

Sources of Growth, Factor Returns and Sustained Growth: A Comparative Study of Primary, Secondary and Tertiary Sectors in Nepal

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Background

- Except during the first half of 1990s, growth performance of the Nepalese economy far from satisfactory:
 - Average growth rate hardly 4 percent during the period 1975 to 2010 and even lower during the post liberalization period.
 - Real state, finance and some social services sectors performed relatively better in the liberalized regime.
- Export performance worsened as its share in GDP reduced to 9.8 percent in 2010 from 24.2 percent in 1995.

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- Gross fixed investment below 20 percent of GDP after 1995.
- Domestic saving to GDP ratio 7.4 percent in 2010 from 15.2 percent in 2000 and remittances and other inflows meeting widened external or internal resource gap.
- Productive employment a major problem as around 94 percent of work force in informal sector.
- A large gap between income and consumption level by decile groups with questions on the robustness or precision of consumption based poverty estimates which show steady decline in poverty and also inequality recently.
- For instance up to third decile group's cons higher than income in 1996 where as in 2011 up to 6th decile group. Consumption poverty in 1996 41.76 %, in 2004 30.85 % and in 2011 25.16 % . Likewise consumption based inequality 0.322, 0. 414 and 0.328 respectively.

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- All these raise some basic questions:
 - Why despite more liberalized and open up policy regime regarded to be key for sustainable higher growth could not be ascertained in Nepal?
 - Are policy and institutional lapses major constraining factors for total factor productivity growth again assumed to be the major channel of higher growth under the liberalized/ free trade regime?
 - Is factor return and distributional dimensions equally important ingredient of sustained high growth in countries like Nepal?

Scope of the Study

Accordingly, the scope of the study was:

- Review of major economic policies and their performance.
- Identify major sources of economic growth in primary, secondary and tertiary sectors and derive determinants of total factor productivity in these sectors before and after liberalization and more importantly evaluate the effect of economic policies on total factor productivity.
- Analyze effect of intra and inter sectoral input reallocation on sectoral productivity growth .
- Analyze factor returns in terms of returns to labor and capital and assess distributional gains or losses taking sustained growth into consideration.
- Carry out diagnostic survey among key informants to verify quantitative analysis based findings and get policy feed backs, and
- Draw some policy inferences.

Methodology

- Both qualitative and quantitative methodological approaches followed covering the period 1975 to 2010 with further breakdown between pre-liberalization (1975-1990) and post liberalization (1990-2010) period. More specifically:
 - A qualitative analysis of economic policies.
 - A comparative analysis of major macro and sectoral indicators.
 - Rigorous quantitative analysis using Cobb-Douglas constant returns to scale production function to delineate sources of growth and factors influencing them.
 - Use of productivity decomposition method as suggested by Taylor to examine the probable effect of intra-inter sectoral reallocation of traditional inputs.
- A perception survey to cross check the findings and get feedbacks from concerned stakeholders.

An Overview of Economic Policies

Economic policy review showed that:

- **Fiscal Policy**
 - Top priority on fiscal balance and economic stabilization and privatization initially.
 - Emphasis and various measures on rationalization of tax system under which sharp reduction in dispersion rates, introduction of VAT (1995), new income tax law (2001) and administrative and institutional reforms .
 - Public expenditure reforms directed to prioritize resource allocations and improve public exp management.
 - Some tax concessions or rebates to both domestic and foreign enterprises.
- **Monetary Policy**
 - Policy mainly driven by price control and BOP stabilization.
 - Financial sector liberalization focus through deregulation in interest rate, flexible exchange rate with hard currencies, abolition of priority sector lending etc.
 - Permission of up to three fourth foreign equity participation in banking and free entry to whole sale banking.
 - Thrust on prudential regulation and financial stability , priority sector and deprived sector lending and financial inclusiveness recently.

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- **Trade Policy**

- Amidst drive toward trade liberalization as part of WTO membership obligations, bilateral and regional agreements also govern the trade relations.
- Trade highly liberalized as tariff one of the lowest in South Asia (average tariff rate below 6.2 percent).
- No export tax except service charge, income tax on exports exempted, no export related policies distorting export trade, free movements of imports except some banned items and no quota restrictions on imports.
- Further liberalization of both goods and services trade going on.

- **Investment Policy**

- Despite no separate policy as such various related policies aimed at creating enabling environment to both domestic and foreign investors. Among them most noticeable :

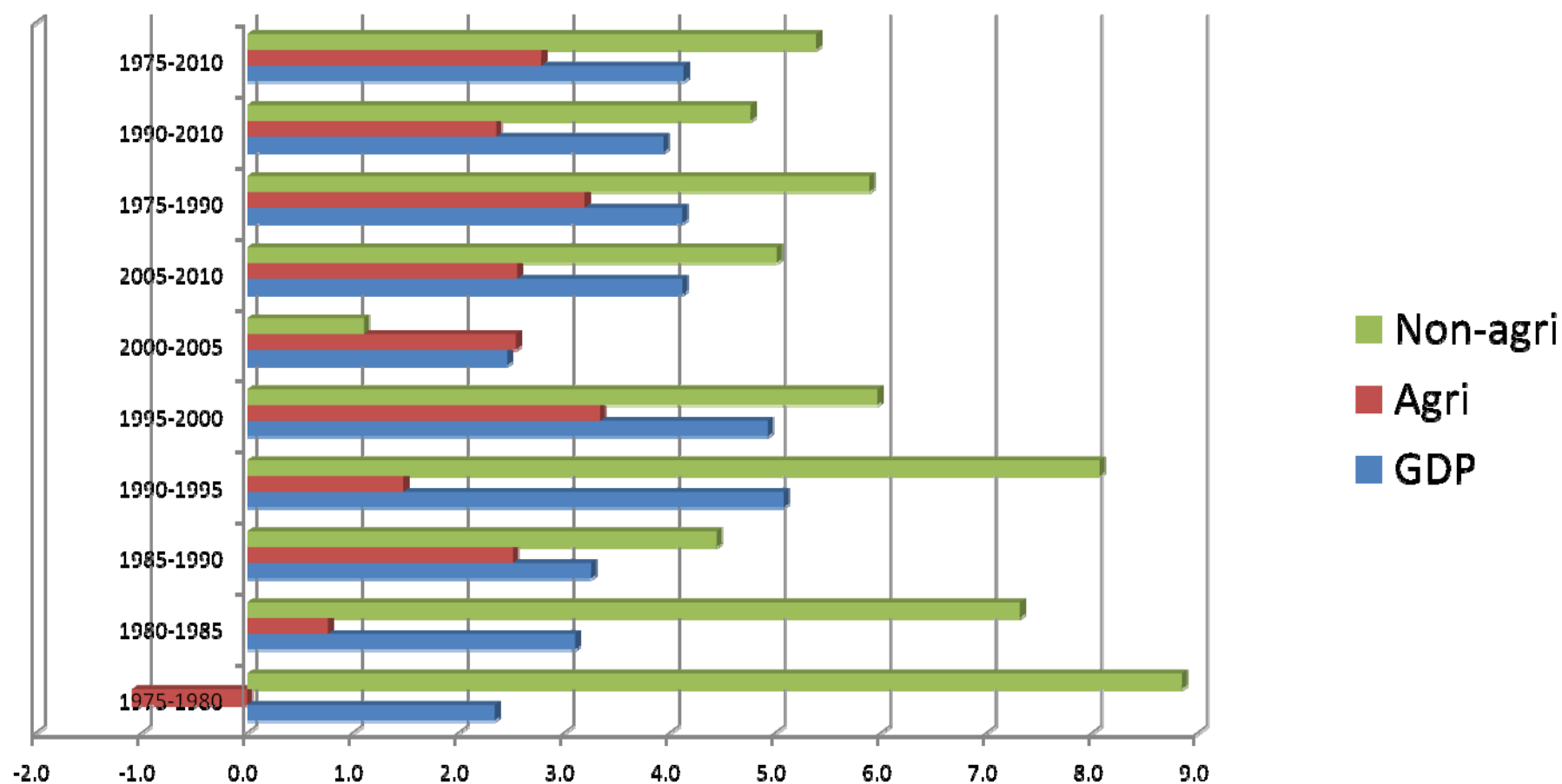
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- Industrial Policy 2010 (which replaces the policy of 1992), Industrial Enterprises Act 1992 (First amendment 1997), Foreign Investment and One-window Policy 1992, and The Foreign Investment and Technology Transfer Act 1992.
- For investment attraction, high level investment board constituted last year added by BIPPA with many countries including India last year .
- **Employment Policy**
 - A Labor and Employment Policy in 2005
 - various subsequent policy initiatives through periodic plans and government budgets.
 - A new policy on foreign employment in 2011.
 - Labor rules including wage policies governed by the Labor Act 1992 and the Trade Union Act 1993 and often criticized to be more rigid and less investment friendly.
 - Ongoing initiatives to expand social security to the informal workers.

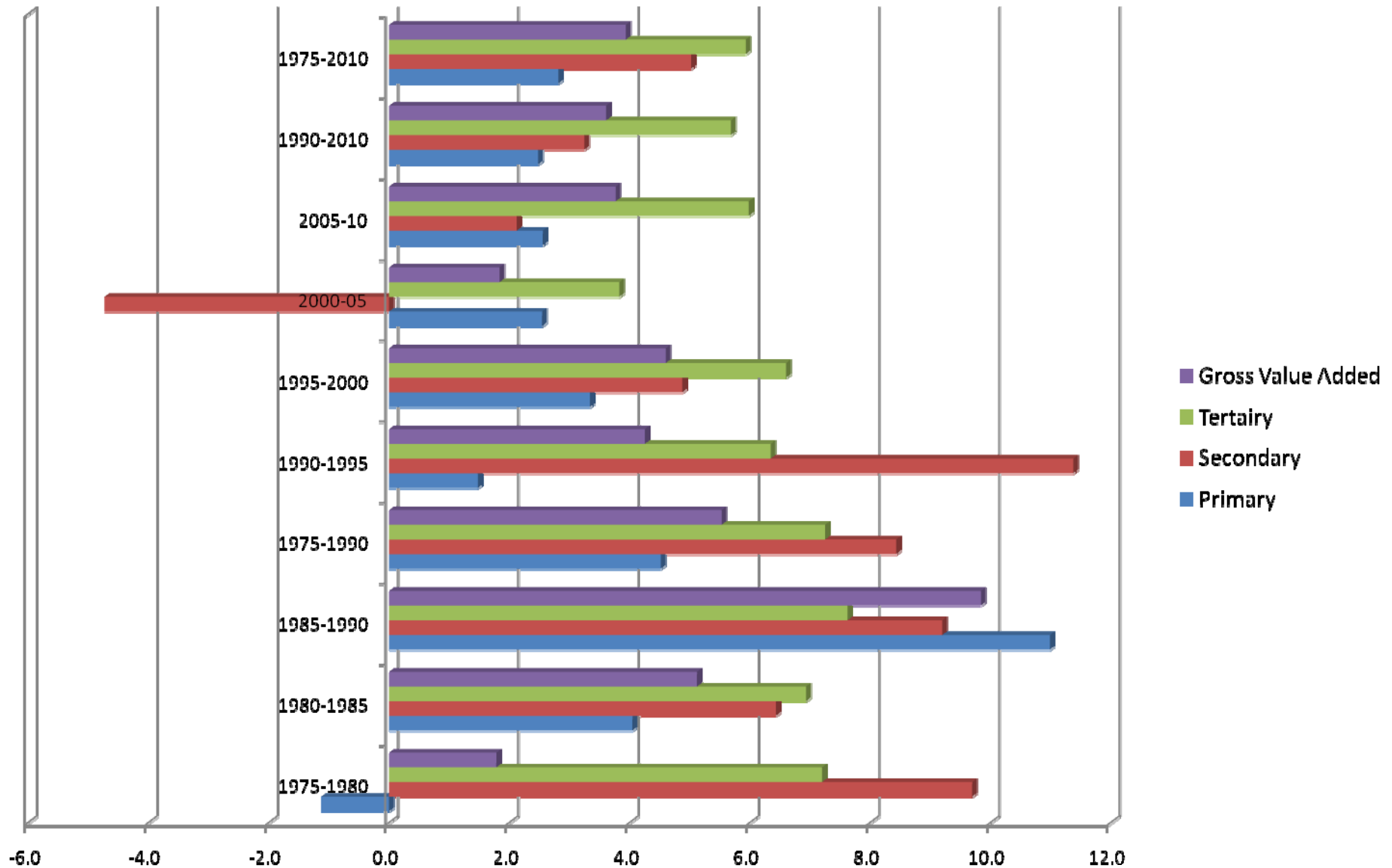
Growth Performance and key Sector Trends

- Average growth rate
- Sectoral growth rate
- Export and import share in GDP
- Balance of trade and current a/c
- Access to institutional credit
- Bank's sectoral lending pattern
- Domestic and national saving, investment and resource gap
- Share of revenue, foreign aid, current and capital exp etc
- Share of social and economic services in total govt. exp
- Sectoral gross fixed investment pattern
- Employment status
- HDI

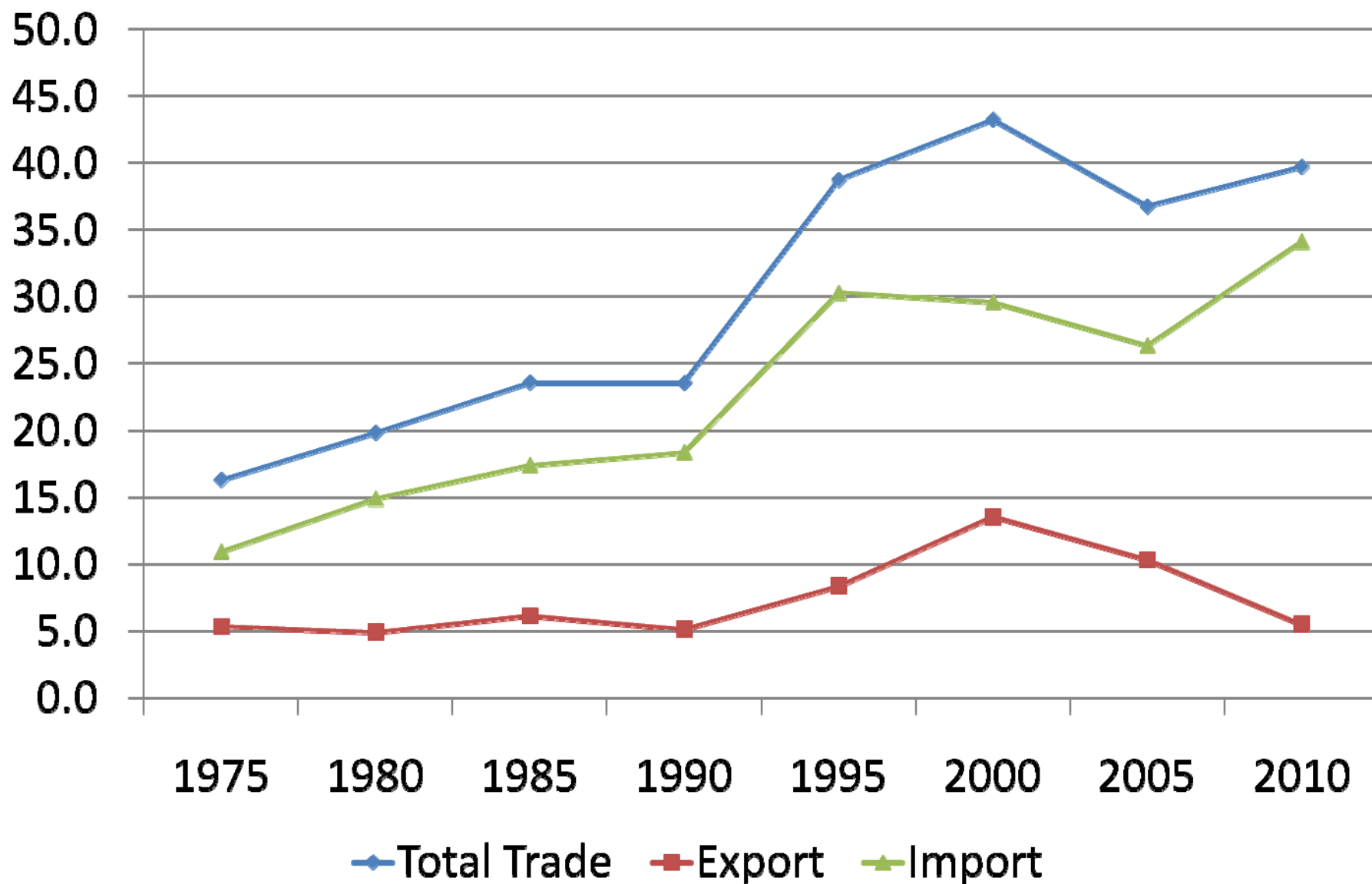
Average Growth Rate During 1975-2010, 1990-2010 and Sub-Periods



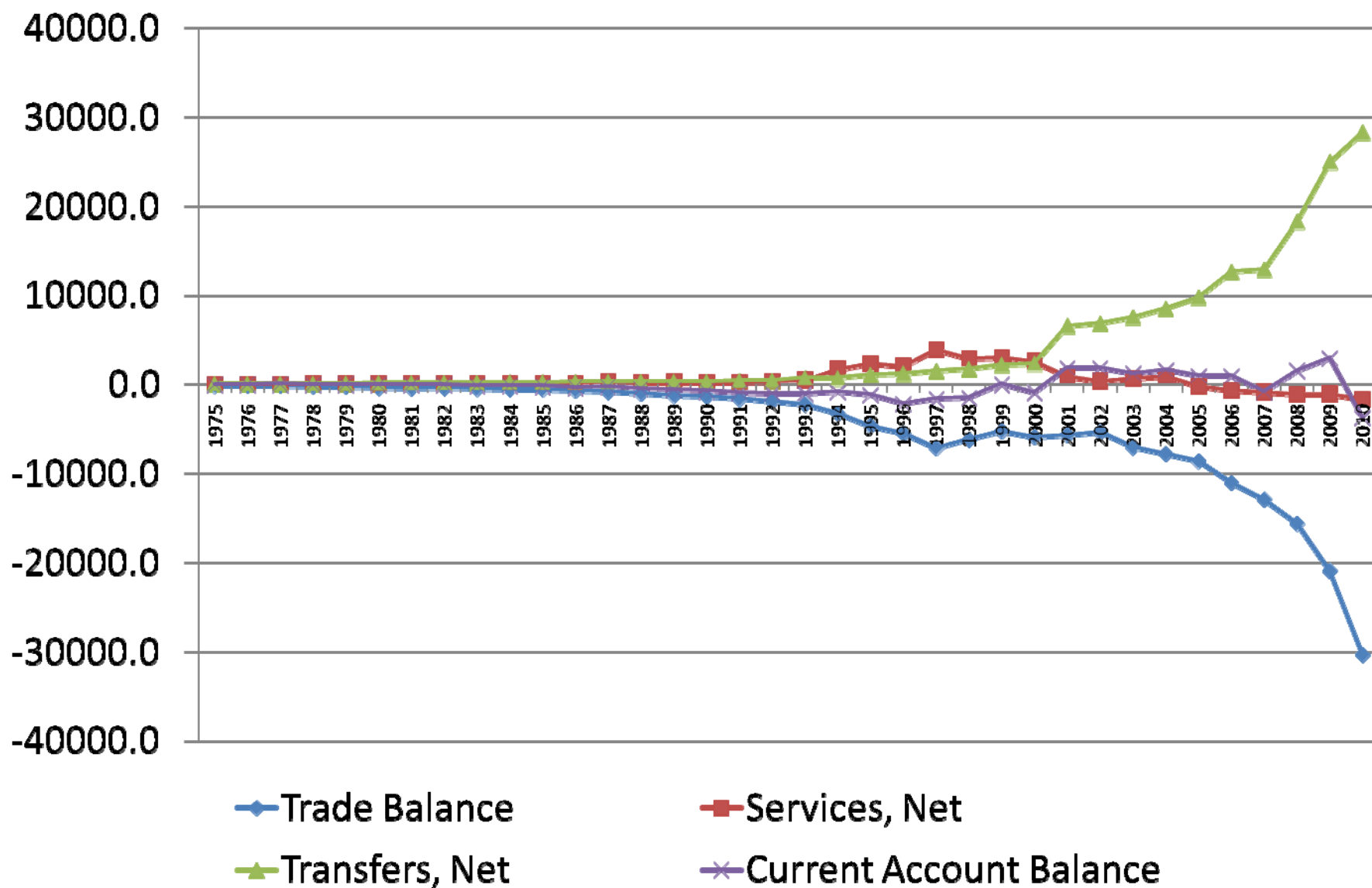
Sectoral Growth Rate



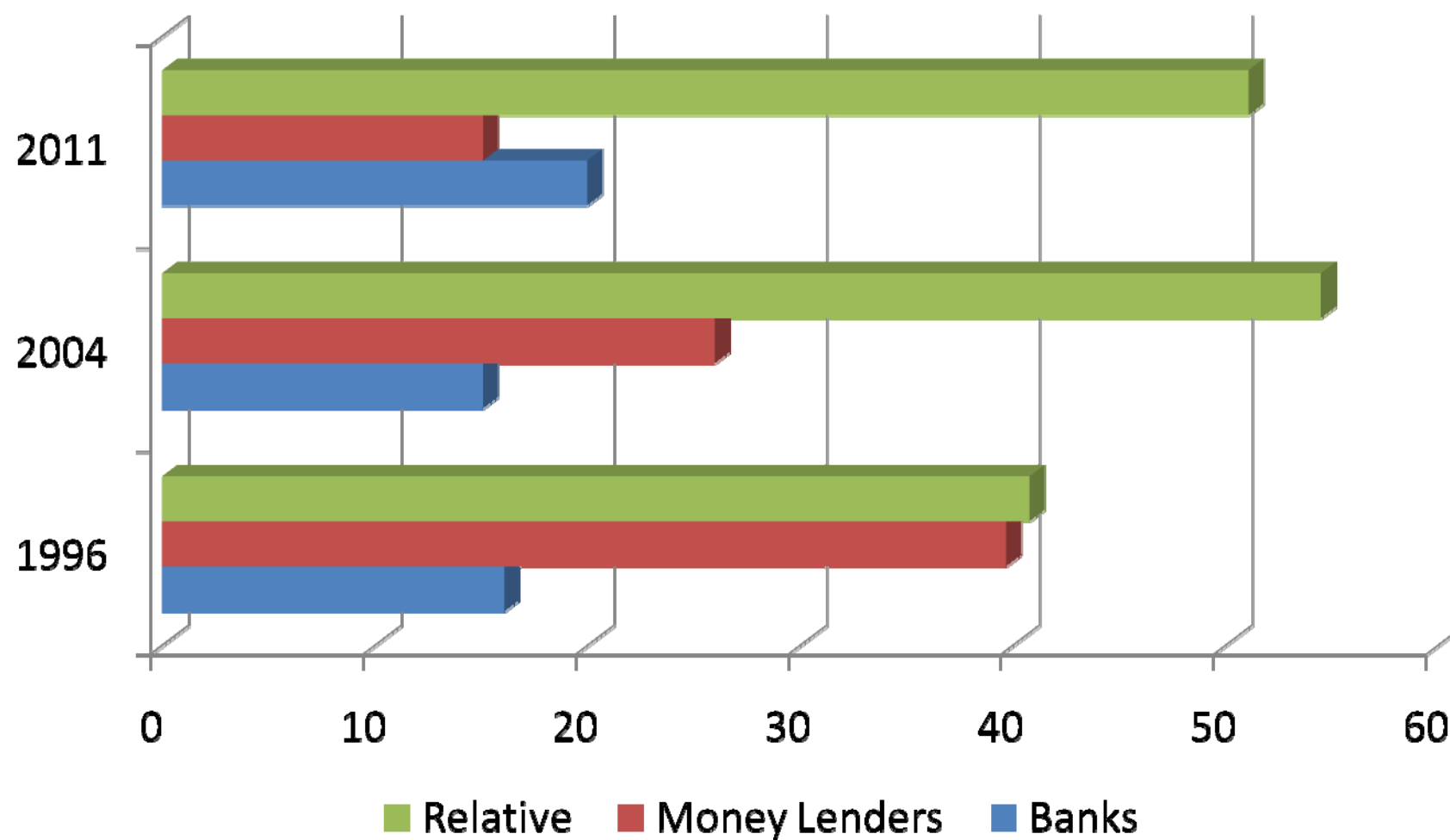
Share of Commodity Export and Import in GDP



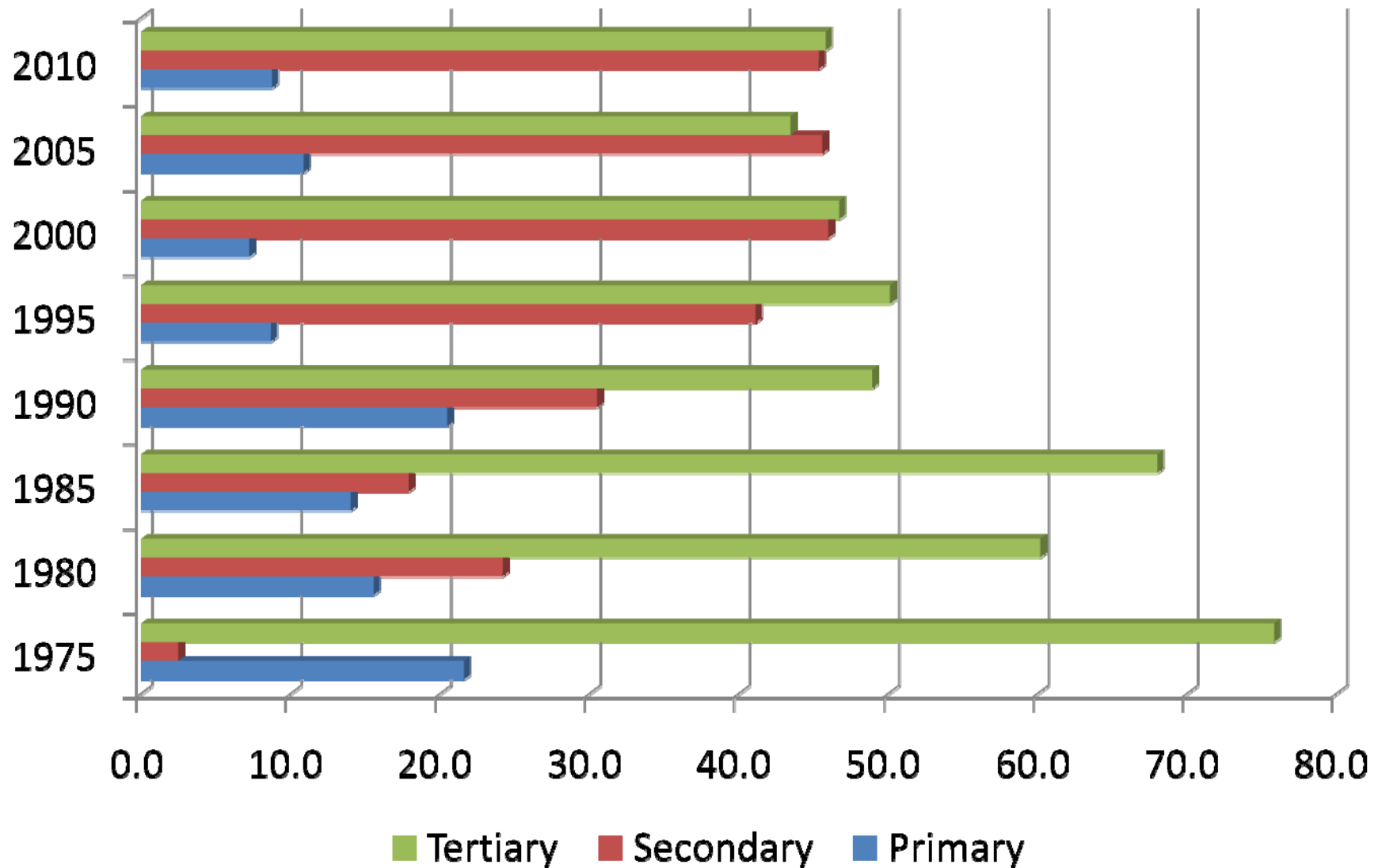
Balance of Trade and Current Account



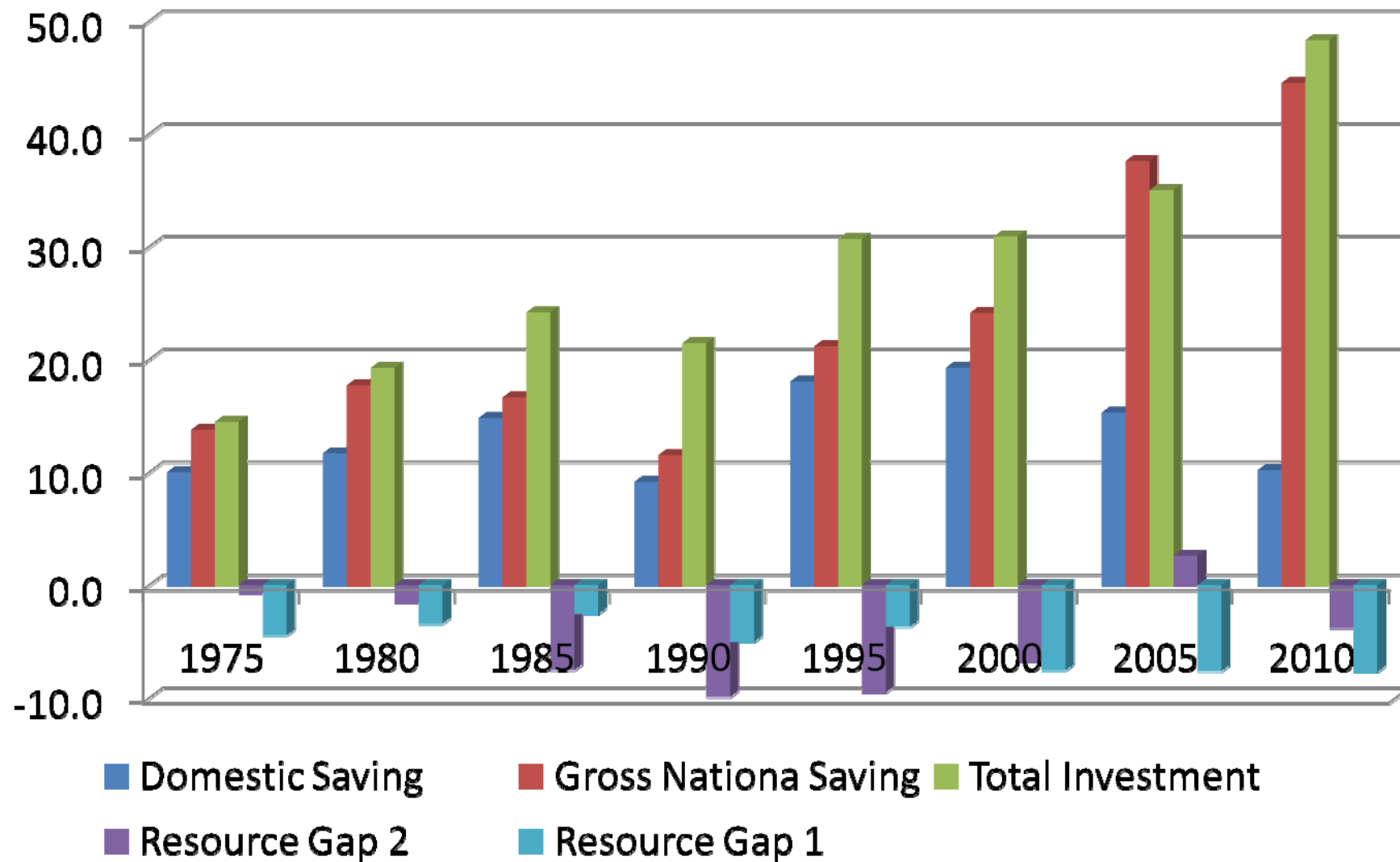
Percentage of Household Loans From



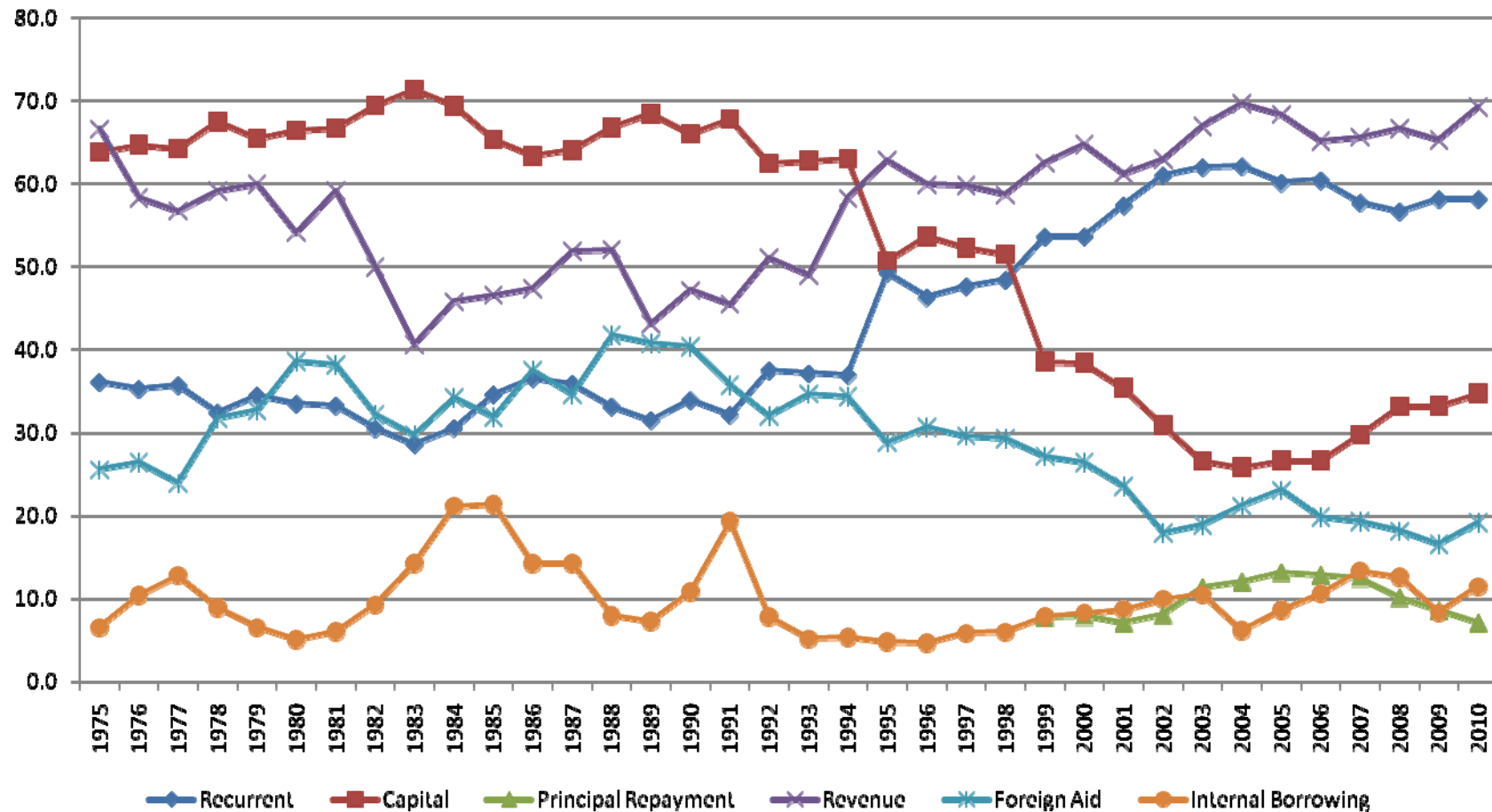
Share of Sectoral Credit in Total Credit of Banks



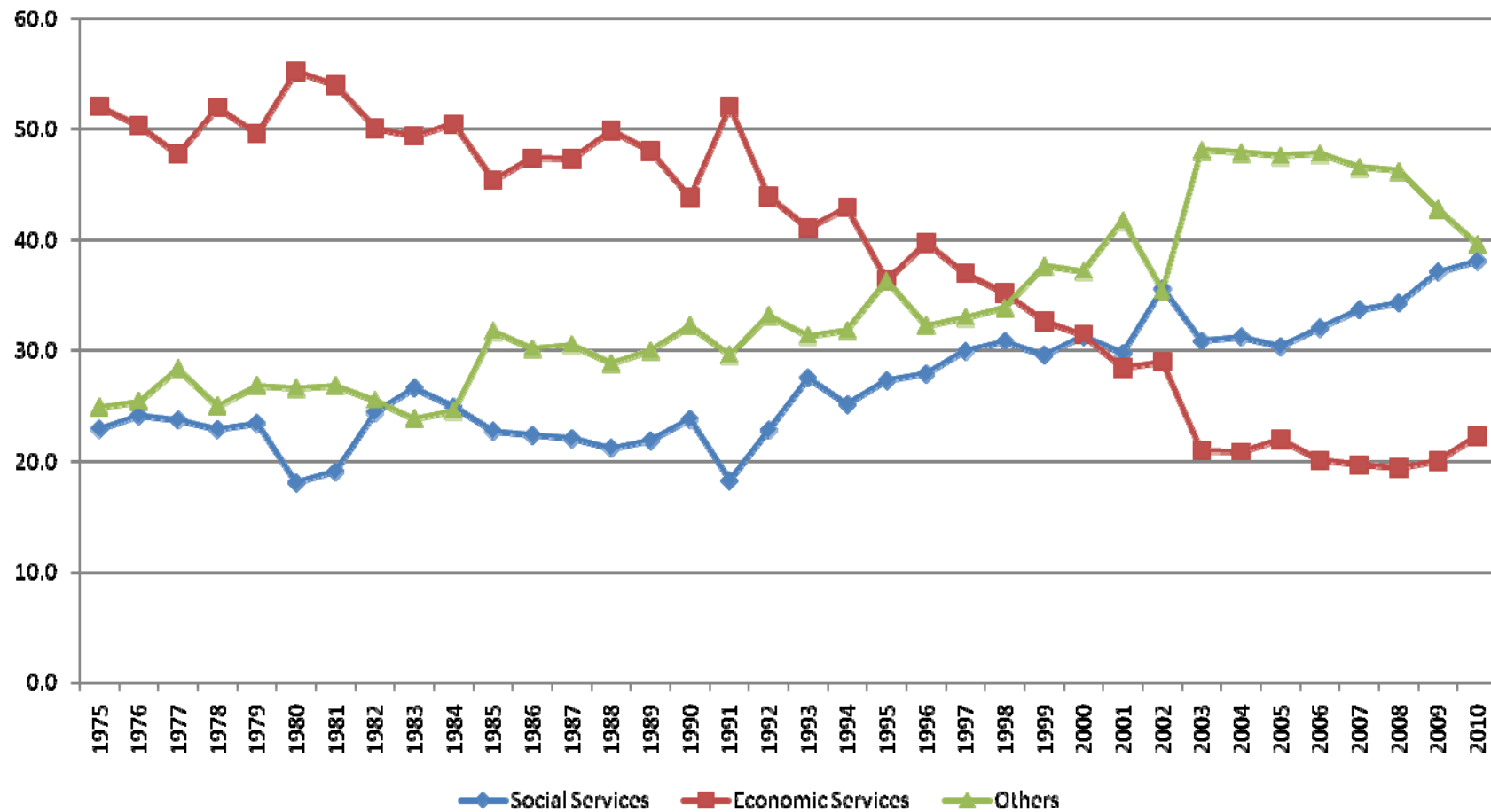
Share of Domestic Saving, National Saving and Gross Capital Formation in GDP



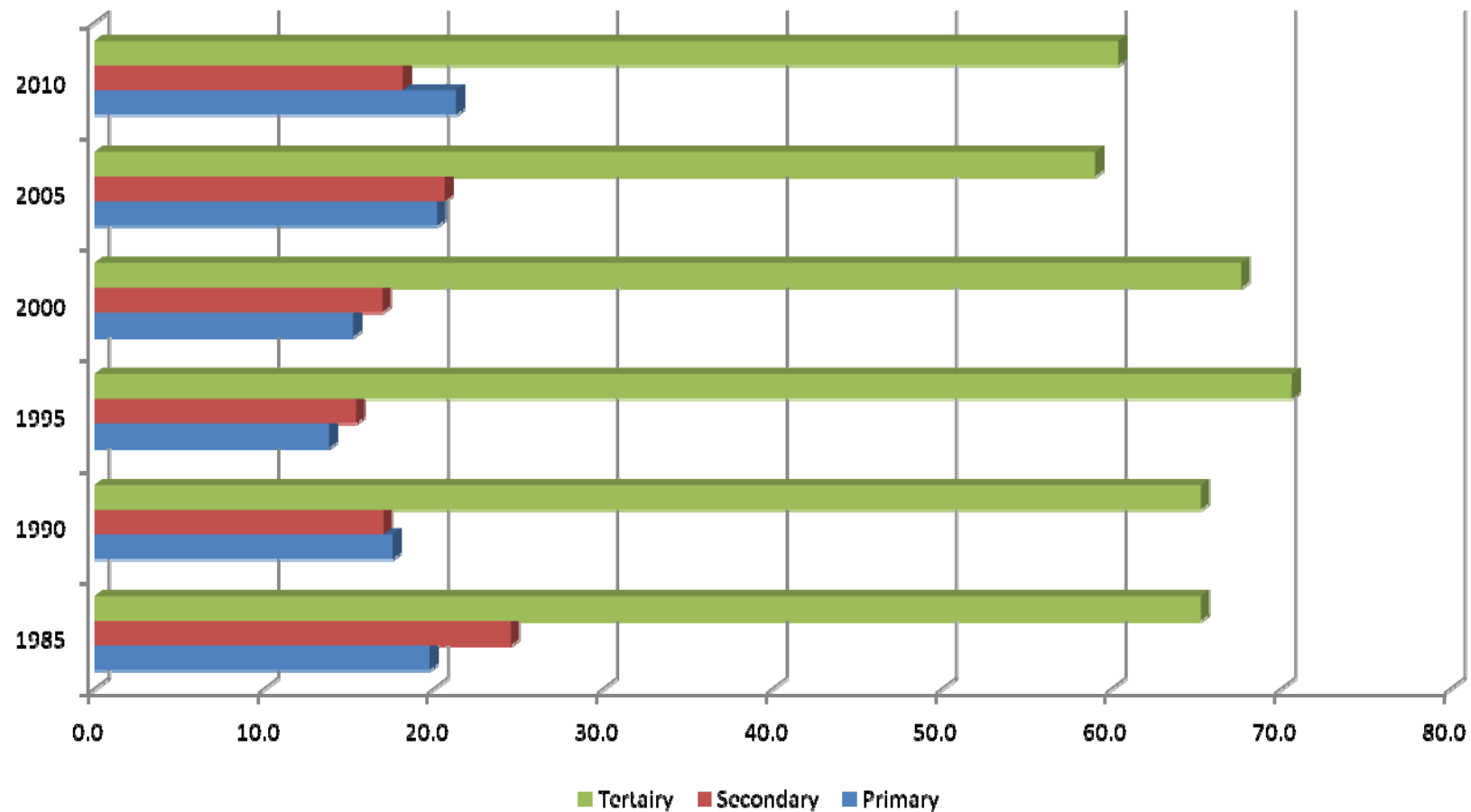
Share of revenue, foreign aid, current and capital exp etc



Share of Social and Economic Services



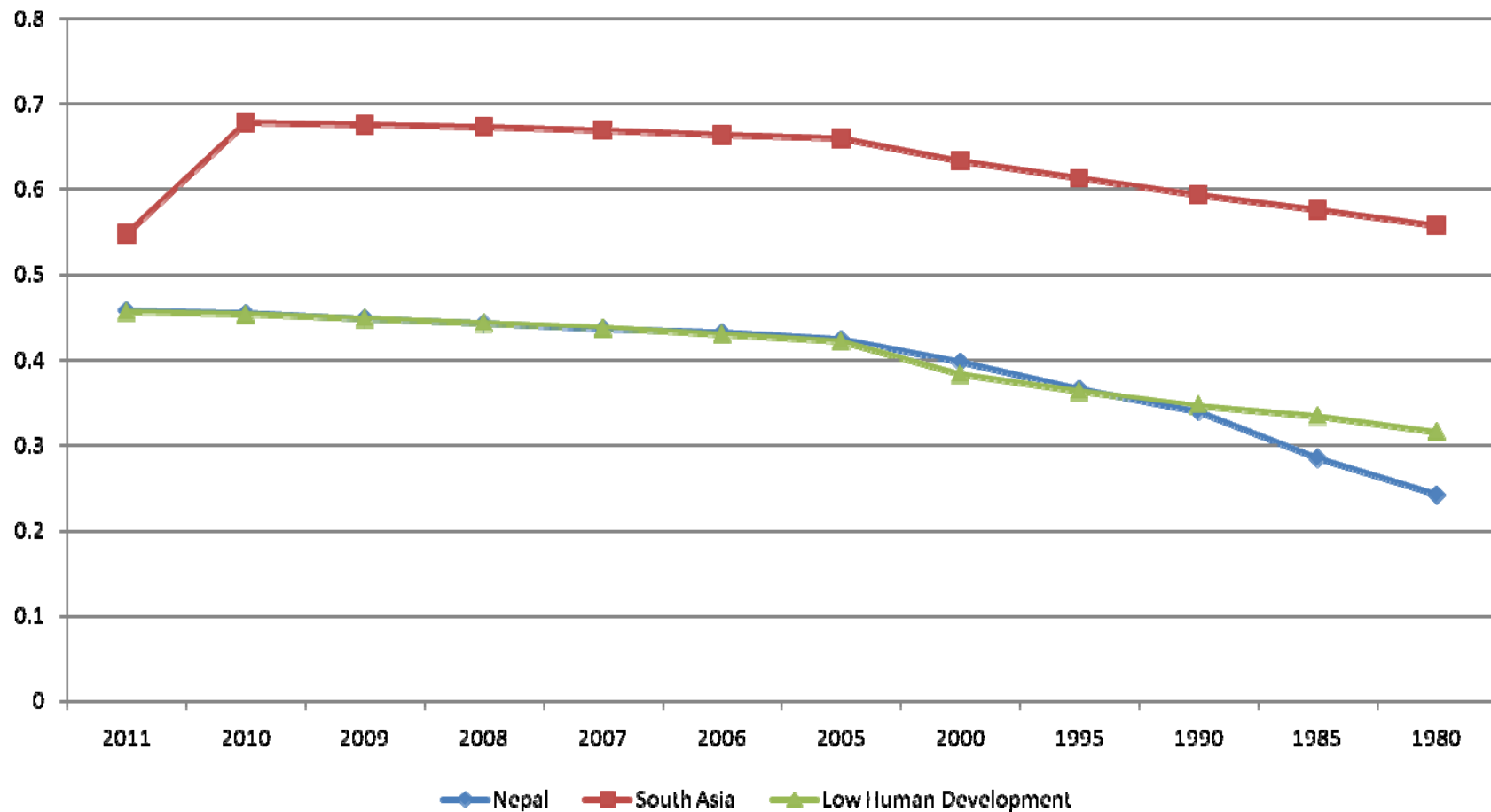
Sectoral Gross Fixed Investment



Status in Employment, 2008

Status	Share in total employment
• Paid employee	16.90
• Self-employed with regular employees	0.98
• Self-employed without regular employees	37.02
• Family members without pay	45.10

HDI: Nepal, South Asia and Low HDICs



Sources of Growth and their Determinants

- Regression results on:
 - Sources of overall and sectoral growth: labor, capital and Total Factor Productivity by five year intervals beginning from 1980 to 2010.
 - Determinants of total factor productivity by primary, secondary and tertiary sectors with attempts to link various policy and institutional reform related variables.

Regression Results

Year	Growth Rate of GDP	Contribution from Capital	Contribution from Labor	TFP Growth Rate
1980	2.34364	0.803693 (0.34)	3.342472 (1.43)	-1.80252 (-0.77)
1985	4.896776	1.581534 (0.32)	1.482112 (0.30)	1.83313 (0.37)
1990	5.14476	0.104522 (0.02)	1.525946 (0.30)	3.514292 (0.68)
1995	5.080432	1.634865 (0.32)	2.838011 (0.56)	0.607556 (0.12)
2000	4.929969	0.285695 (0.06)	3.999415 (0.81)	0.644859 (0.13)
2005	2.462303	0.450371 (0.18)	2.861103 (1.16)	-0.84917 (-0.34)
2010	4.122913	0.702221 (0.17)	2.395372 (0.58)	1.02532 (0.25)

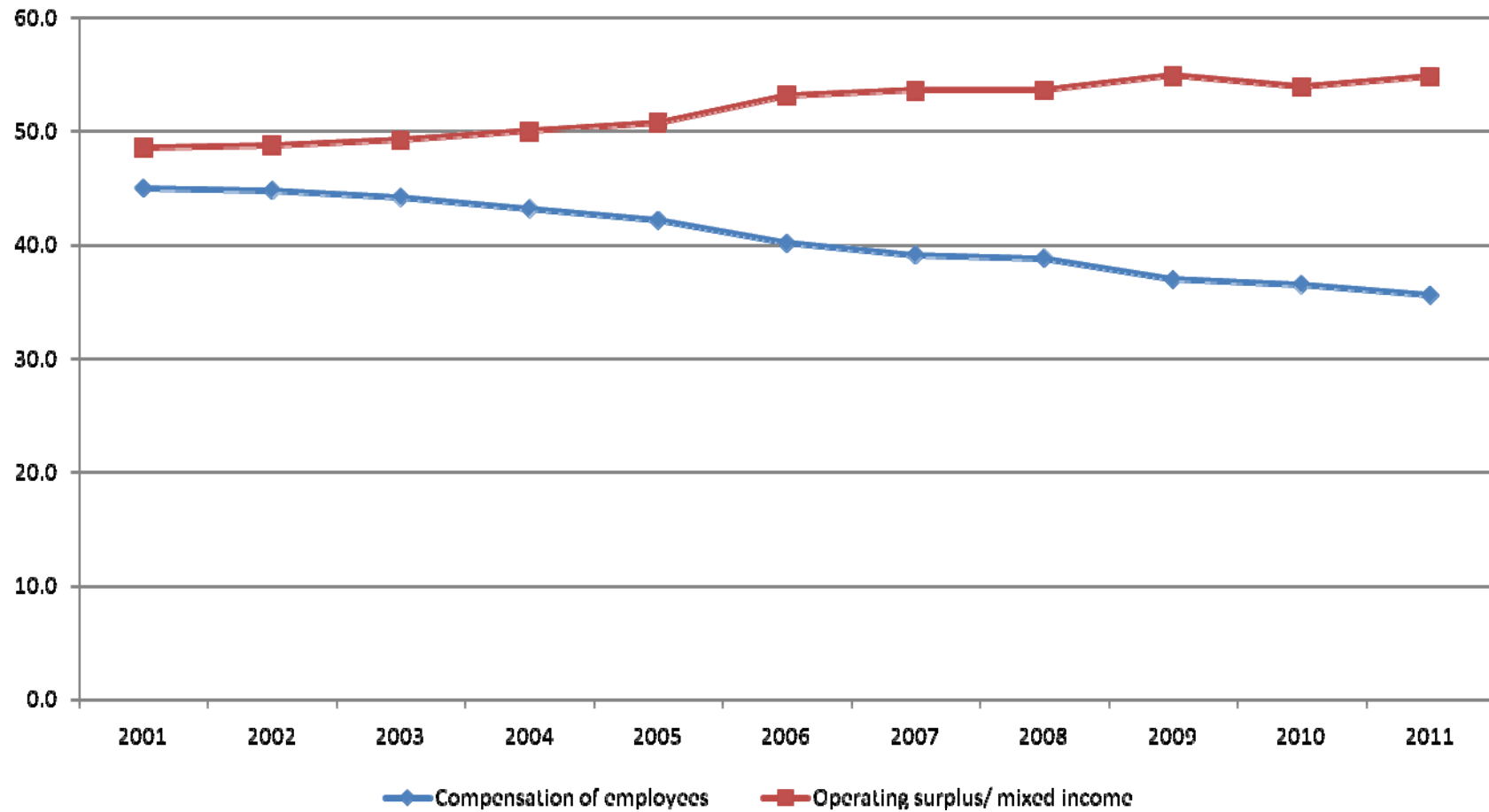
Independent Variables (<i>First Eight variable in log form</i>)	Determinants of TFP			
	All Sectors	Primary Sector	Secondary Sector	Tertiary Sector
Investment in Social services	7.101***			
	(2.315)			
Trade Openness	12.71***			
	(3.516)			
Financial Deepening			3.12*	
			(0.53)	
Investment in Infrastructure				3.640 **
				(1.473)
Investment in Education				2.793**
				(1.039)
Agriculture Credit		-3.390***		
		(0.959)		
Agriculture Investment		1.866*		
		(0.909)		
Per Hecter Fertilizer Used (mt)		0.819		
		(2.285)		

Independent Variables (First Eight variable in log form)	Determinants of TFP			
	All Sectors	Primary Sector	Secondary Sector	Tertiary Sector
Lending Rate (Primary)		-1.260**		
		(0.458)		
Policy Dummy (2005)	0.379		8.75*	1.821**
	(2.748)		(5.01)	(0.914)
Governance Index	-0.139		-0.31**	
	(0.129)		(0.041)	
Lending Rate (Secondary)			2.05*	
			(.862)	
Lending Rate (Tertiary)				-0.500*
				(0.053)
Inflation Rate	-0.353**			
	(0.155)			
Interest Rate (12 months)	-1.084**			
	(0.366)			
Constant	-24.15*	27.96*	20.14	-24.95**
	(12.58)	(14.37)	(5.88)	(10.758)
Observations	20	20	20	20
R-squared	0.535	0.537	0.34	0.35

Factor Returns/Distributional Gains

- As per national accounts estimates, share of compensation to employees gone down to 38.1 percent in 2011 from 46.7 percent in 2001.
- Nepal Living Standard Survey (NLSS) results of 1996, 2004 and 2011 further show that in 1996 the share of wage earnings in total household income was 54 percent. This ratio reduced to 47 percent in 2004 and 38 percent in 2011.
- NLSS results also show that share of wage employment in total employment was 21.7 percent in 1996 which went up to 39.6 percent in 2011.
- The manufacturing census results also reveal that the share of wages and salaries in the total manufacturing value added reduced to 19.6 percent in 2002 from 24.5 percent in 1992.

Factor Returns



Conclusions and Policy Implications

- Many lapses in both policy and institutional revealed by the exercise.
 - Low or negative total factor productivity main reason for poor or less sustainable growth indicating role of policy and institutional reforms not so much effective.
 - Despite overall policy shift playing some positive role, trade openness, financial deepening, investment in infrastructure and social services, banking sector lending including agricultural sector credit , interest rates etc related policy reforms considered to be major ingredient of policy reforms contributed very little to enhance TFP growth in all sectors.

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- Results reconfirm the recent focuses that governance/institutional reforms key for TFP growth.
- Productivity decomposition analysis at the same time showed some kind of Lewis effect indicating transfer of labor from primary to secondary and tertiary sectors would have positive productivity effect.
- With respect to capital, results, unlike general believe, suggest that only when there is high rate of reallocation of capital in primary and secondary sectors relative to tertiary sector, capital addition would have some positive impact on productivity.
- In terms of policy implications, the results suggest that free trade and other liberal policies generally lead to enhance productivity and growth automatically is misleading and hence combination of policies, their sequencing and host of institutional and other related factors are critically important.

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- More specifically, higher priority on production and infrastructure sectors for minimizing supply side bottlenecks and strengthening of internal capacity of the economy will be required which in turn could enhance sustainable growth, raise exports and generate productive employment. The encouragement to bubble and then bust type policy course amidst massive inflow of remittances may be more counterproductive in future . In this respect, the reforms in the fiscal and monetary policy accompanied by a comprehensive investment policy may be desirable to ensure and enhance competitiveness in trade, business services and industry.
- *Crude indicators examining the factor returns or distributional gains additionally suggest on the need of employment including income and wage policy review from sustainable growth and distributional gains point of view which in turn would have strong positive impact on poverty and human development. This area , however, may need more in-depth analysis for firm conclusions.