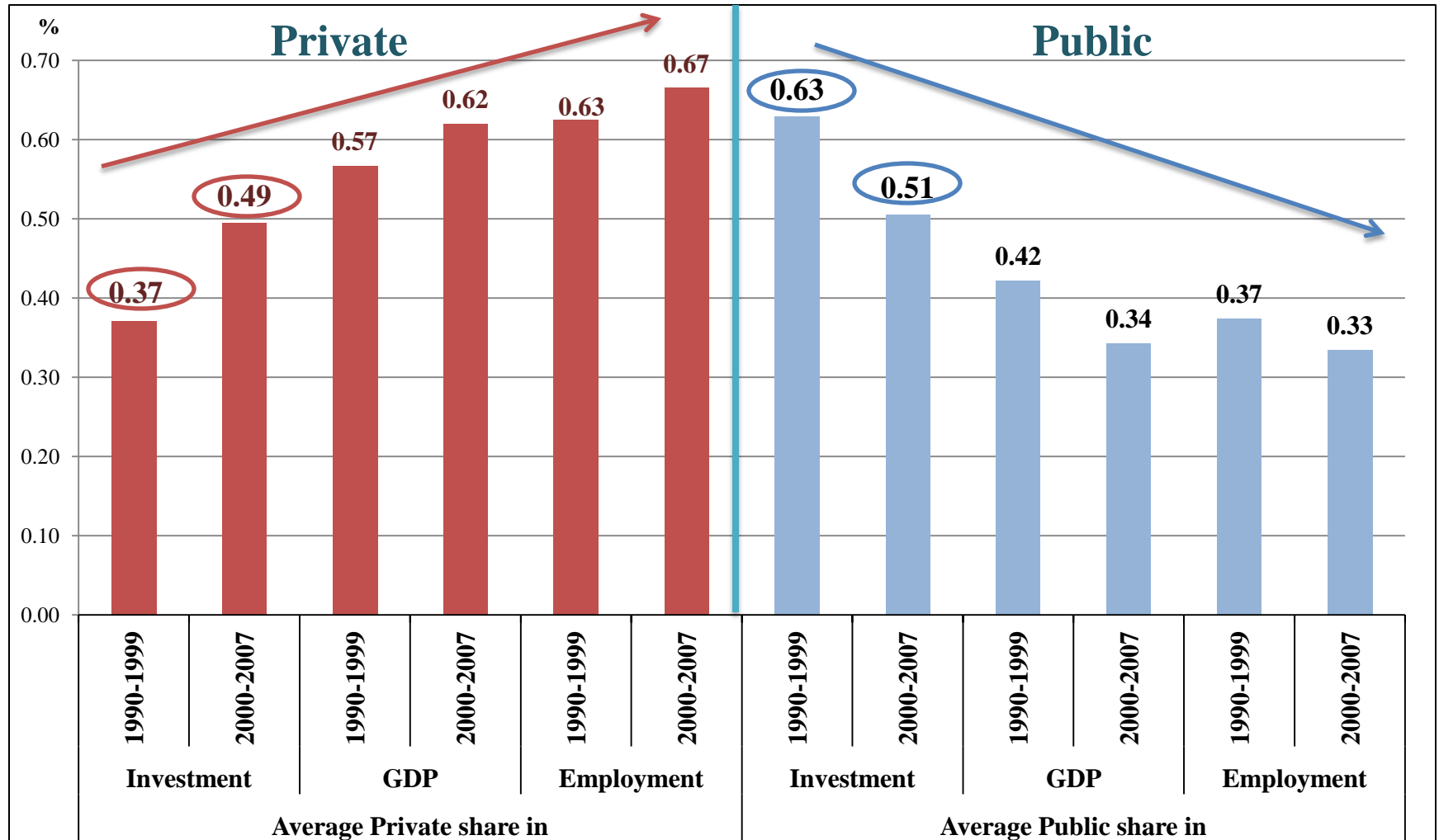
Macro-Level Overview

During the period (1992-2011), annual real GDP growth averaged 4.75 percent, leading employment to grow over the whole period at an average annual growth rate of 2.65 percent.

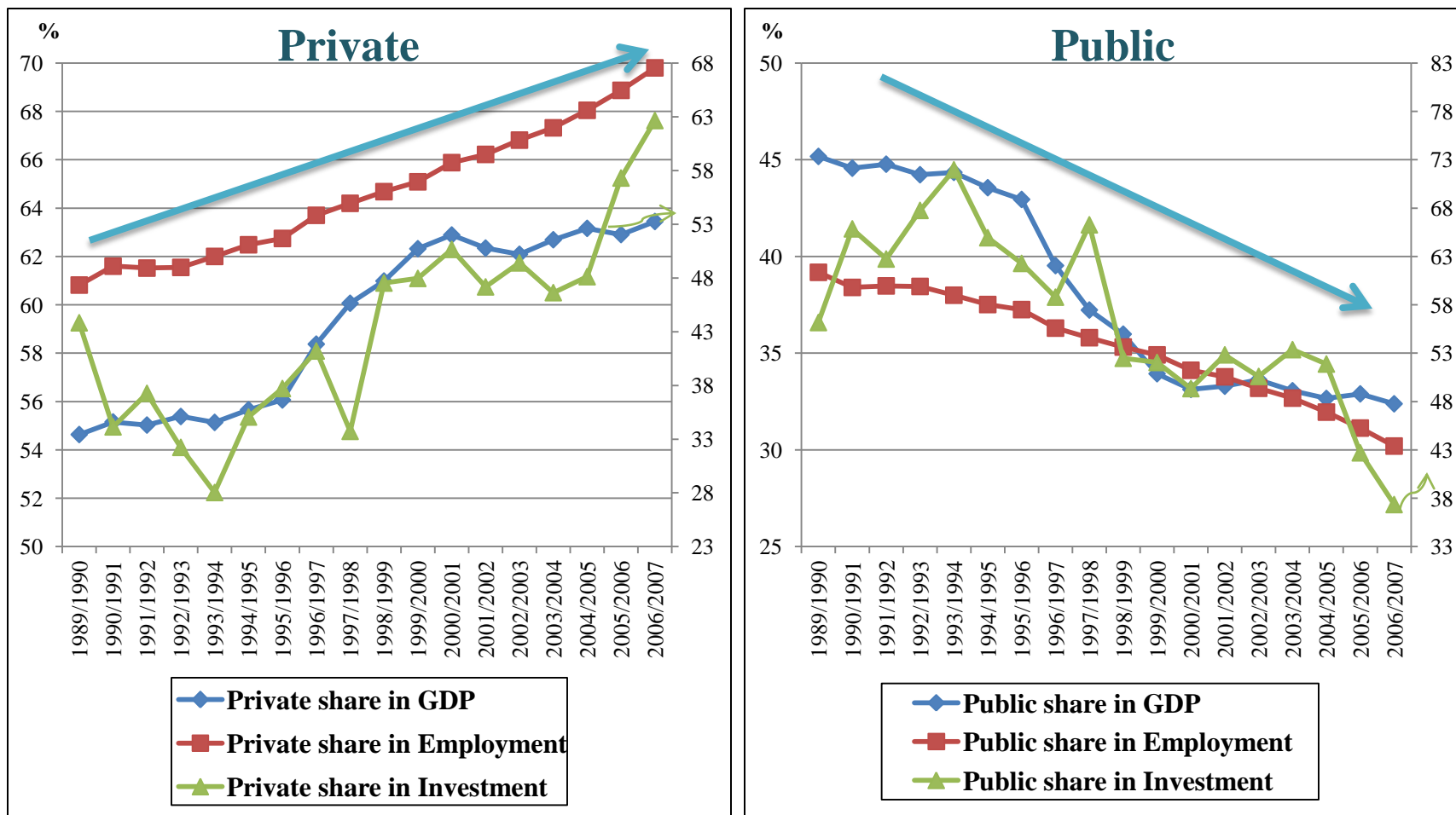


Source: Ministry of planning, Economic indicators

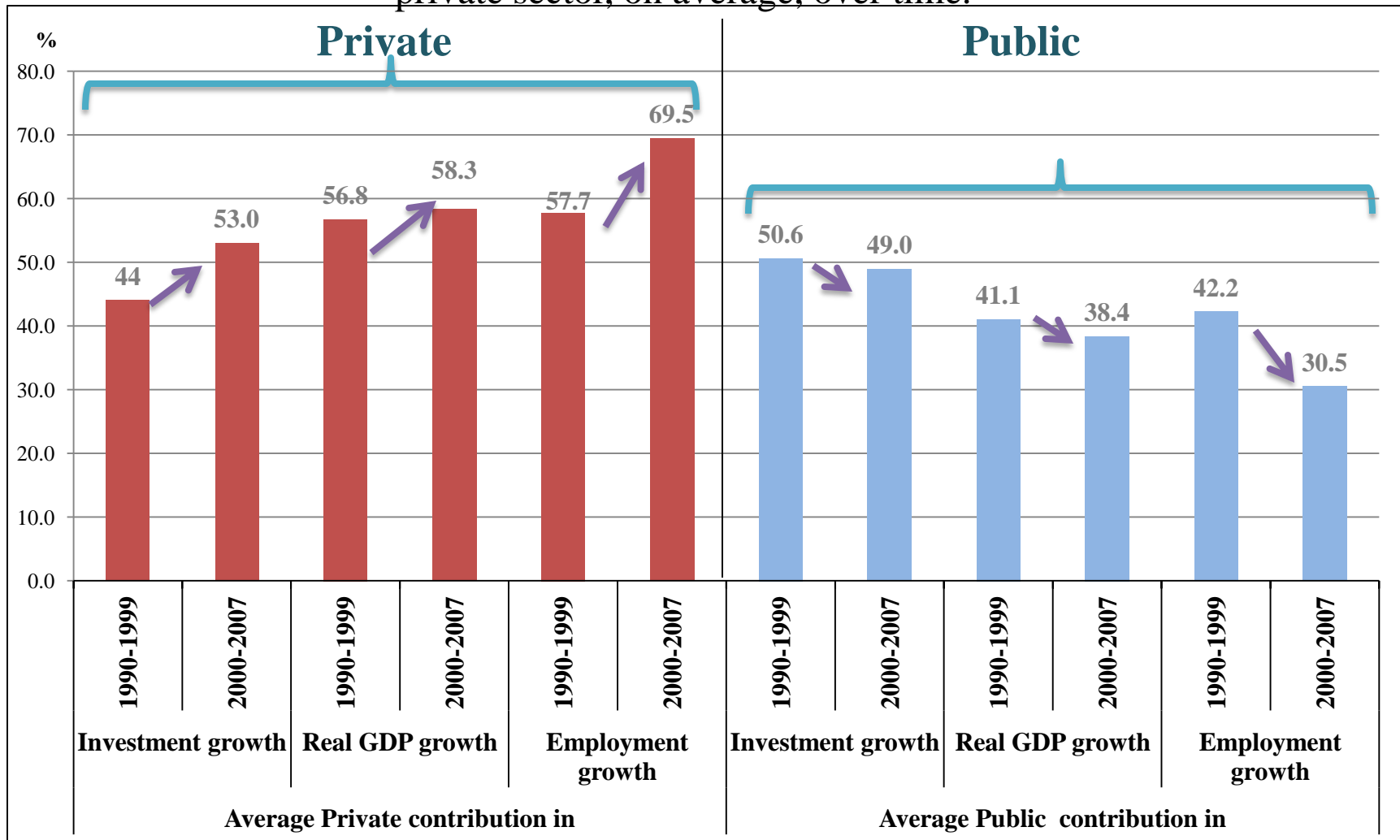
Since the nineties, the economy has grown in size and employment based on higher shares of the private sector, although the share of the public sector in investment is higher, on average.



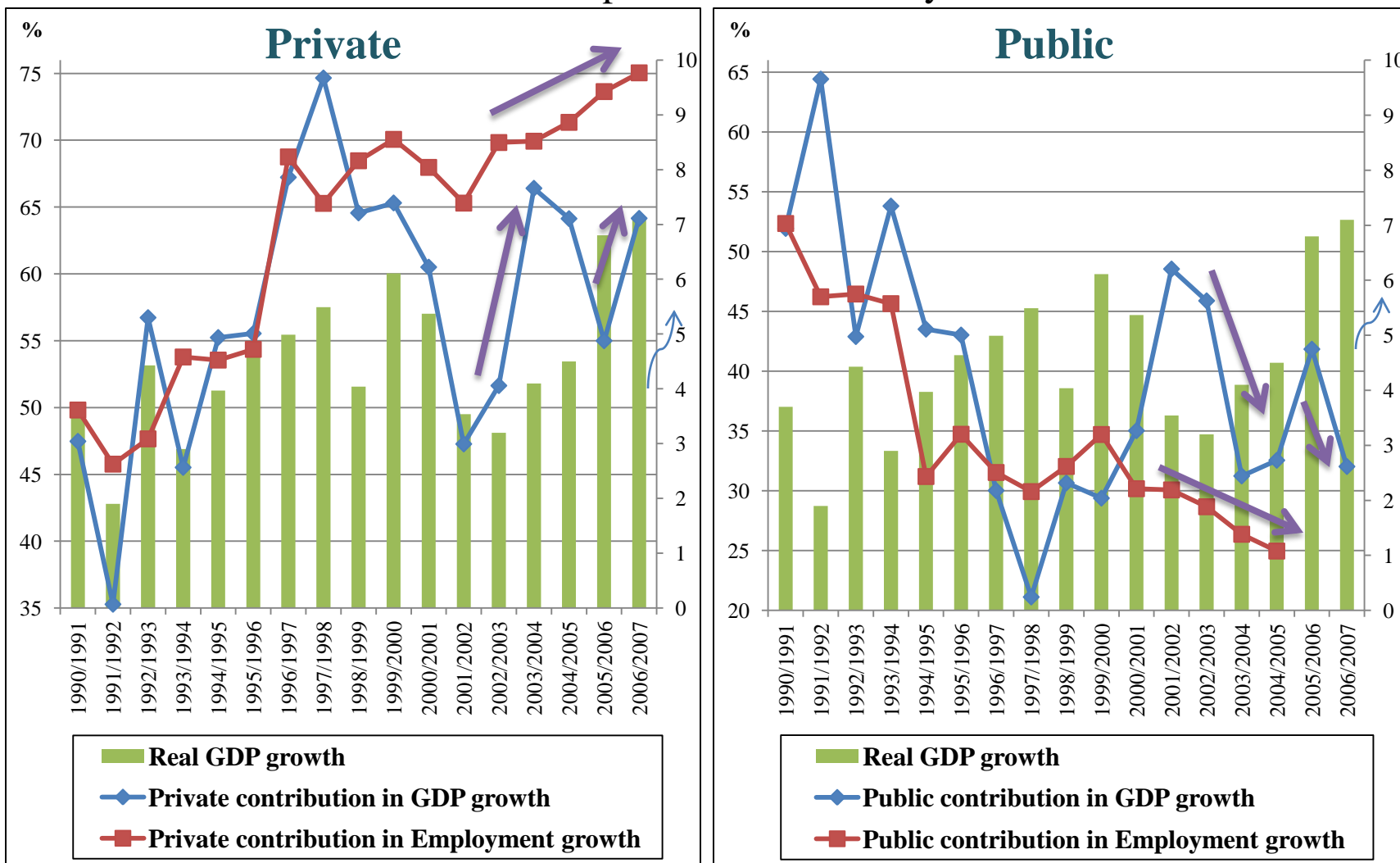
Private sector shares in GDP, Investment and employment have progressively increased over time, in contrast to declining shares in the public sector.



Consistently, the contributions of the private sector in real GDP, employment and investment growth have increased, reflecting higher job content of growth in the private sector, on average, over time.

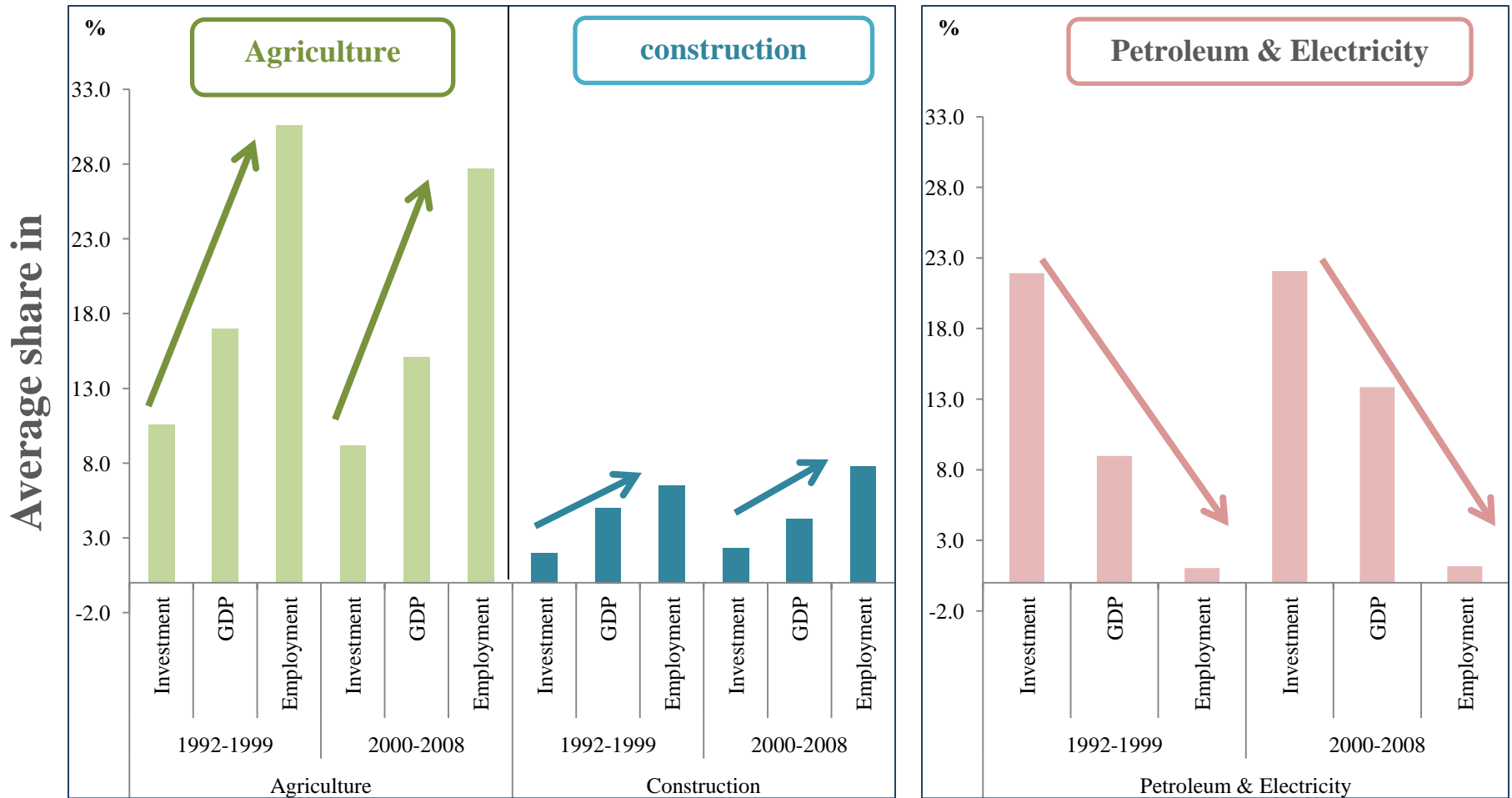


As real growth increased, the contribution of the private sector has been a major driver, reflecting limited scope for employment in the public sector coupled with the agenda to mobilize private sector activity

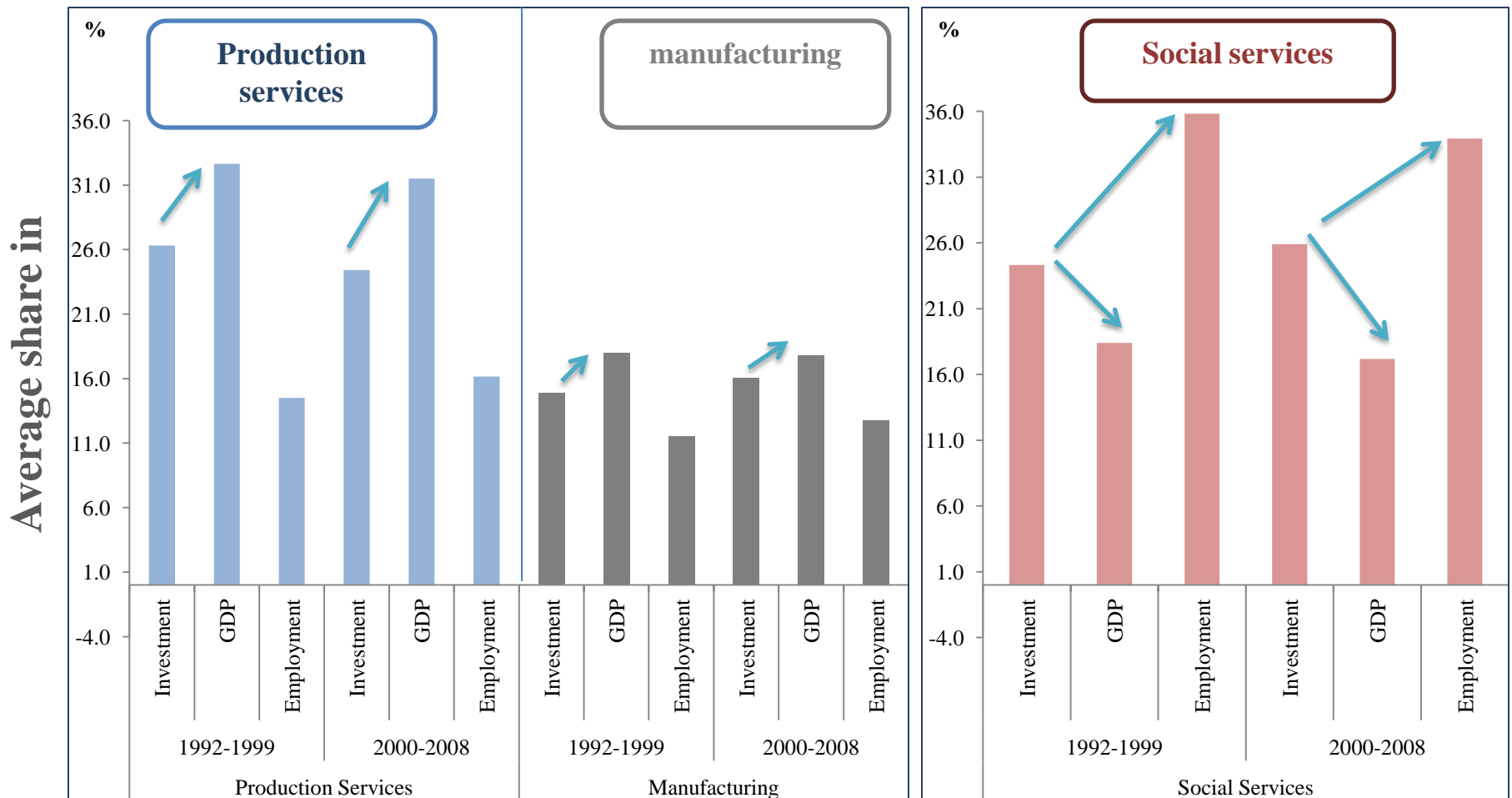


Sectoral -Level Overview: Shares in Aggregate

Higher investment pays off to mobilize higher output and employment in agriculture and construction. In contrast, there is limited employment payoff for high investments in petroleum and electricity.

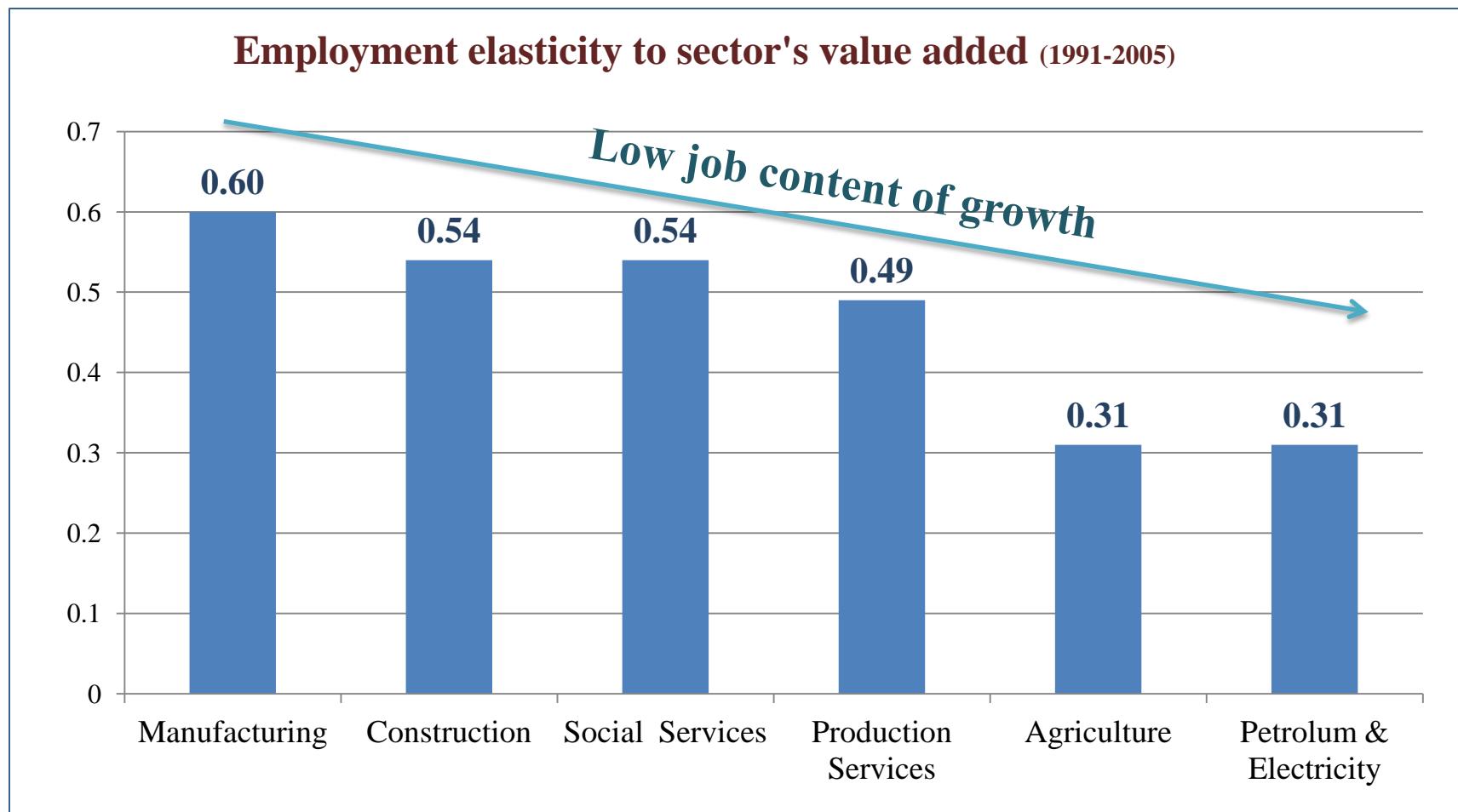


Investment boosts worker productivity in production services and manufacturing where output responds highly to investment. In contrast, investment mobilizes additional employment in social services where the job content of growth is high.



Sectoral -Level Overview: Elasticity of Employment to Sector's Output

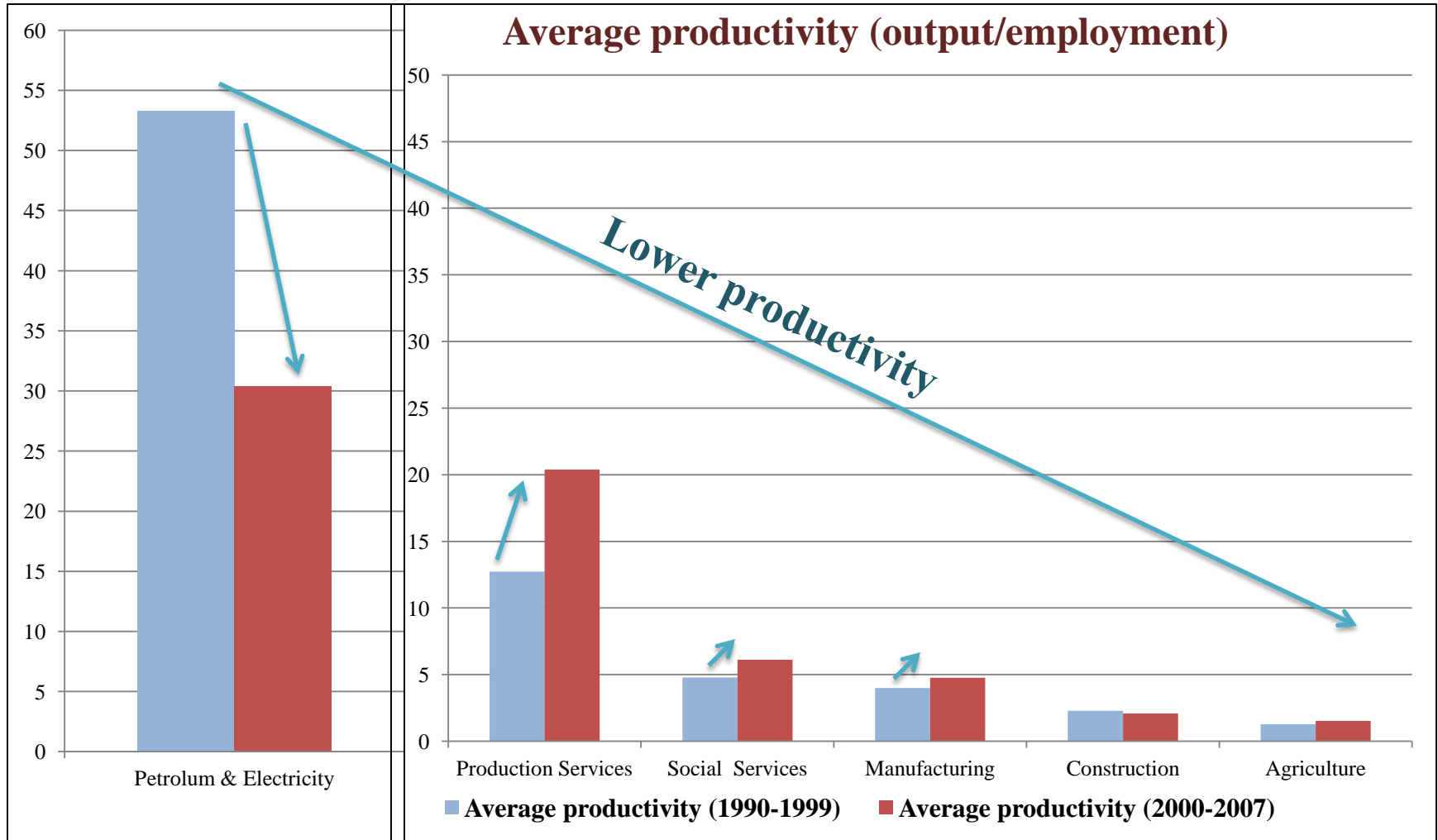
The job content of growth is the highest in the manufacturing sector, and the lowest in petroleum and electricity.



Source: El-Ehwany, Naglaa, and Nihal El-Megharbel. "Employment Intensity of Growth in Egypt with focus on Manufacturing Industries." *ECES* WB No. 130 (2009).

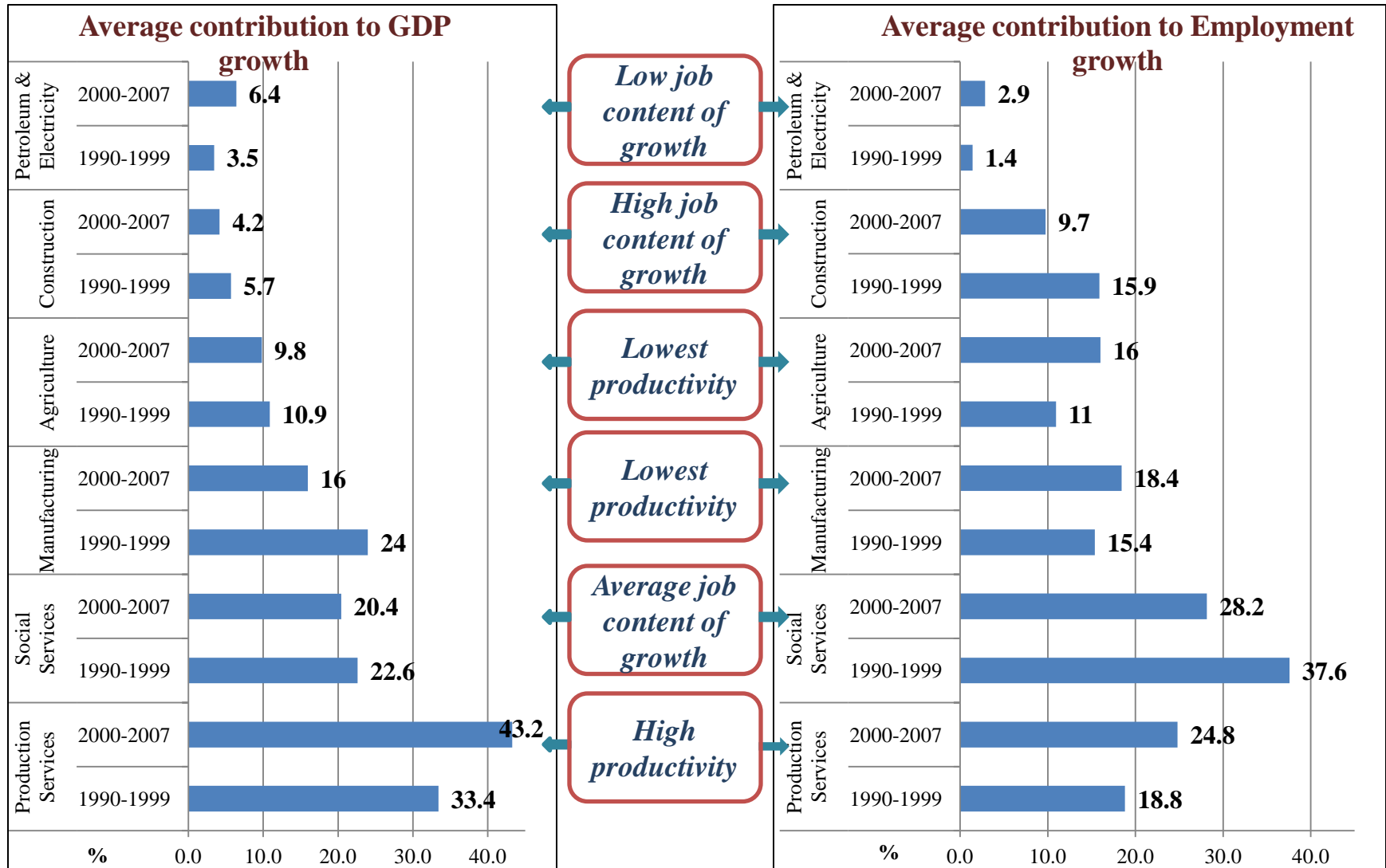
Sectoral -Level Overview: Productivity Indicators

Productivity has increased overtime in many sectors. In contrast, where the job content of growth is low in petroleum and electricity, productivity also has decreased over time.



Sectoral -level overview: contributions to growth

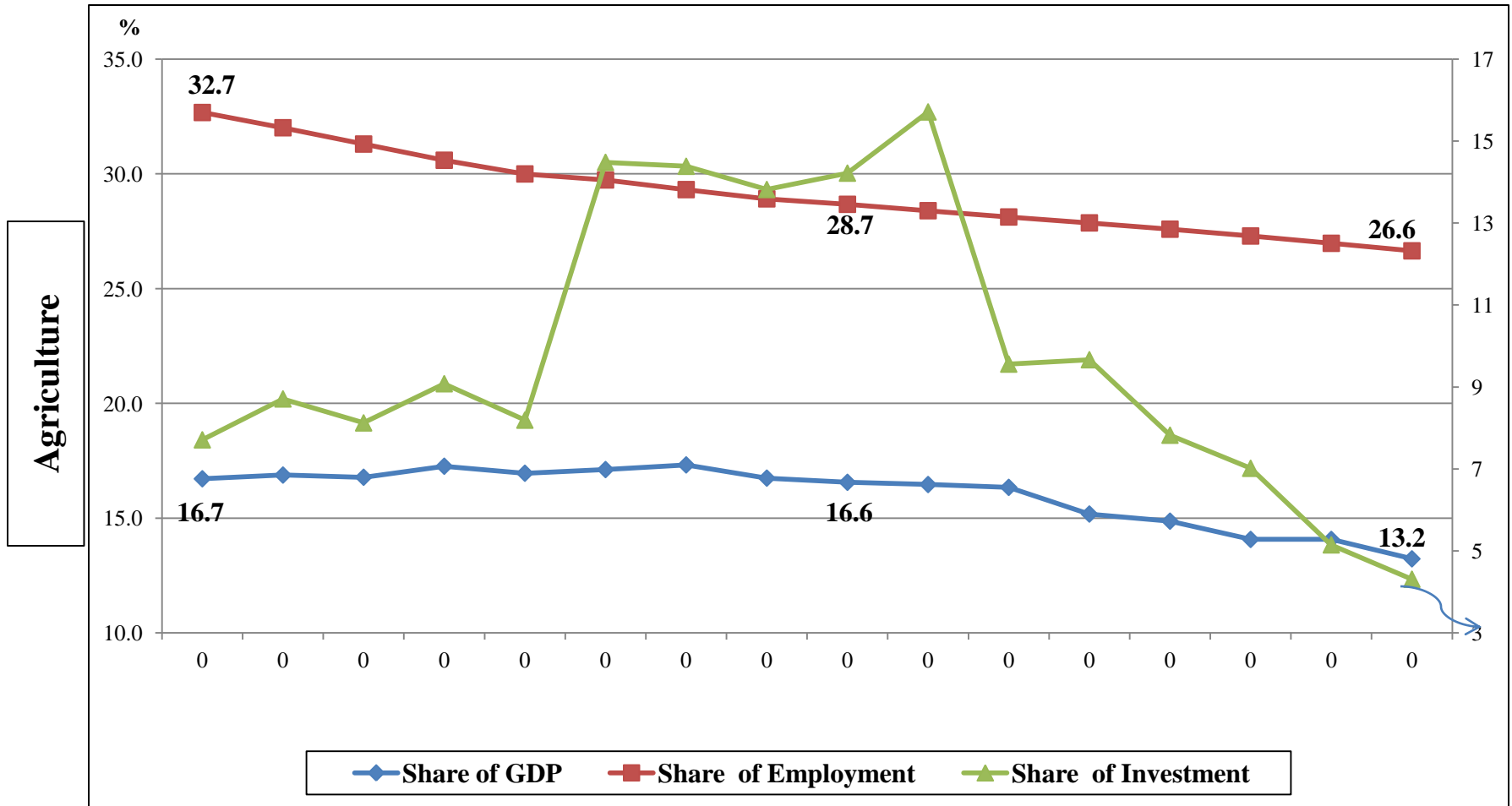
Sectors with the highest contribution to growth, e.g. production services, contribute significantly less towards employment. In contrast, sectors with high employment contribution, e.g., social services have less contribution to growth, reflecting imbalances in productivity and the job content of growth.



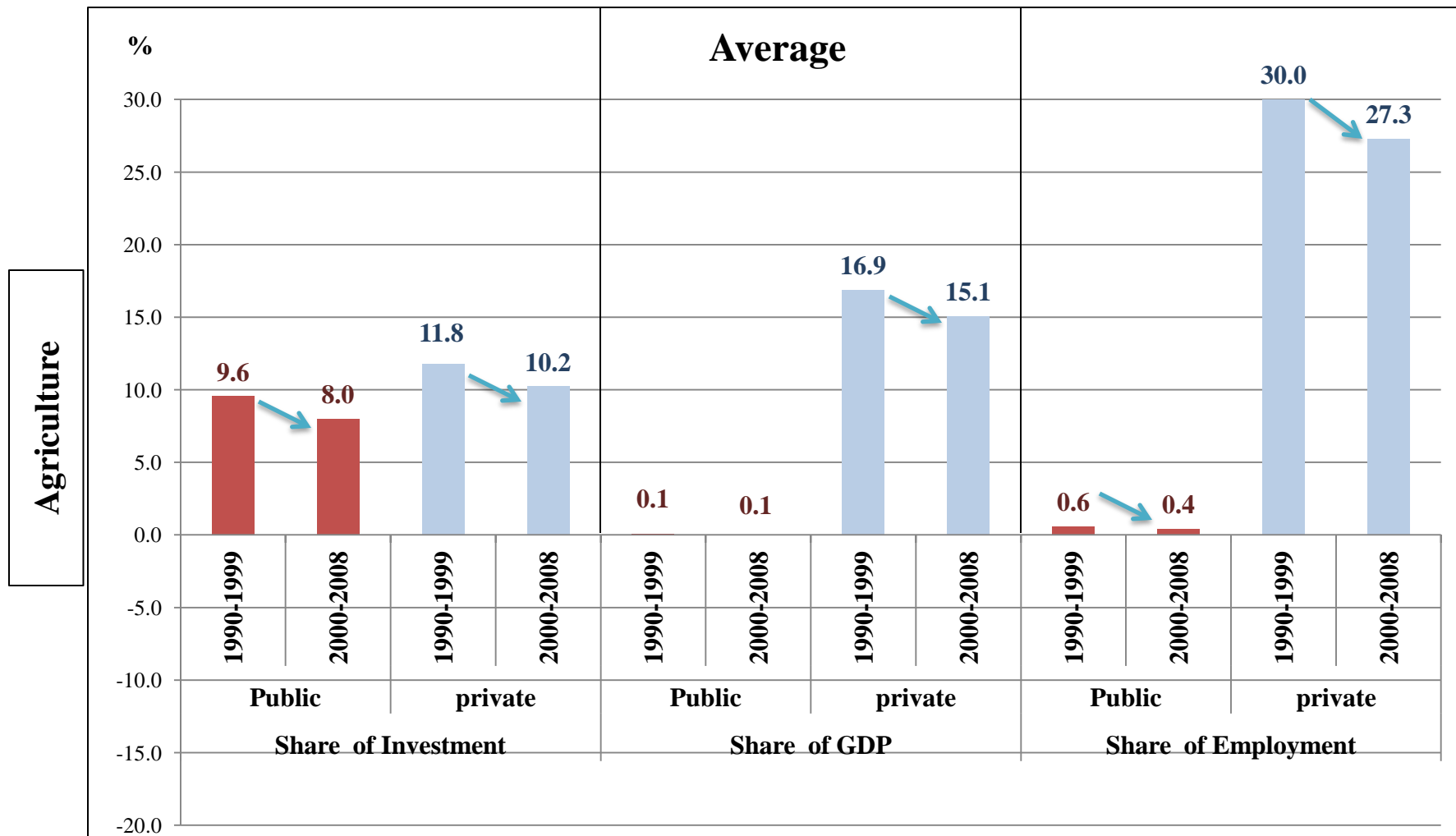
Agriculture

Analysis by sector

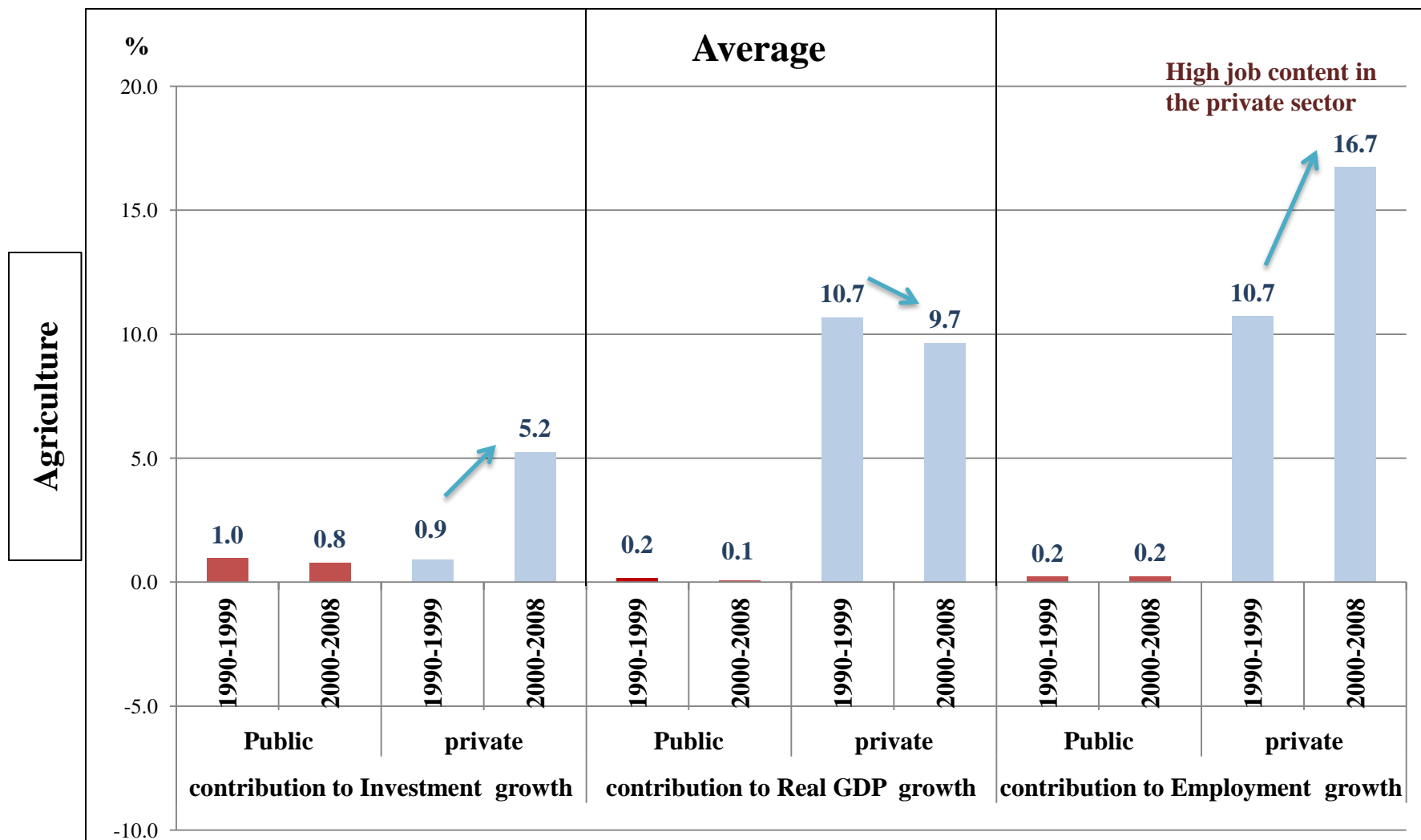
The share of agriculture in employment is nearly double its share in output over time, reflecting low productivity. In addition, the sector exhibited declining shares over time, in line with the decline in its share of investment.



The agriculture sector is highly dominated by private employment and output, although, the share of public investment is also noticeable, and shares have declined over time.

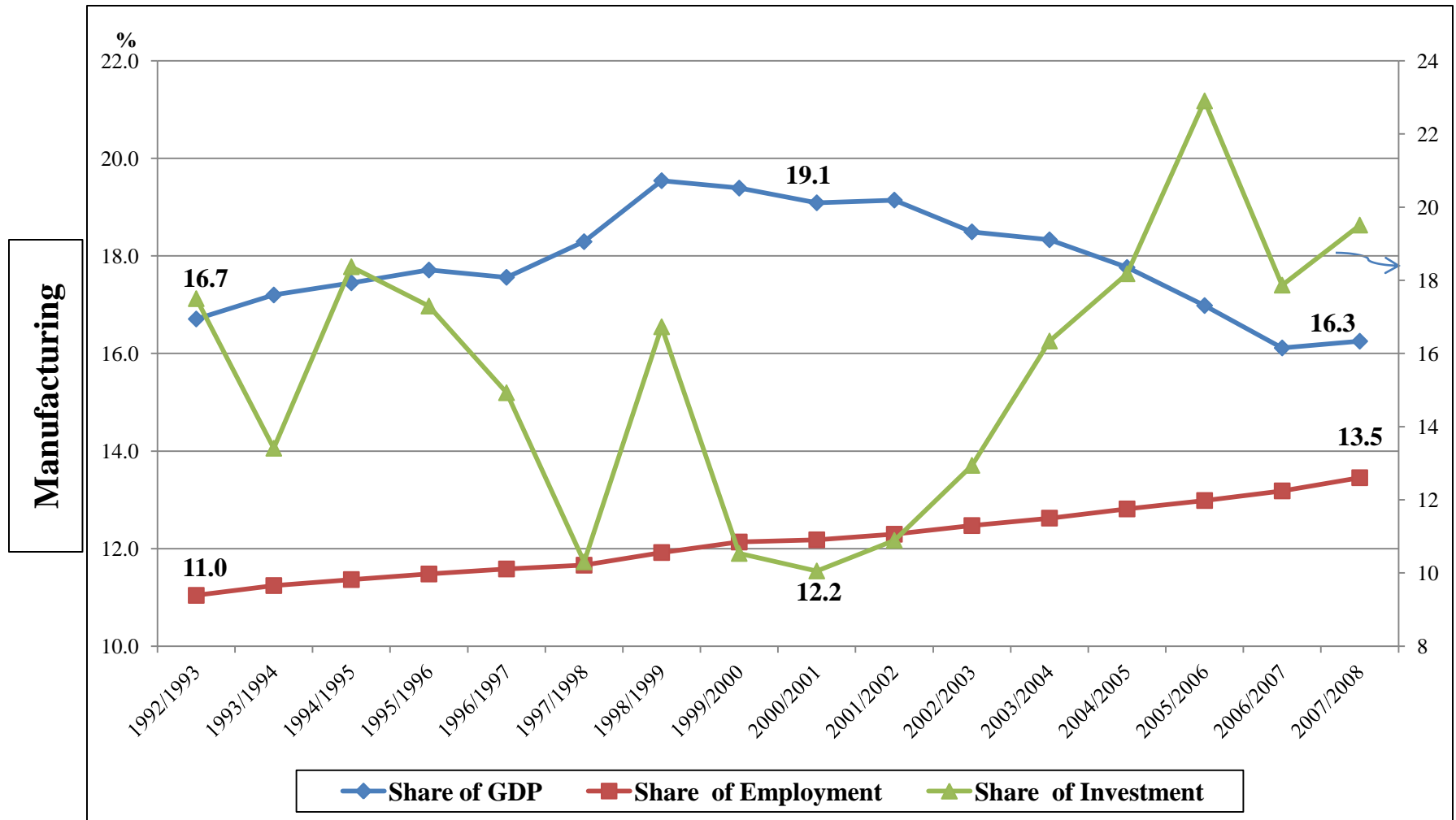


Consistently, the contributions of the private sector to output, employment and investment growth have dominated in the agriculture sector over time.

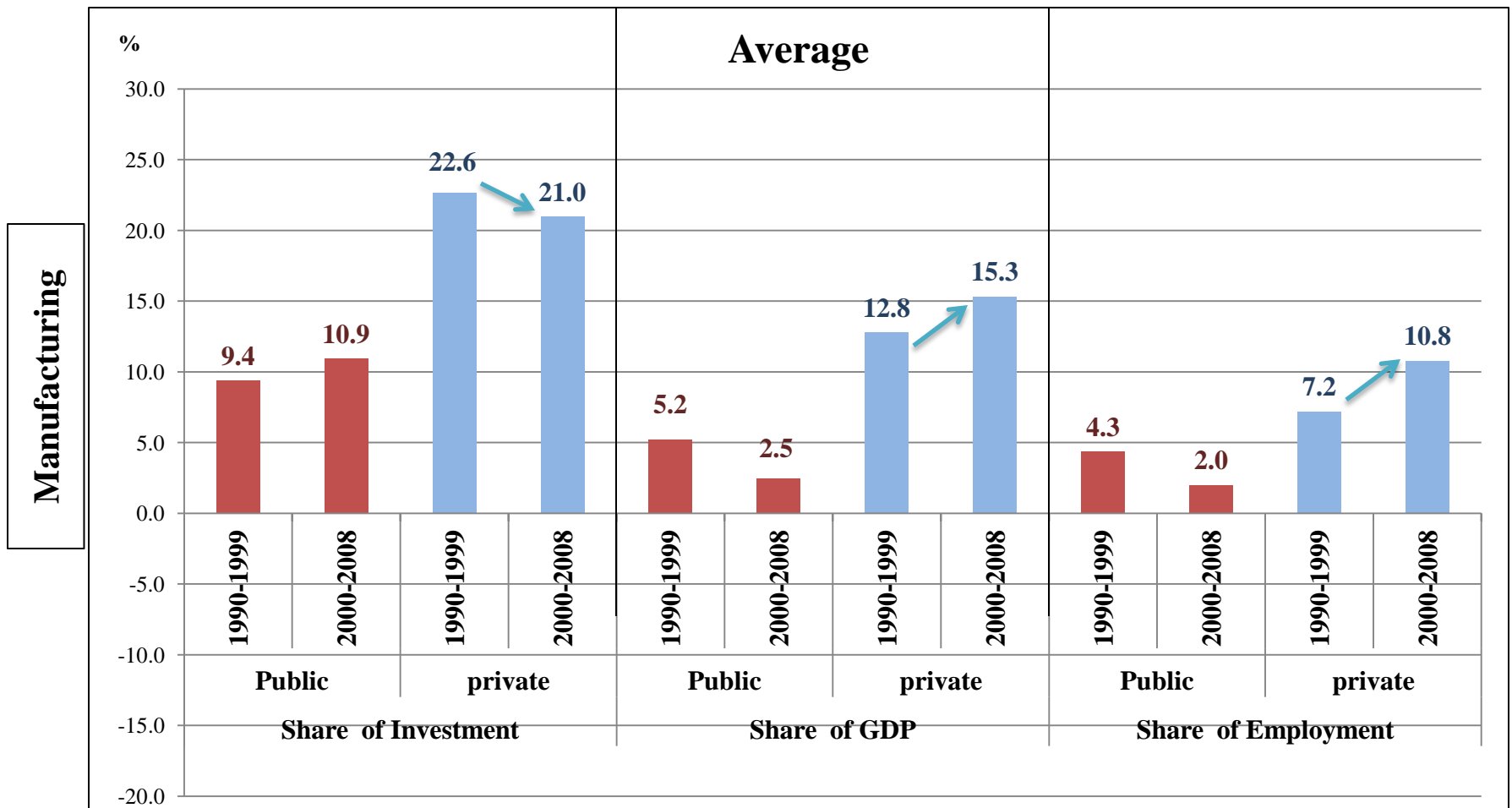


Manufacturing

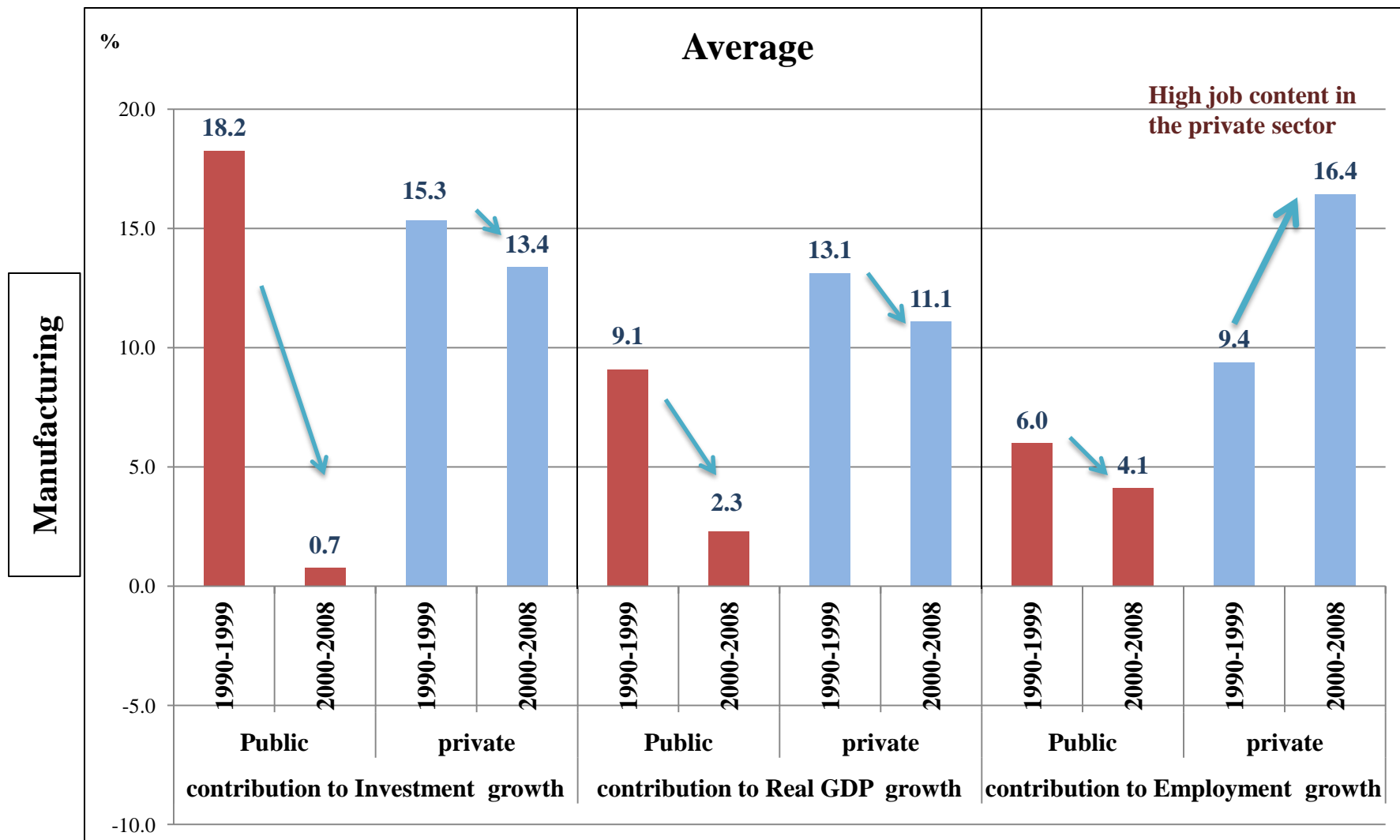
The sector's shares in investment have generally surged, in line with increasing its share in employment, on average, over time.



The shares of the private sector in manufacturing are more dominant in investment, and its shares in output and employment have increased over time.

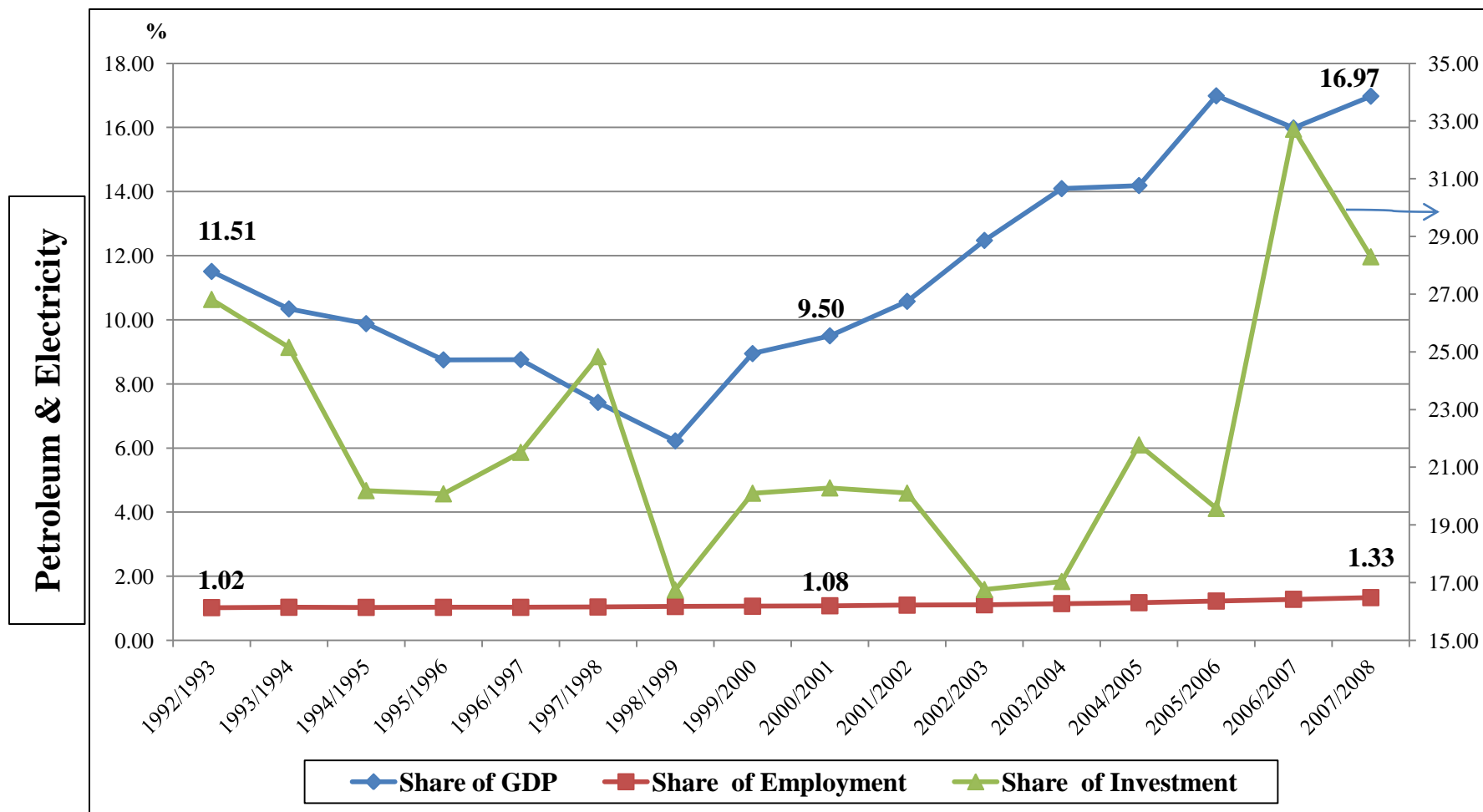


Overtime, the contributions of the private and public sectors to output and investment growth have declined. In contrast, the contribution of the private sector to employment growth has surged over time.

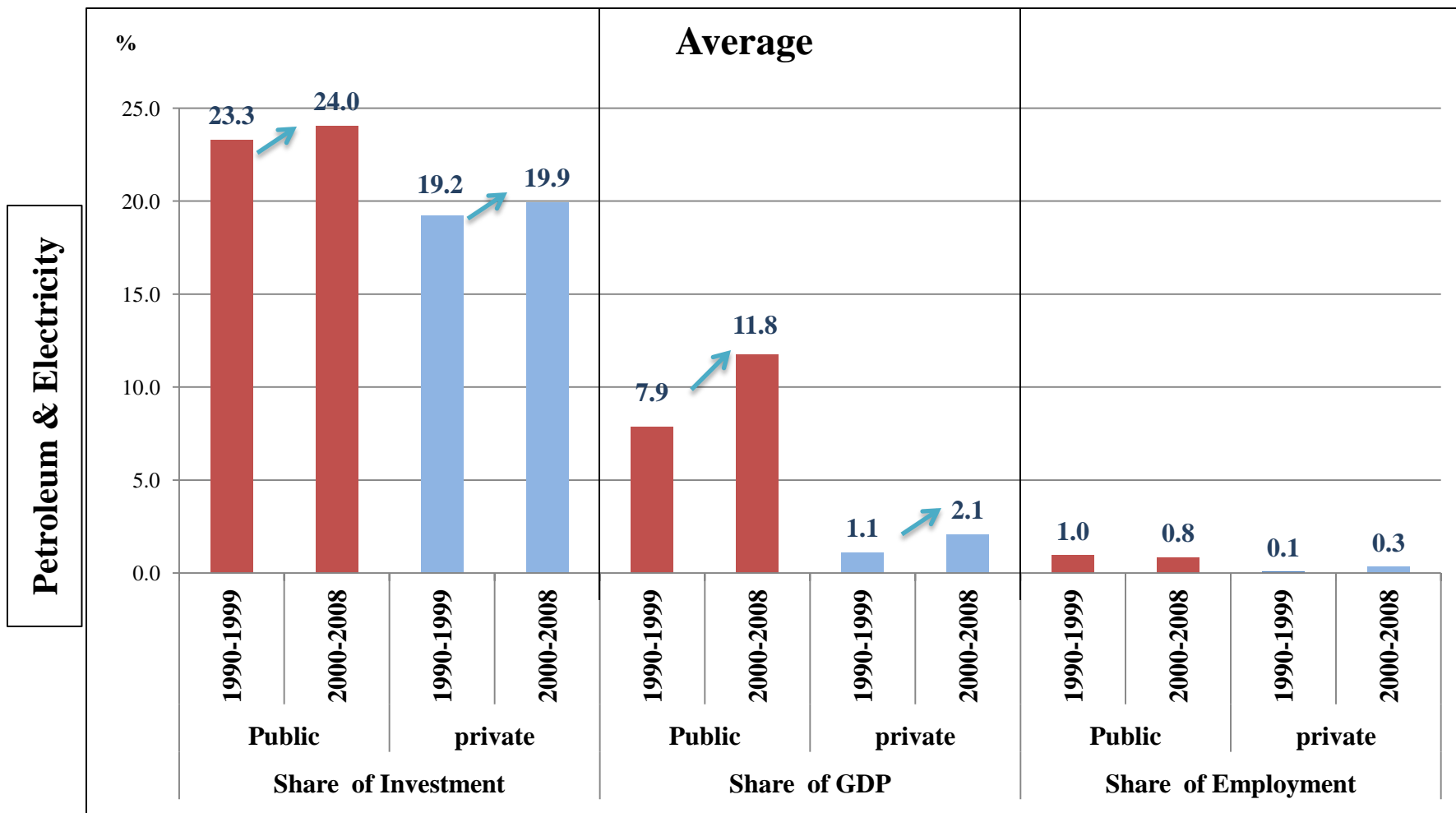


Petroleum & Electricity

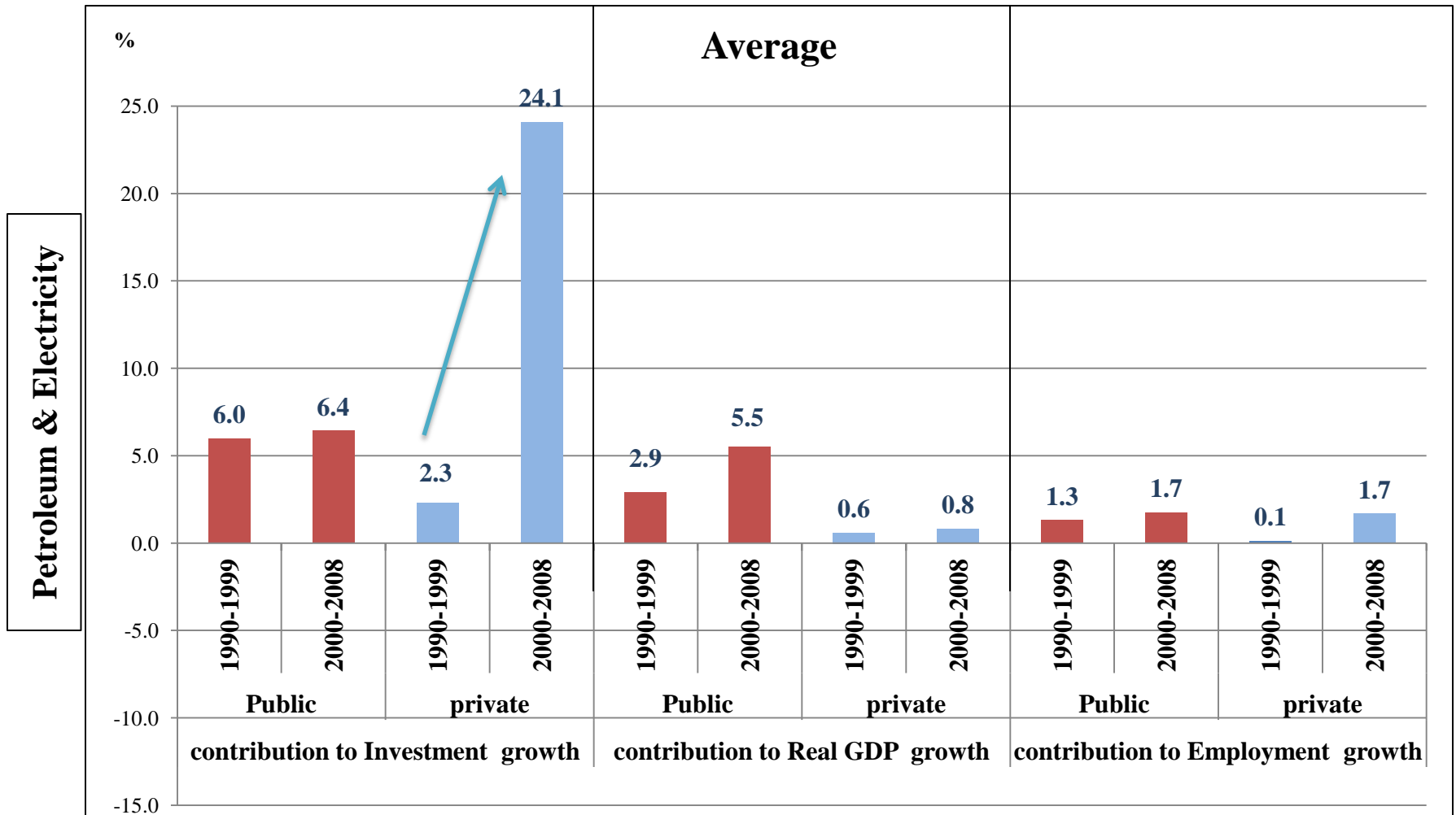
Despite higher shares in investment and GDP, the sector's share of employment has been modest over time.



Investment has surged in the public and private sectors with a positive effect on the sector's share of output.

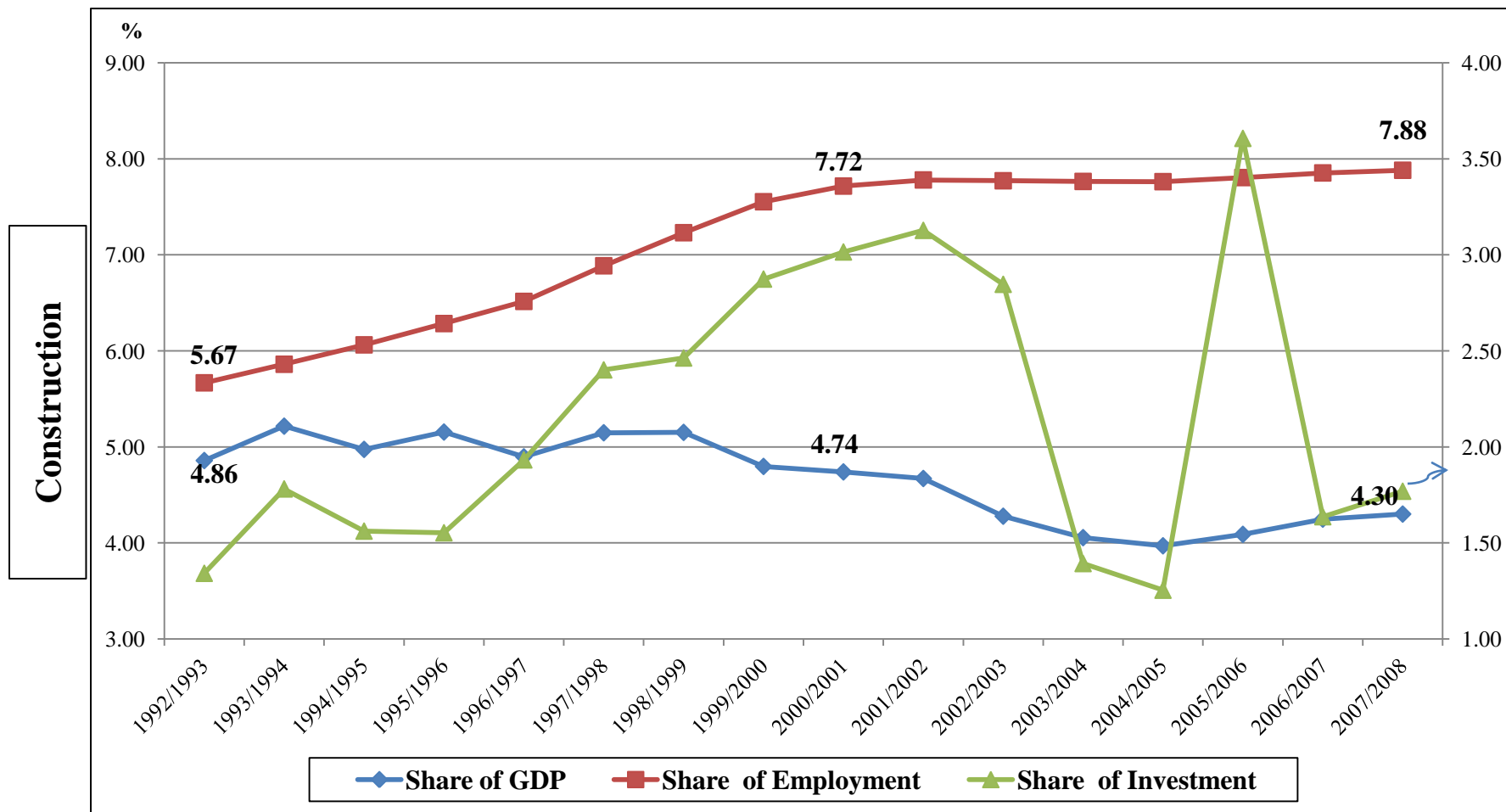


There has been a surge in the sector's contribution to investment growth attributed to private investment, with small return on contributions to output and employment growth.

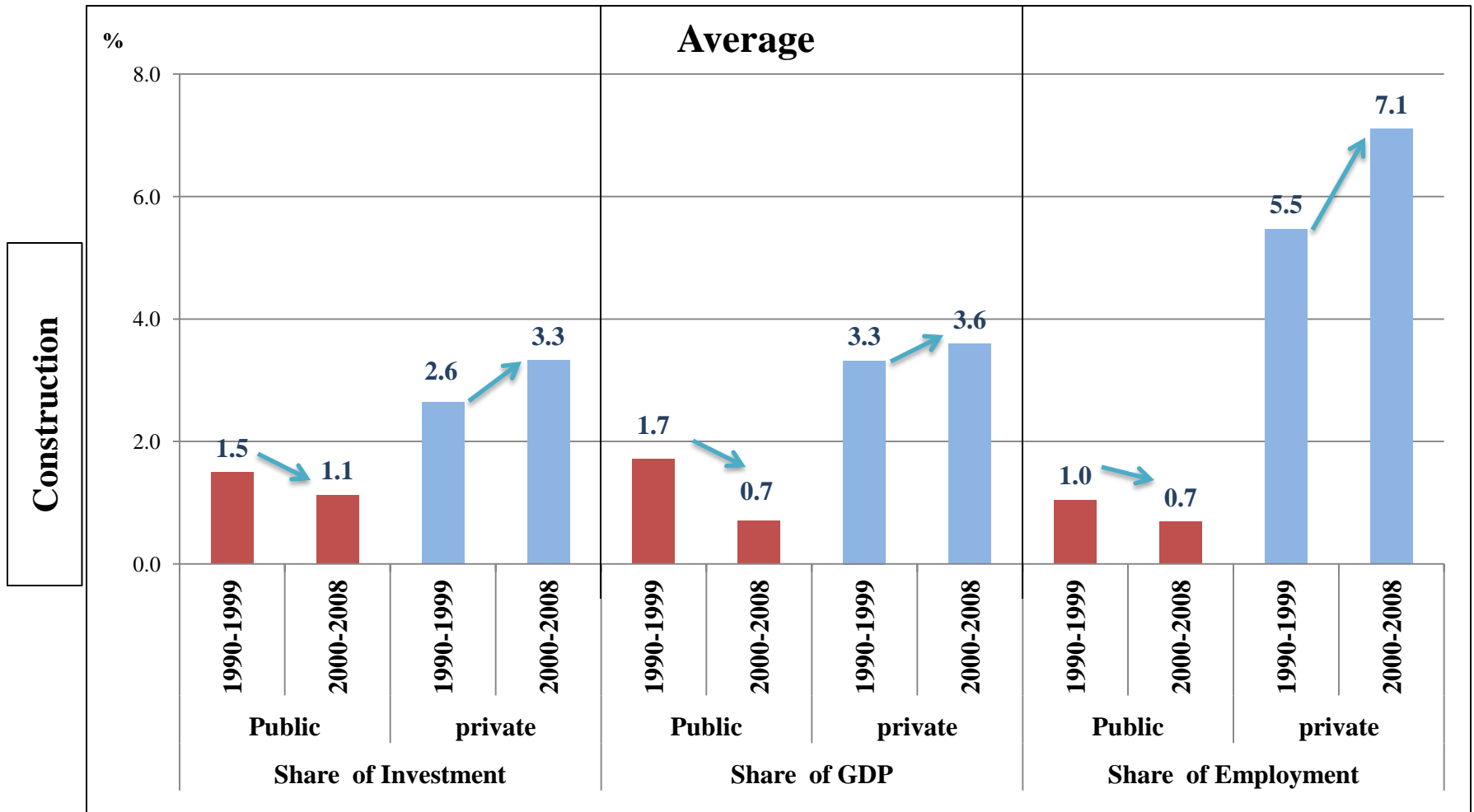


Construction

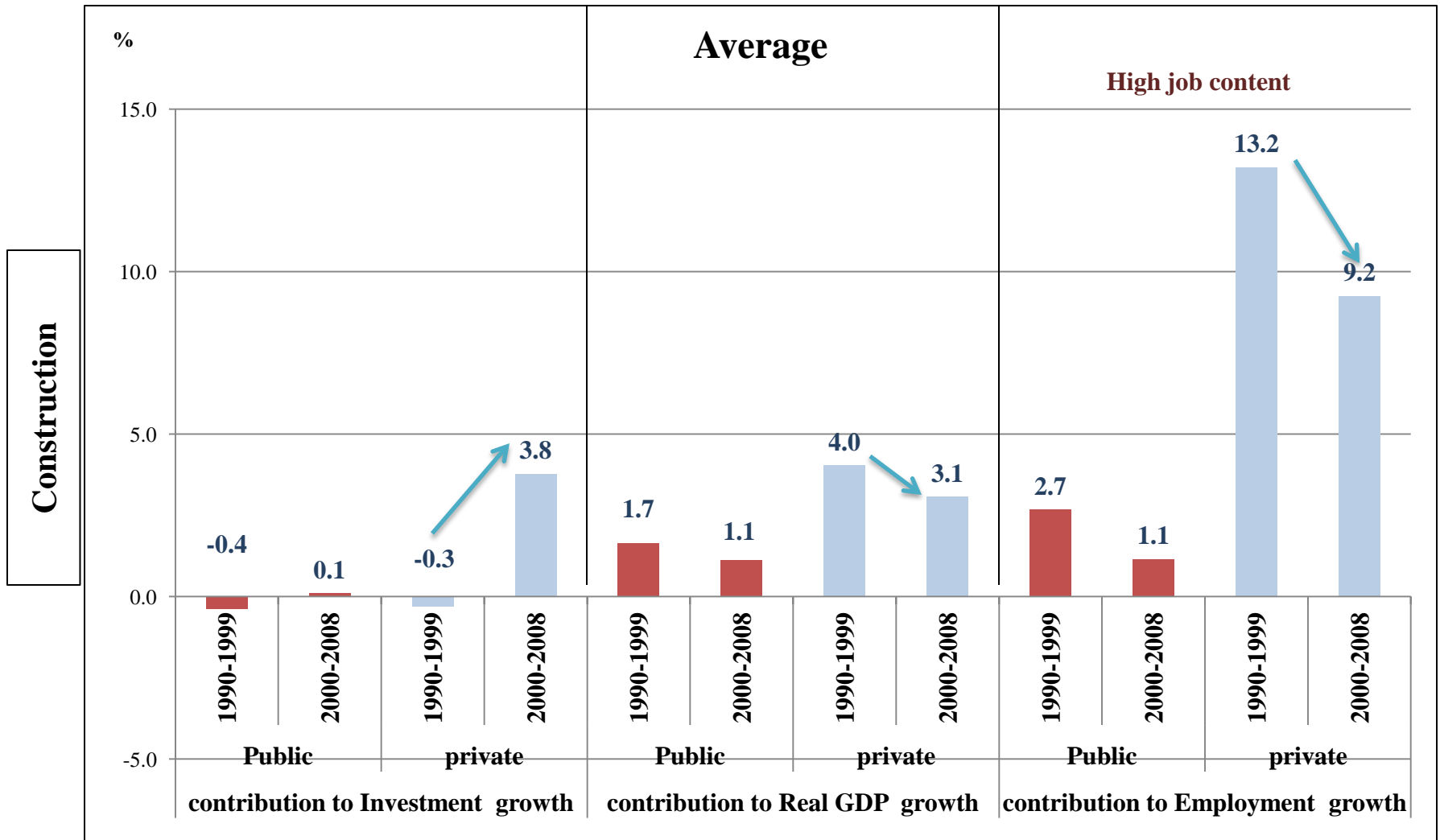
The sectors' share in output has recently increased, although its share in employment is somewhat stable.



Shares in construction are predominantly private, and increasing over time, in contrast to declining public shares over time.



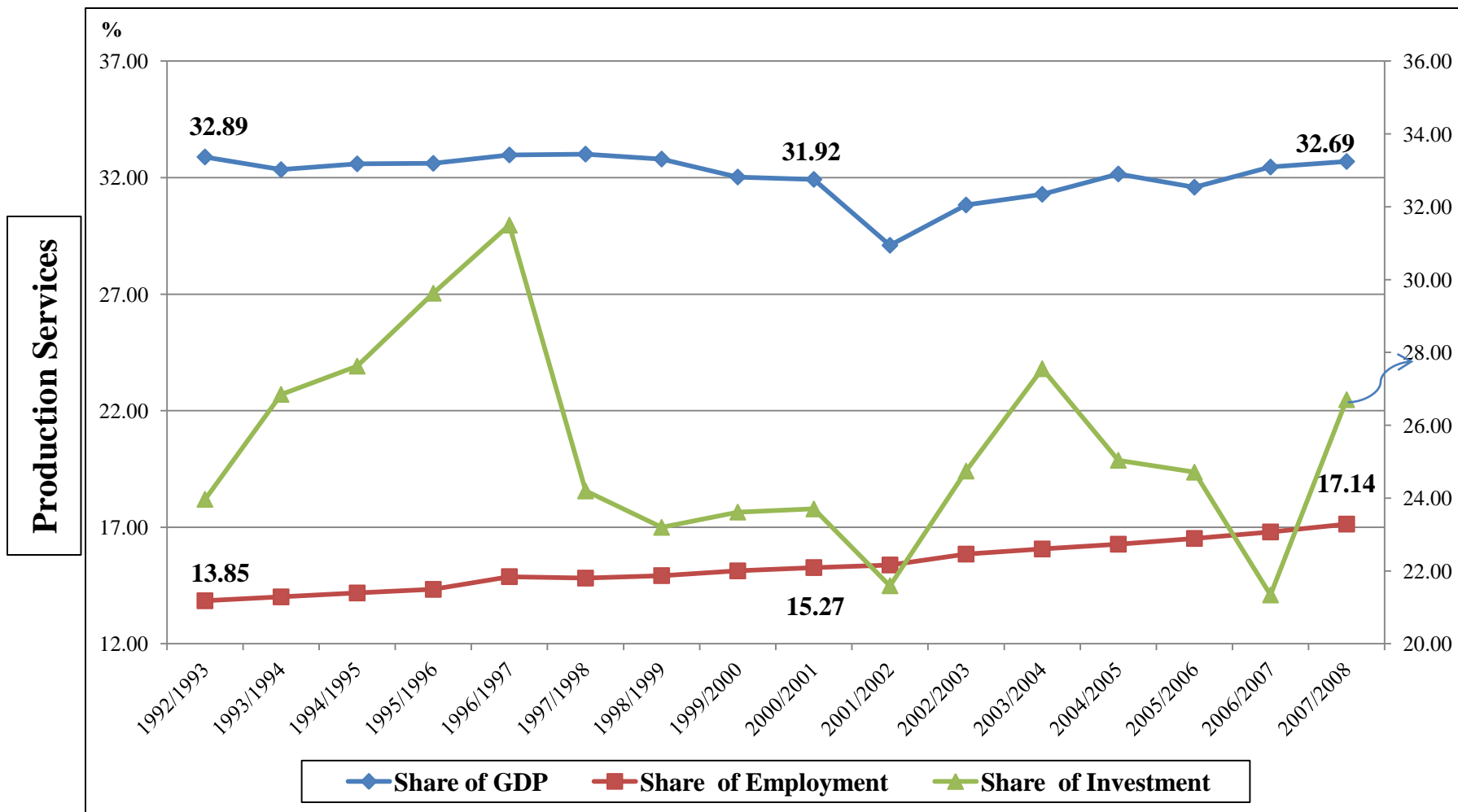
Private contributions to employment and output growth have declined overtime, despite higher private contribution to investment growth.



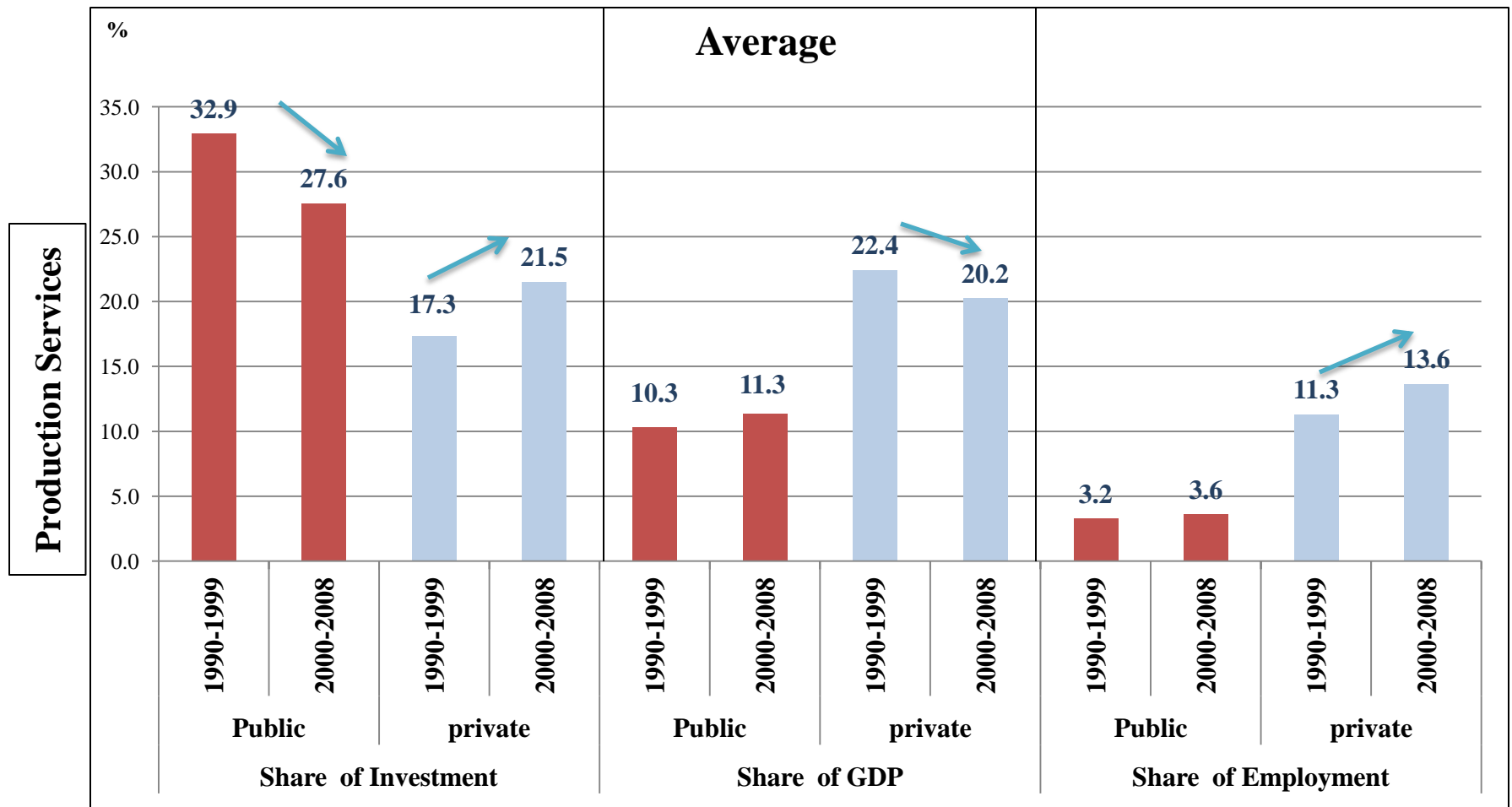
Production Services

Production services
Transport and storage
Communications
Suez Canal
Trade, Finance & Insurance
Tourism

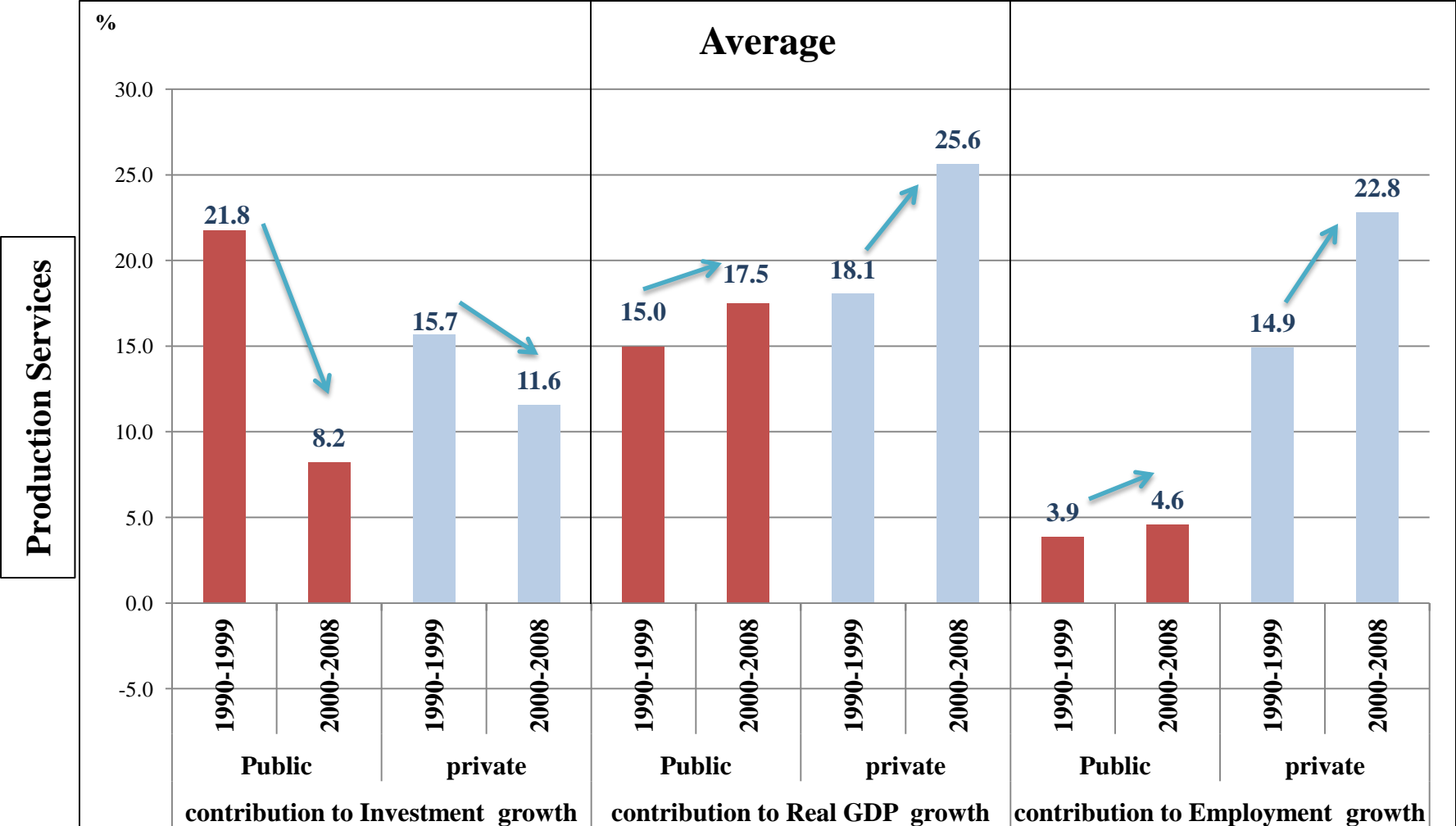
On average, the sector's share in output is nearly double its share in employment over time, reflecting high productivity.



Higher private share of investment has paid off to mobilize higher share of private employment over time.



Despite low contribution to investment growth overtime, contributions to GDP and employment growth have increased both in the public and private sectors.

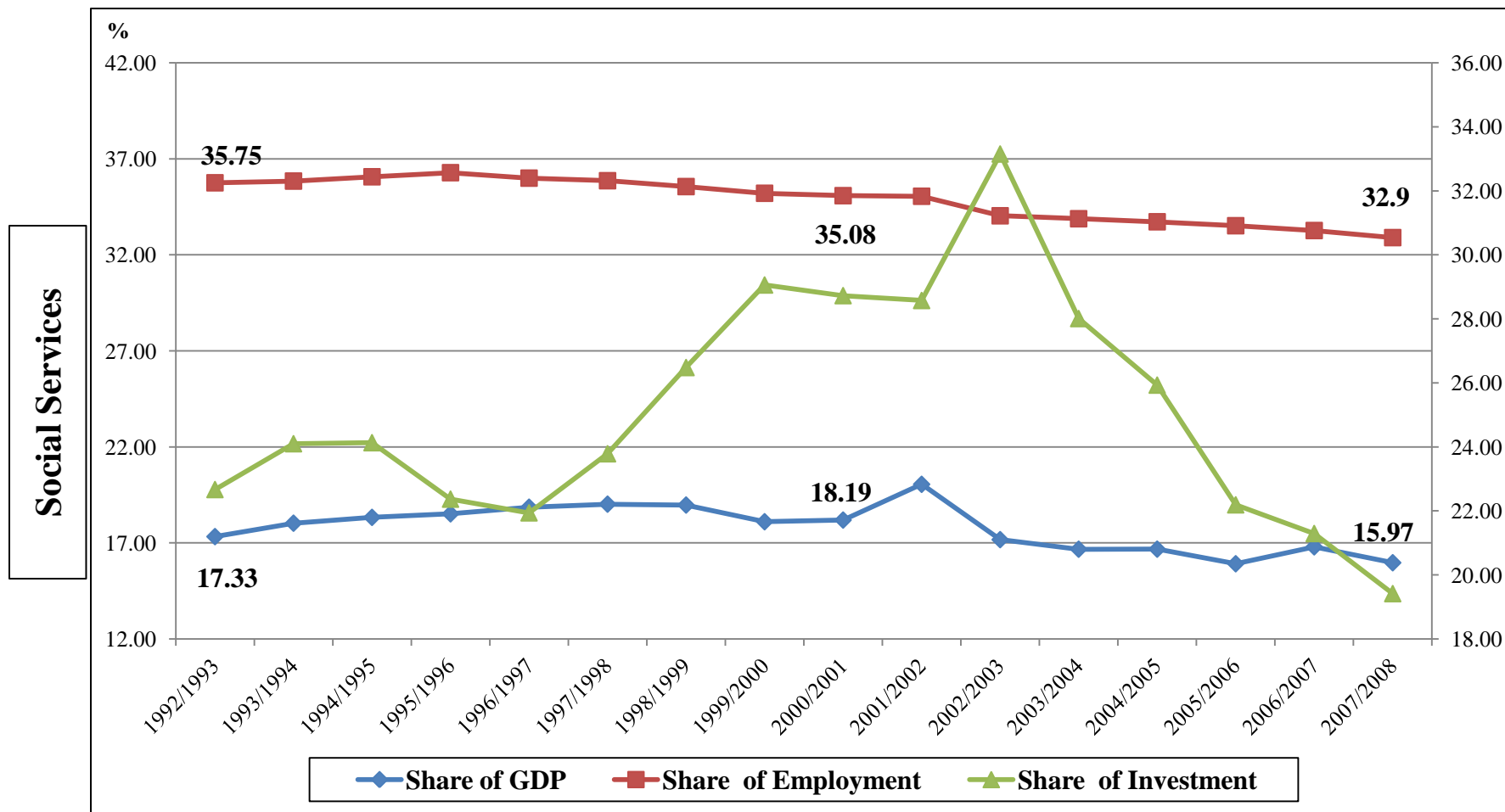


Source: Ministry of planning, Economic indicators

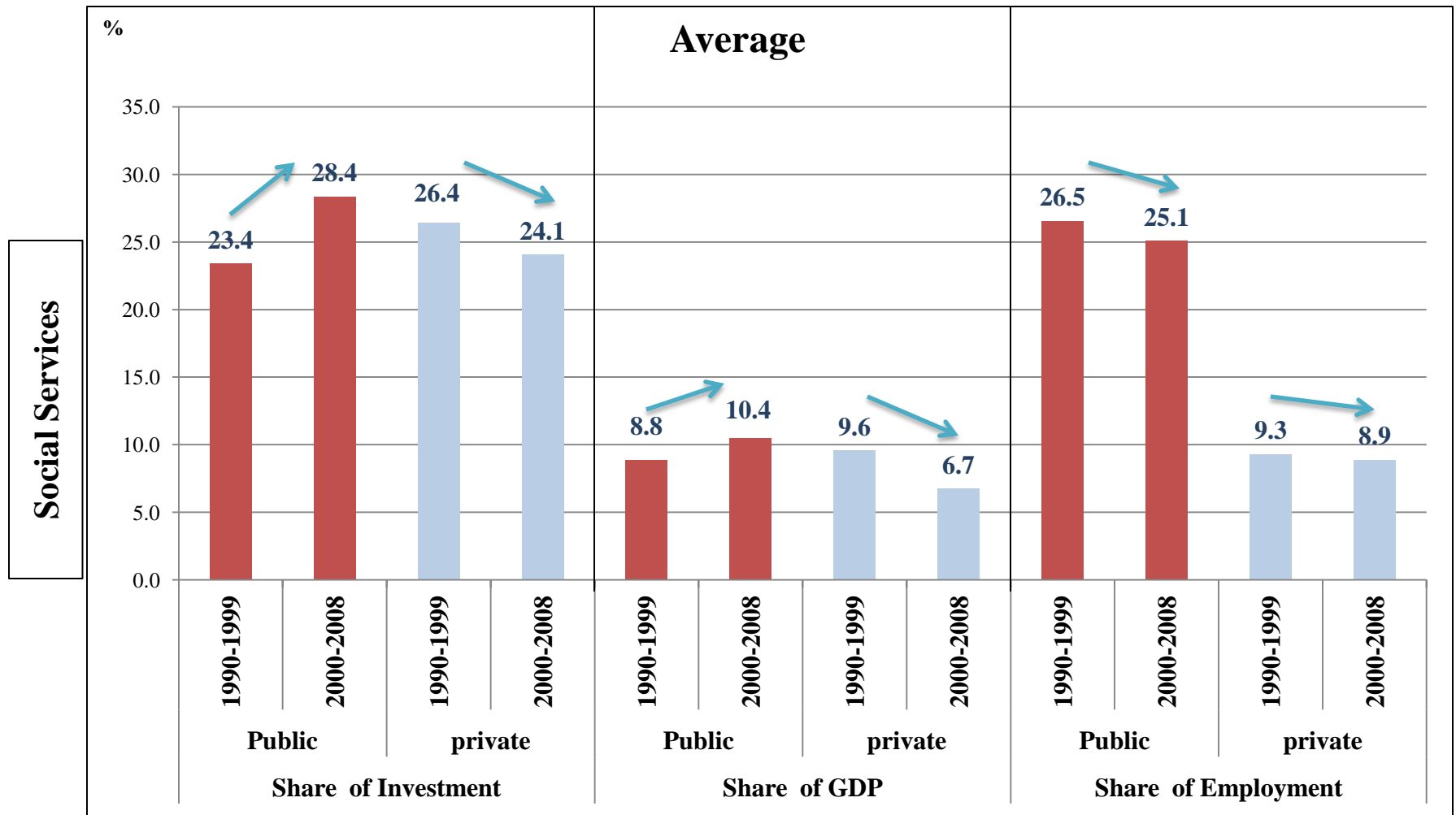
Social Services

The sector's share in employment is nearly double its output share overtime, reflecting low productivity and high job content of growth.

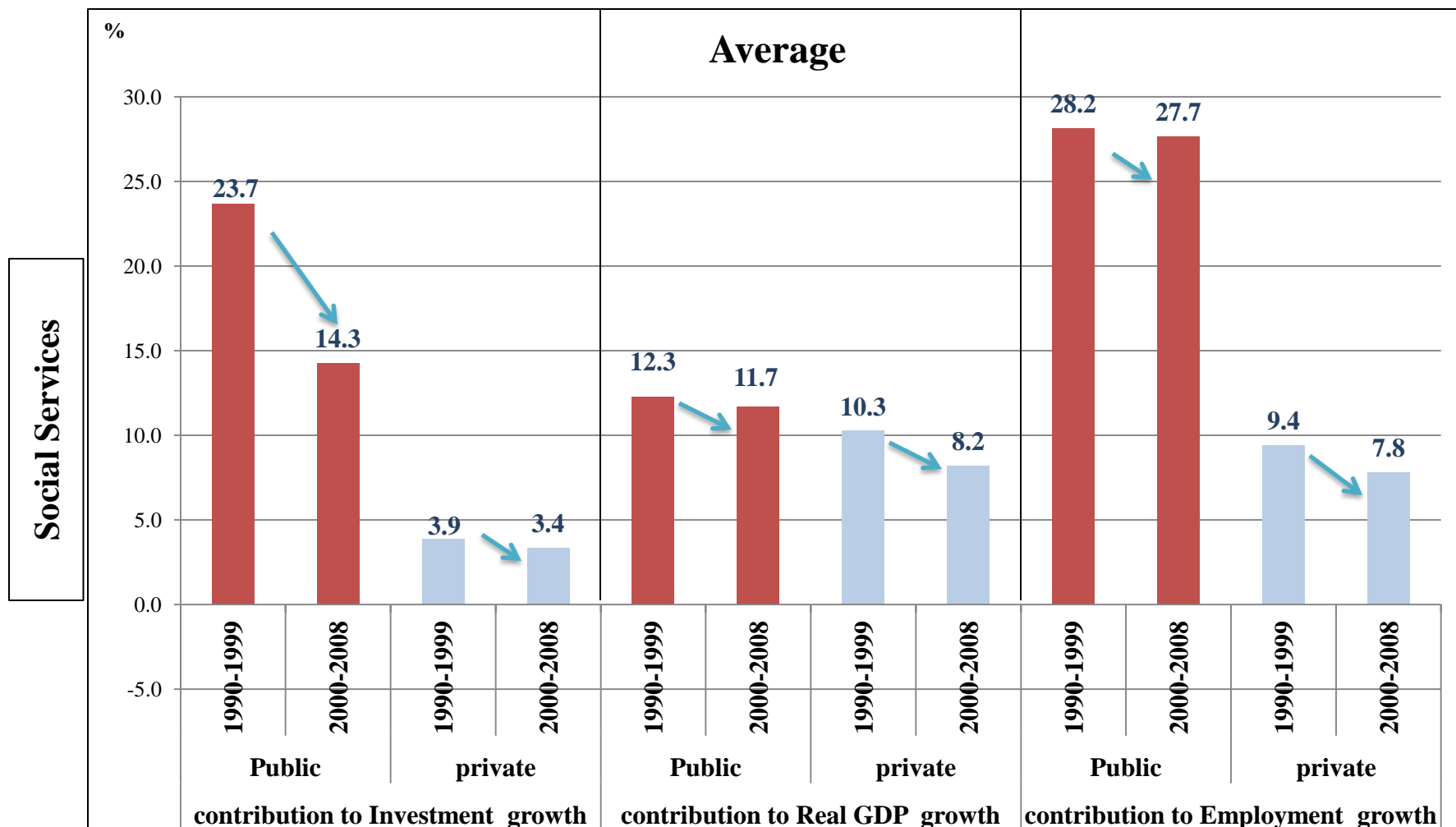
Social services
Housing and property
Public utilities
Educational and health services
Other services



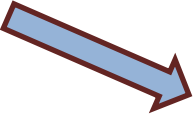
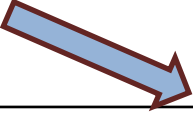
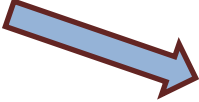
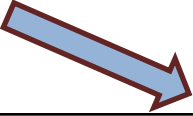
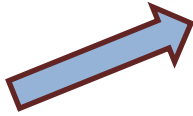
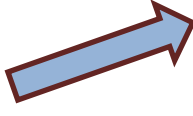
Public shares in investment and output have been dominant and increasing overtime, despite the declining share of employment.



Over time, the contributions of public and private sectors to investment, output and employment have declined, reflecting more dominant shares of growth in other sectors.



Summary of sectoral indicators and policy recommendations

Sector	Job content of growth	Productivity	Investment	Recommendations for investment polices
Agriculture *	low	Lowest		More investment + rebalance to move excess labor and boost productivity
Production services **	High	High		More investment to increase employment
Manufacturing **	High	Medium		More investment to boost productivity
Social services **	High	Medium		More investment to boost productivity
Construction ***	High	Low		Excess labor and low productivity warrant rebalancing of labor
Petroleum and electricity ***	Low	Highest		Scope to increase employment

* Sectors are targeted for more investment and reduction of excess labor.

** Sectors are targeted for more investment to increase employment and boost productivity.

*** Sectors are targeted for rebalancing to better align output and employment.

Part 2: Education Reform

Mismatch in the labor market

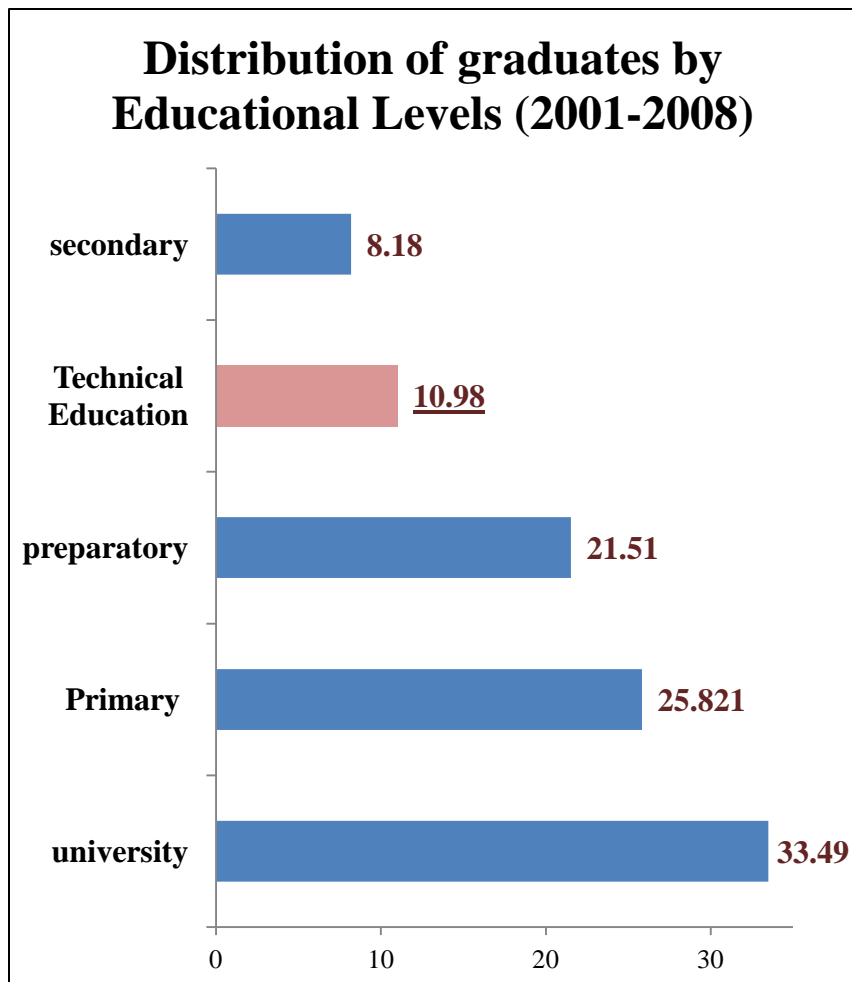
Supply-Demand Mismatch

Education-Occupation Mismatch

Professionals workers	white-collar workers	blue-collar workers
Legislators, senior officials and managers	Technicians and associate professionals	Plants and machine operators and assemblers
Professionals	Clerks	Elementary occupations
	Service worker and shop and market sales workers	
	Agriculture and fishery workers	
	Crafts and related trade workers	

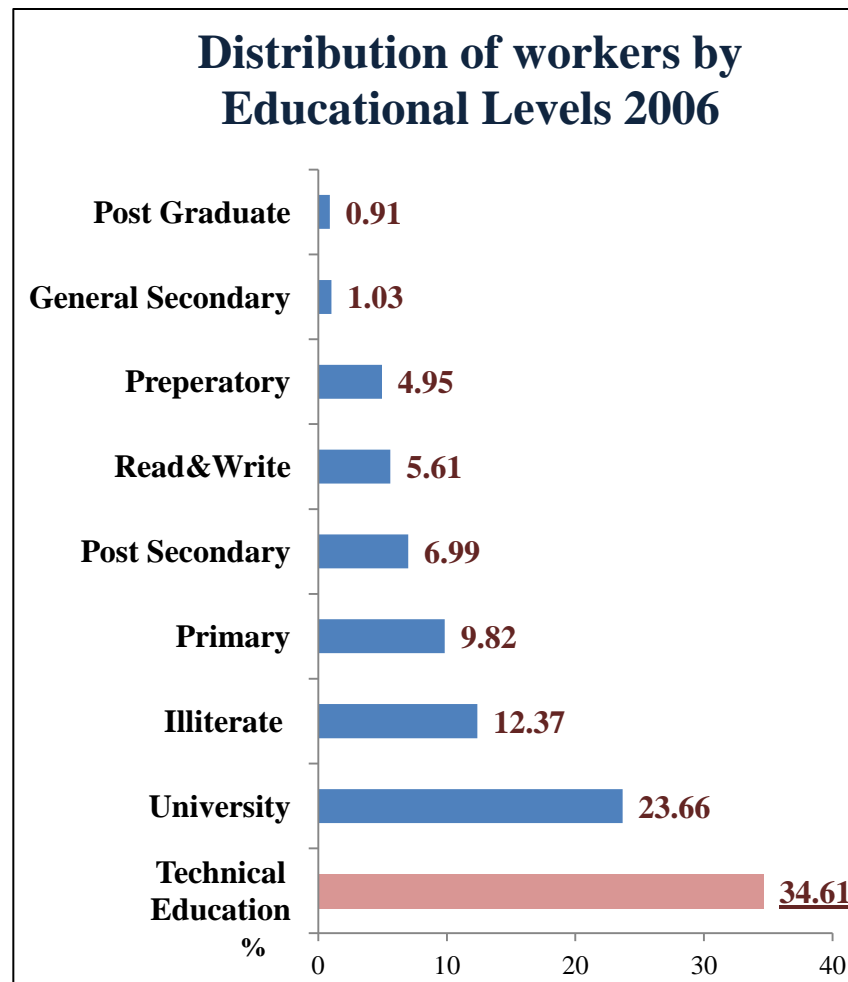
There is a gap between the education outcome (dominated by **university graduates**) and available jobs (dominated by **Technical education**), providing scope for more education reforms.

Stock of education outcome



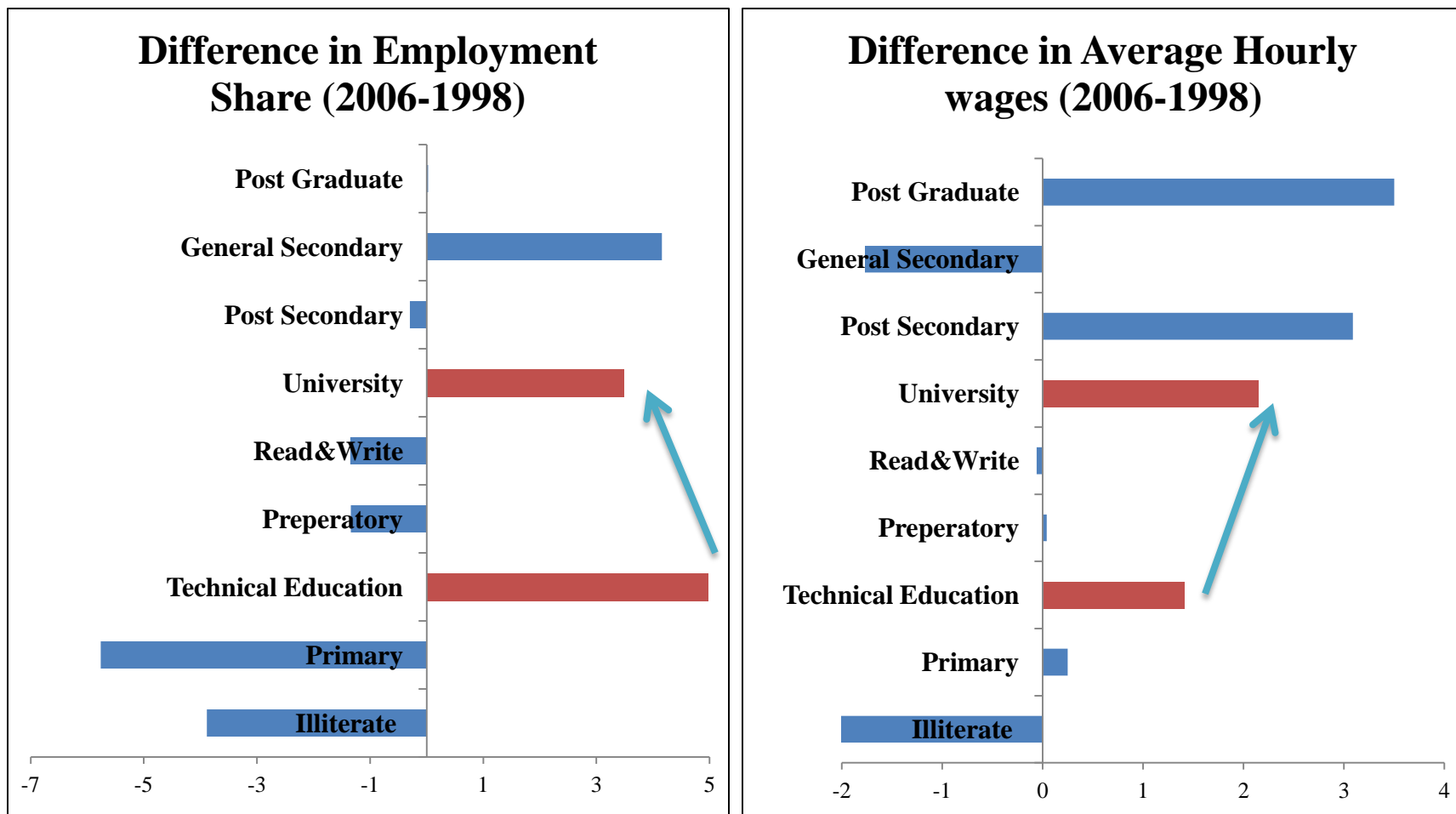
Source: statistical year book, CAPMAS.

Distribution of existing jobs by education



Source: Author's Estimates, ELMPS 2006.

The share of technical graduates in the labor market increased over time significantly higher than the share of university graduates. In contrast, the increase in the average hourly wage for technical graduates is significantly lower than university graduates, reflecting mismatch between returns and employment needs.

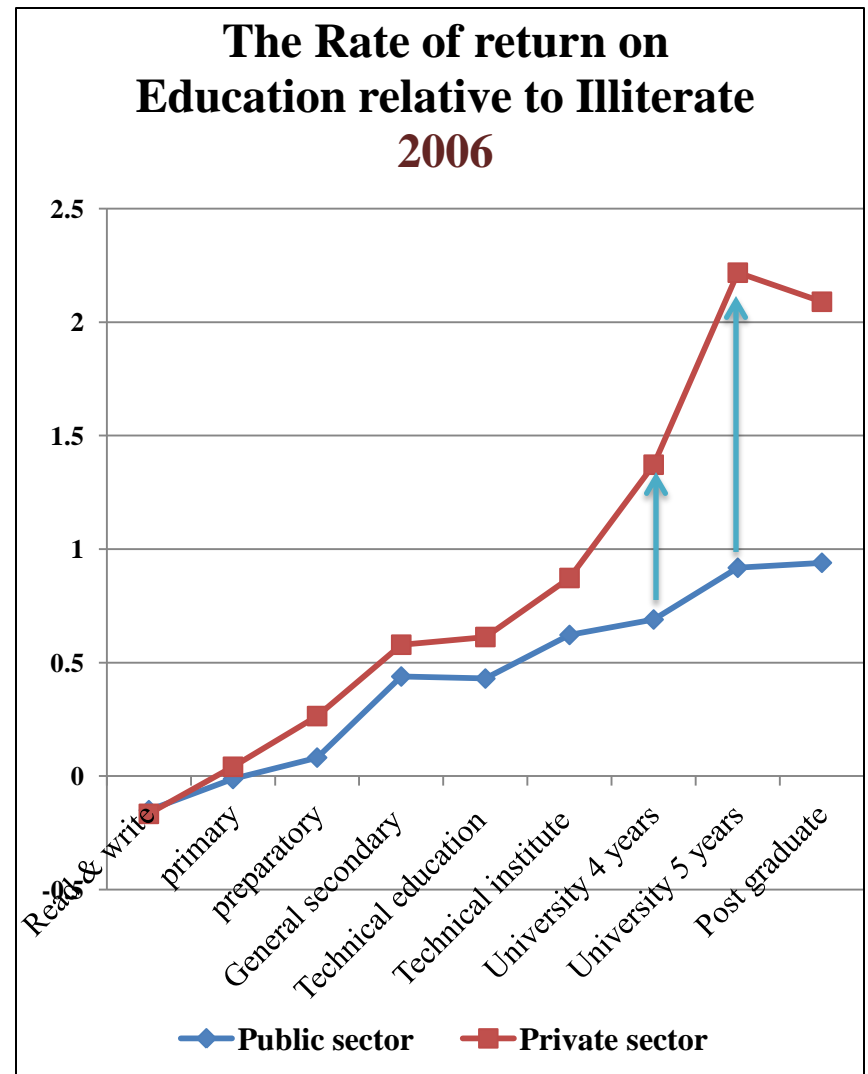
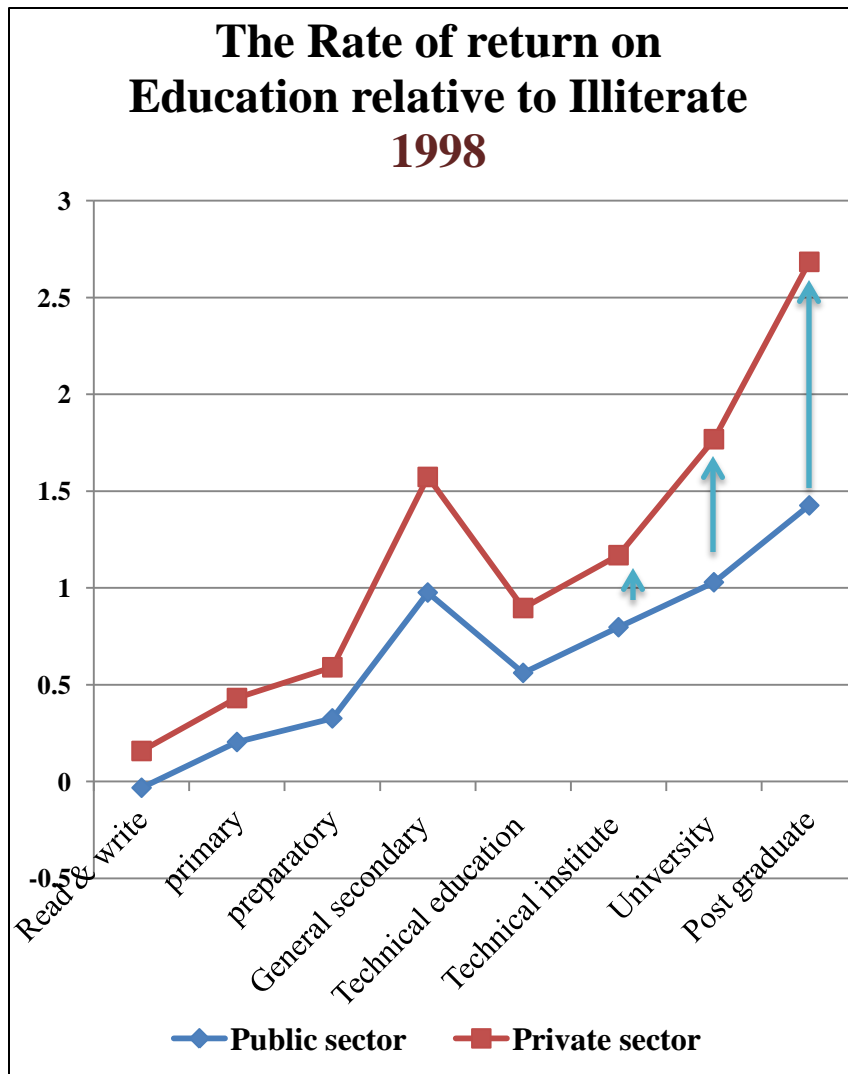


To reinforce the point, the return on education for technical graduates is lower than for university graduates, especially in the private sector, more recently.

Mincer equation	ln (hourly wage)			
	Public 1998	Public 2006	Private 1998	Private 2006
Experience	0.0633***	0.0509***	0.0664***	0.0578***
Experience ²	-0.000505***	-0.0645***	-0.000685***	-0.0916***
Illiterate as reference				
Read & write	-0.0324	-0.150*	0.190***	-0.0162
primary	0.204***	-0.0125	0.227***	0.0537
preparatory	0.326***	0.0817	0.264***	0.183***
General secondary	0.976***	0.439***	0.597**	0.14
Technical education	0.561***	0.430***	0.335***	0.183***
Technical institute	0.797***	0.622***	0.372***	0.251***
University 4 years	1.029***	0.690***	0.739***	0.682***
University 5 years		0.918***		1.300***
Post graduate	1.426***	0.945***	1.258**	1.151***
Constant	-1.749***	-0.1	-1.331***	-0.0614
Observations	2,001	3,535	1,306	3,382
R-squared	0.401	0.148	0.188	0.168

*** p<0.01, ** p<0.05, * p<0.1

The rate of returns on additional schooling in the private sector is higher than in the public sector, and the gap is wider with higher education, more recently.



Main points

- Evident mismatch between the number of graduates and available jobs, too many university graduates and fewer jobs, compared to the need for technical education.
- Depressed wages for technical graduates reduce incentives to increase supply in a labor market that increases premium for higher education, despite fewer jobs.
- Hence, there is a need to invest in technical training to increase returns and address imbalances between demand and supply in the labor market.

Education-occupation Mismatch : workers are hired in occupations which are unsuitable for their education.

- The labor market is divided to occupations, across the economy.
- Across each occupation, workers with educational attainment greater than the occupational mode are labeled “**overeducated**”. Likewise, workers with educational attainment below the occupational mode deviation are classified as “**undereducated**”. Workers whose educational attainment is equal to the occupational mode are considered “**adequately matched**”.

Less than mode
“undereducated”

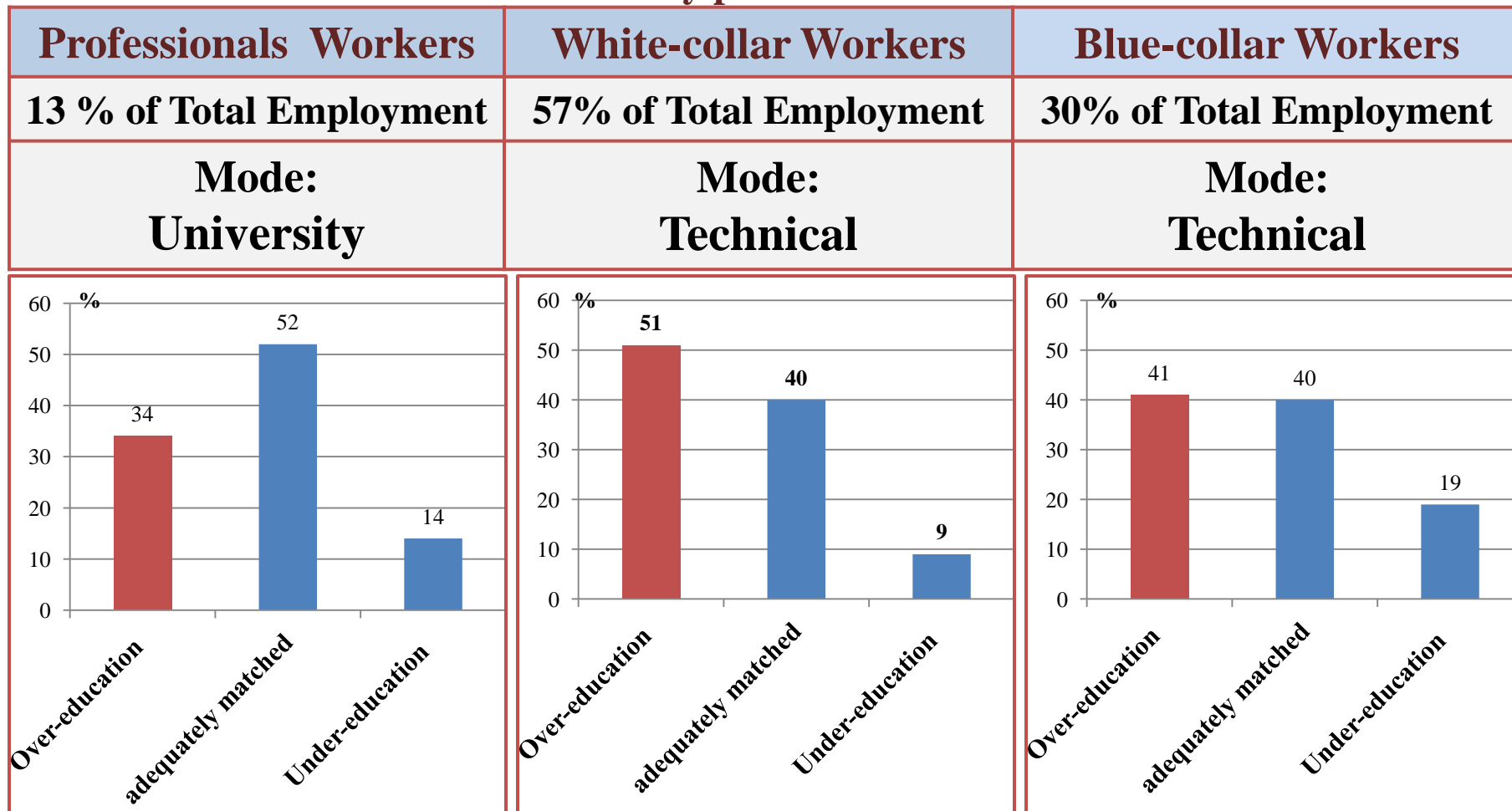
= mode
“adequately matched”

Greater than mode
“overeducated”

- The empirical analysis is based on the recent Egypt Labor Market Panel Survey 2006 (ELMPS 2006). The ELMPS 2006 sample consists of a total of 8,349 households.

Related to the imbalances between supply and demand in the labor market, employers may hire overeducated workers to perform jobs that require less education, reflecting higher supply of educated applicants and fewer compatible jobs for their education, particularly among white-collar workers.

Shares of education by professional match/mismatch



The return of additional schooling for overeducated workers is higher, reflecting that higher wages are linked to over-education rather than job requirements, further reinforcing imbalances between supply and demand in the labor market, particularly among professionals and white collars.

	ln (hourly wage)				
	Overall Workers	Professionals Workers	White-collar Workers	Blue-collar Workers	
	Adequately Matched as Reference				
Over-education (=1 if overeducated)	0.158***	0.423***	0.150***	-0.127**	A positive coefficient means that overeducated workers earn more than workers with the required level of education.
Under-education (=1 if undereducated)	- 0.130***	- 0.00966	- 0.0963***	0.209***	A negative coefficient means that undereducated workers earn less than workers with the required level of education.
Constant	0.874***	1.169***	0.735***	0.571***	
Observations	6,926	1,910	4,132	883	
R-squared	0.013	0.031	0.009	0.038	

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: Author's Estimates, ELMPS 2006.

Summary of Mismatch in the labor market

There is a gap between the education outcome and labor demand

There is structural mismatch between job qualifications and education.

wages reward education, not necessarily qualifications for the job.

- **On the supply side**, it is possible to limit the over supply of college graduates by providing selective state support for free college education.

- **On the demand side**, it is possible to mobilize the demand by offering tax credits, and higher investment in industries that require college graduates.

- **Employers** should influence the design of university curriculum and technical education.

- **Job availability** should be dependent on the job requirements and skills evaluation, not necessarily education.

- **Addressing mismatch** between supply and demand in the labor market should provide better match between education and the job requirements.

- **Accordingly**, wages will be compatible with job requirements and education will be better matched with the needs of employers for available jobs.

Part 3: SMEs Development

SMEs in Egypt: Opportunities and challenges

CAPMAS define SMEs as any enterprises that have between 5 to 99 employees, corresponding to boarder definition indentified by the World Bank for SMEs.

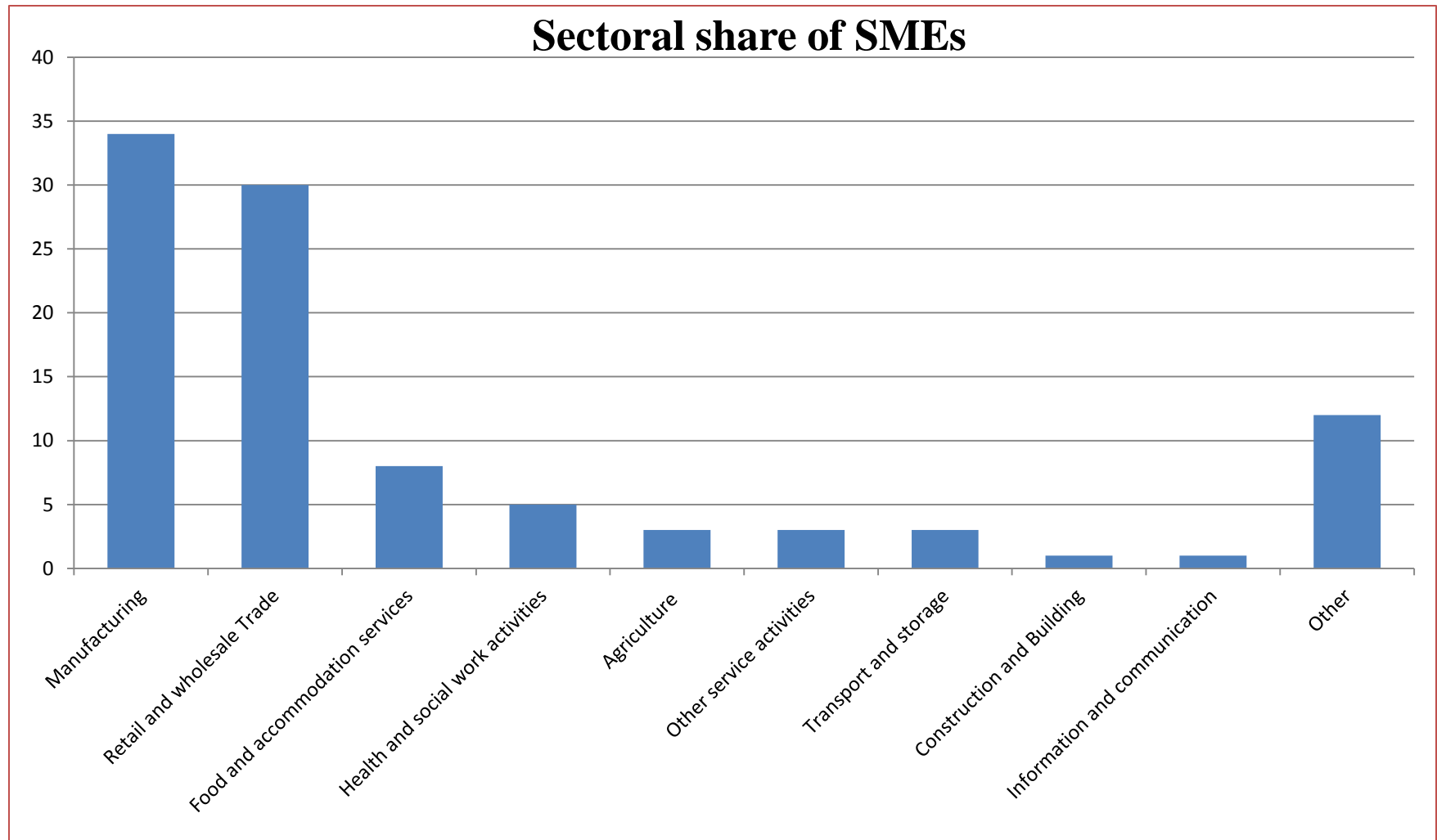
Number of employees	CAPMAS	World Bank
Micro	1-4	1-4
Small	5-49	5-19
Medium	50-99	20-99
Large	100+	100+

SMEs represent a total of 8 percent of all enterprises with 25 percent of total employment, reflecting a large scope for SMEs to absorb more employment, along with growth in micro enterprises.

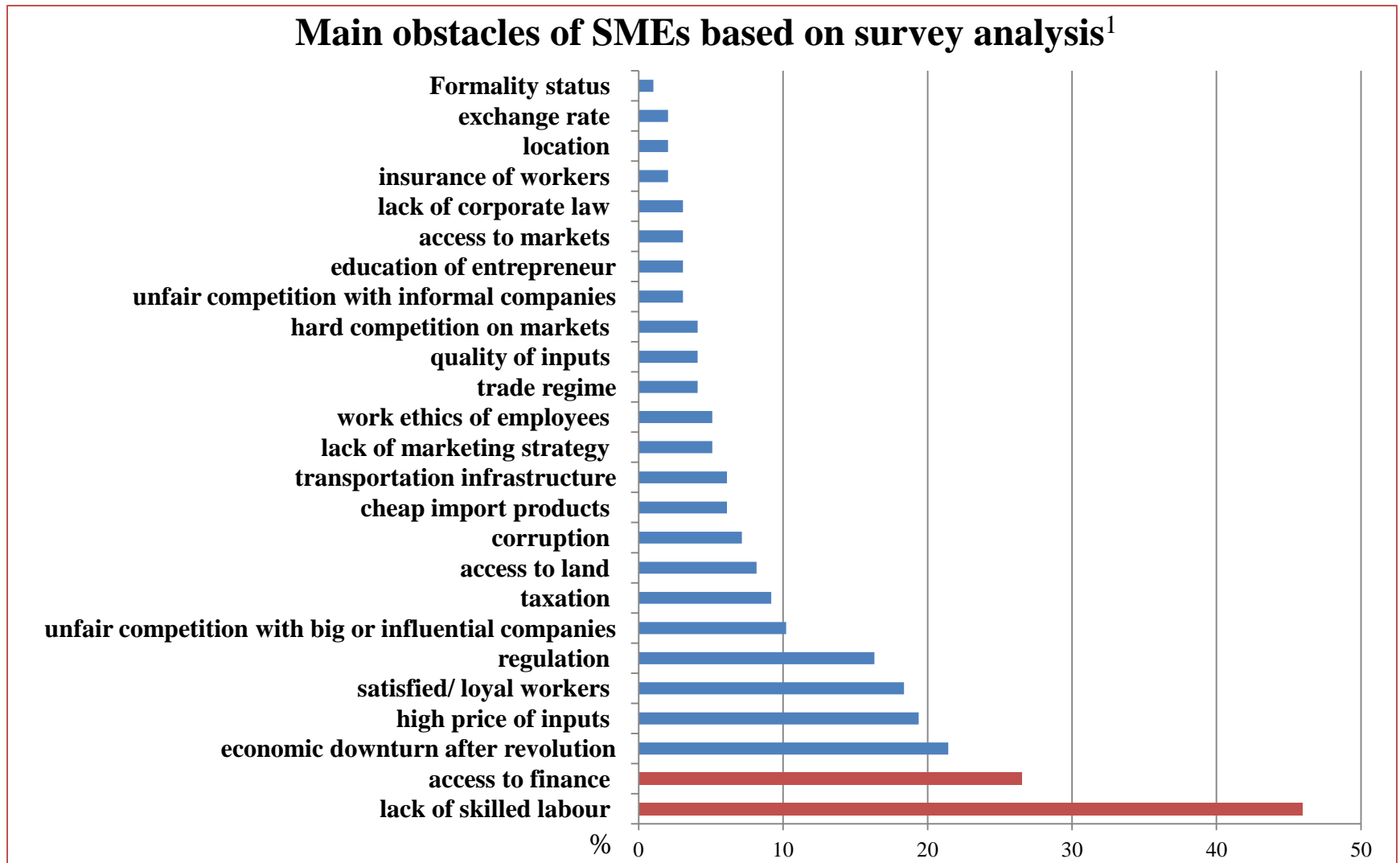
Size	Number of employees	Distribution of enterprises in Egypt	Share of total employment
Micro	1 - 4	91.91 %	58 %
Small	5 – 49	7.82 %	22 %
Medium	50 - 99	0.13 %	3 %
Large	100+	0.14 %	17 %

Enterprises are defined using the staff headcount ceilings as per CAPMAS

More than 50 percent of SMEs in Egypt work in manufacturing, retail and wholesale trade.

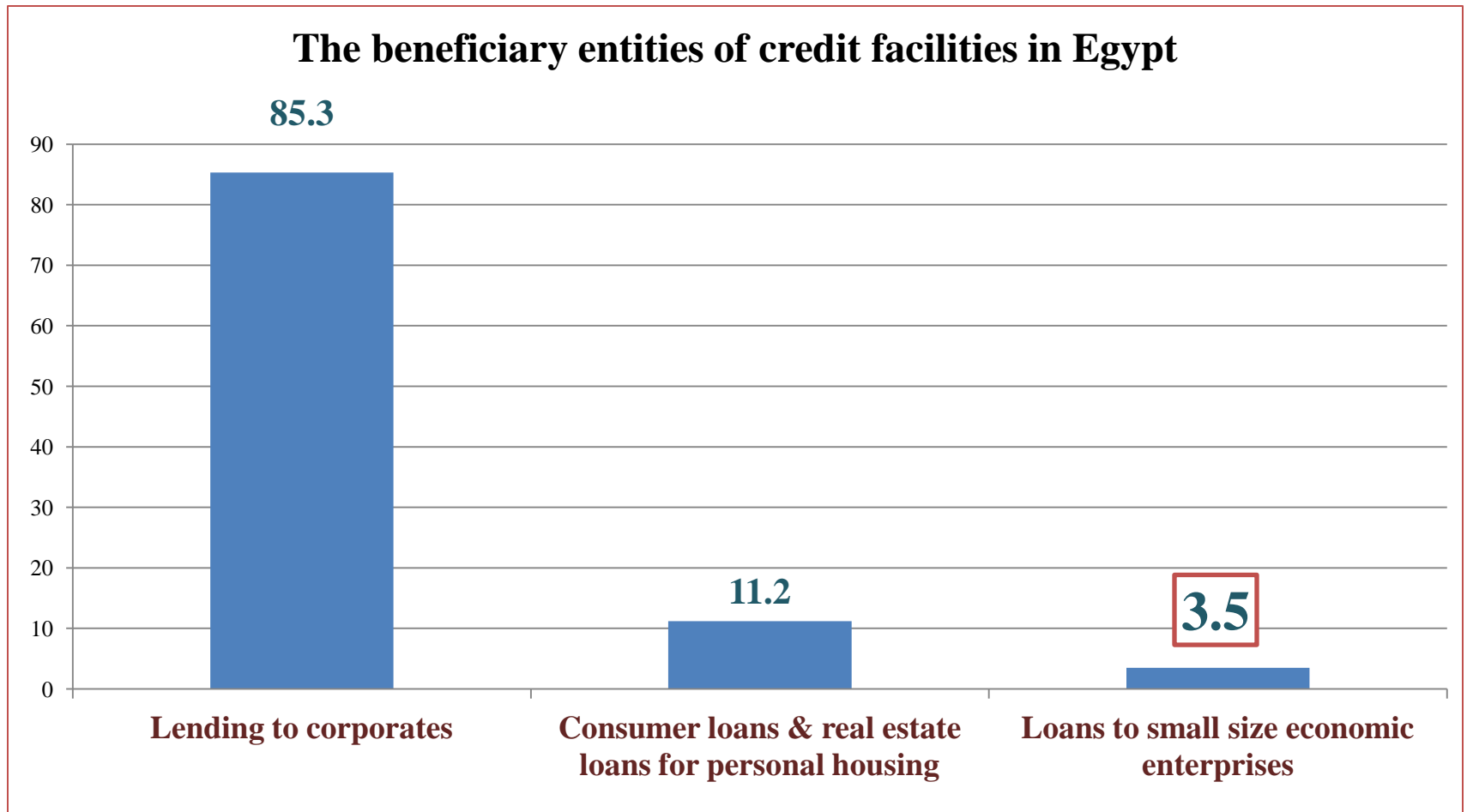


The lack of skilled labour and access to finance represent the major obstacles for SMEs in Egypt.



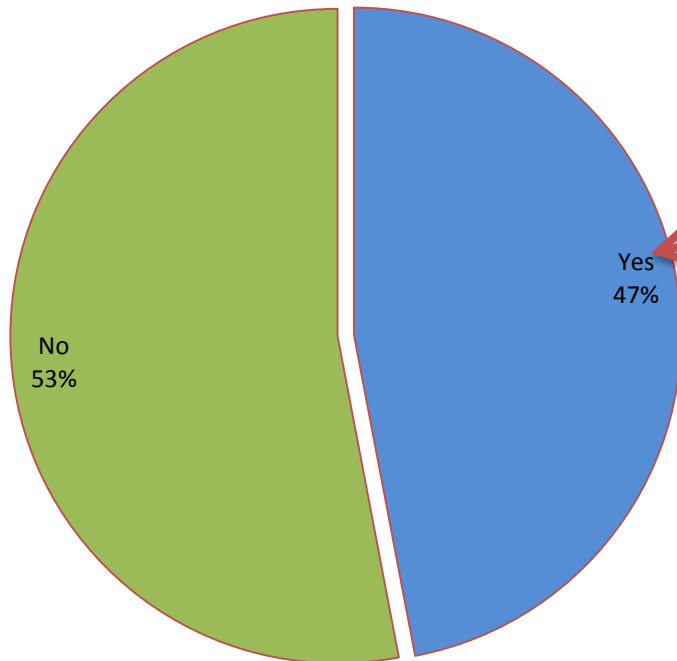
¹Survey among 102 SMEs in five governorates of Egypt: Cairo, Giza, Gharbiyya, Qalyubiyya and Sharqiyya. This survey conducted in 2012
 Source: Loewe, et.al , (2012), *Which factors determine the upgrading of small and medium-sized enterprises (SMEs)? The case of Egypt.* 47

Consistently, SMEs receive a tiny share of total credit in the banking sector, despite significant shares in activity and a large potential for employment.



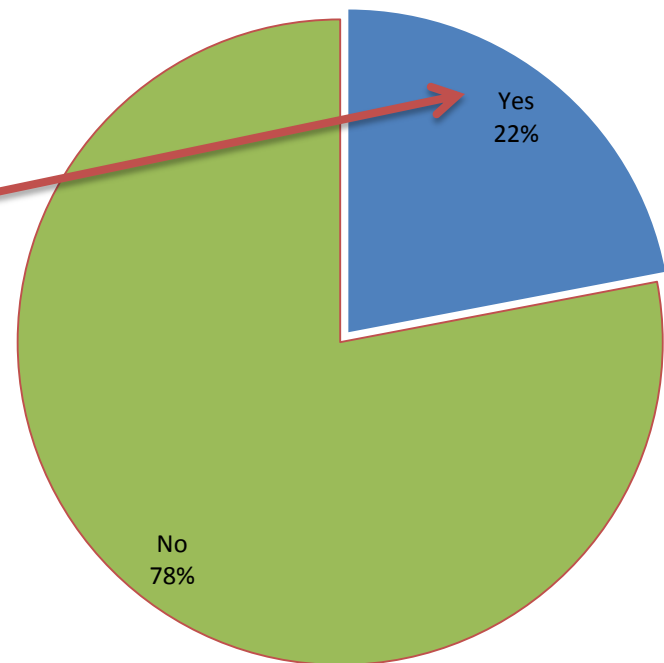
There is a sharp contrast between the number of SMEs who attempt access to banking credit and those who successfully secure required funding.

Relative distribution of SMEs according to dealing¹ with banks



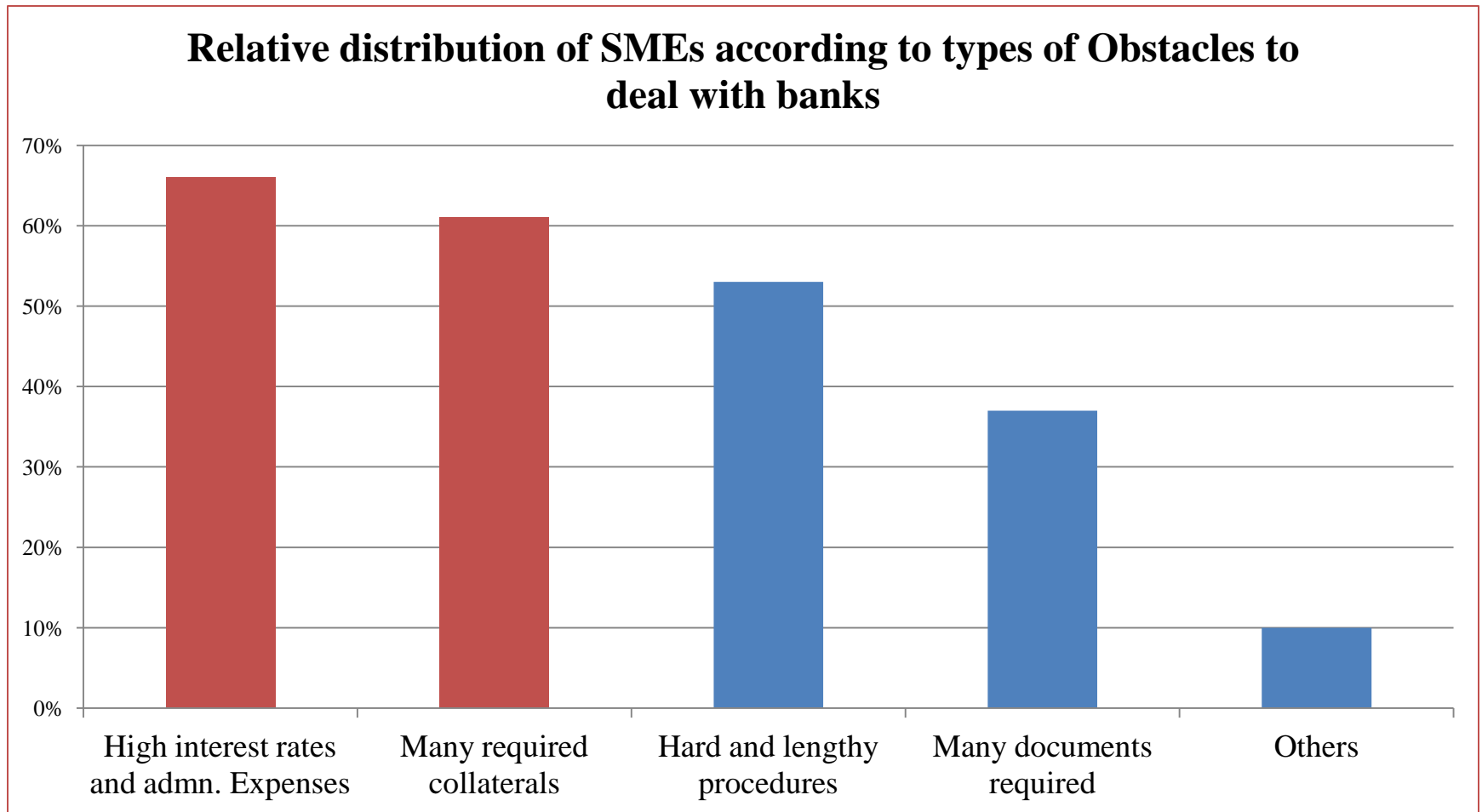
¹SMEs that attempt =access to banking credit.

Relative distribution of SMEs according to having facilities² from banks



²SMEs that end up successfully securing required funding.

..... This can be attributed to high interest rate, administrative expenses and many required collaterals that SMEs lack.



Generally, SMEs tend to face many obstacles.

Economic obstacles

- Uncertainty regarding government policies.
- Lack of information about opportunities in each activity.
- Fierce competition from large enterprises.

Institutional obstacles

- Difficulty to access credit.
- Shortage of trained workers and tough labor regulations.
- Obstacles to market product.
- Lack of adequate protection for innovation and intellectual property rights.

Administrative obstacles

- Difficulty and high cost to obtain new licenses.
- Difficulty to exit from the market due to long bureaucratic procedures.

Conclusion and Policy Implications

Sectoral policy



Agriculture:

- * More investment to boost productivity and lift the standard of living for millions of Egyptians in rural Egypt.



Manufacturing, production service and social services:

- * More investment to increase the job content of growth and boost productivity.



Construction:

- * Rebalancing excess labor to other sectors towards boosting productivity.



Petroleum and electricity:

- * Scope to align large investment with more employment.

Conclusion and Policy Implications

Education Reform



Addressing mismatch between supply and demand:

- * Limiting the over supply of graduates by providing selective state support for free college education.
- * Offering tax credits and higher investment in industries that increase demand for college graduates.



Better match between education and the job requirements:

- * Invest in technical training to increase returns and address imbalances between demand and supply in the labor market.
- * Draw on employers to influence the design of university curriculum and technical education.
- * Match job offers with task requirements and skill evaluation, not necessarily education.

Conclusion and Policy Implications

SMEs Development



Addressing economic obstacles:

- * More information about opportunities.
- * Better laws to reinforce competition.



Addressing institutional obstacles:

- * Facilitate access to credit.
- * Mobilize options for training, technical assistance and capacity building.
- * Offer clustered umbrella of legal protection.
- * Reinforce better linkages with market opportunities.



Addressing administrative obstacles:

- * Facilitate start up and exit strategies.
- * Facilitate procedures for registration and execution plans.



Inclusive growth and trickling wealth in a growing economy will be maximized via equitable opportunities to enjoy returns on education and participate in productive activity by many participants who contribute and share the fruits of a growing economy.