Is India's services trade pro-poor? A simultaneous approach

by

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By Prabir De and Ajitava Raychaudhuri[*]

Introduction

Trade in services in India has been growing rapidly since beginning of the last decade, following significant domestic liberalization on one hand, and access to a growing overseas market for services, on the other hand. By not only growing more rapidly than the country's merchandise exports, India's services export grew much faster than that recorded by the world during the past decade and a half. India's services trade currently constitutes about 32 per cent of the country's total trade.[1]

Due to such rapid growth in services exports, India has succeeded in raising its penetration in global markets more rapidly for services than for goods. In 2006, its share in world services trade was around 2.52 per cent compared with a 0.9 per cent share in world merchandise trade.[2] Today, the services sector is the single largest sector in India, accounting for more than 50 per cent of domestic production, 32 per cent of international trade, and some 33 per cent of employment in the organized sector (2006). Yet, a large part of India's services sector is untapped and rarely explored in the international market.

The expansion of India's services sector has been attributed to demand as well as supply factors. Demand for many services has become highly income elastic; that is, as people grow richer, their consumption of services such as education and health expands more rapidly than their demand for manufactures and agricultural products. To a certain degree, the growing share of services in gross domestic product (GDP) and the rising services trade also reflect the dynamism of the Indian economy, where an efficient services sector is not only crucial to the country's economic growth but also crucial to its competitiveness in the current era of globalization. Therefore, the liberalization of the services trade is quite appealing as it is likely to exert an economy-wide influence in providing strong inputs to all other economic activities, including poverty reduction.

The crucial role of international trade in fostering economic growth, personal and social development as well as reducing poverty and inequality is well recognized. Cross-country studies on the implications of services trade on social sector development indicate that broad-based growth in services trade is critical to accelerating poverty reduction. However, despite India's success in services exports in recent years, little is known about the empirical relationship between services trade, poverty and inequality in India. In fact, the services trade contribution to pro-poor

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[1] This corresponds to the year 2006, sourced from the International Monetary Fund, 2008.
[2] Annex table 1 shows the trends in India's share of the world services trade.

growth in the context of India is less debated. While much of the effort has gone into identifying India's opportunities and constraints in services trade, little attention has been paid to understanding the impact of services trade on poverty and inequality in India.

This chapter attempts to provide some insights into the actual nature and extent of exports of services from India, and examines the underlying factors and broader implications for poverty reduction. Section A provides an overview of India's services trade, including its composition and export competitiveness. Section B discusses the role of the services trade in delivering pro-poor growth as well as how services exports affect poverty and inequality in India with the help of the two-stage least squares (TSLS) regression. Section C concludes the chapter.

A. Overview of India's services trade

Despite the significant rise in the contribution of services to India's GDP, there has not been a parallel rise in the share of India's services trade in the country's GDP. Table 1 shows that the contribution of services trade to GDP was only 8.89 per cent in 2005/06, increased from 3.38 per cent in 1990/91, whereas more than half of the country's GDP comes from the services sector (53.2 per cent in 2005/06). While this distribution indicates trade component of India's services sector is at present not very substantial, this also suggests India's services trade has a large potential.

Table 1. India's services trade volume

Year	Services trade share in GDP	Exports		Imports		Balance of trade
		Volume	Share of world	Volume	Share of world	
	(%)	(US$ billion)	(%)	(US$ billion)	(%)	(US$ billion)
1990/91	3.381	4.551	0.557	3.571	0.708	0.98
1995/96	4.799	7.344	0.547	7.544	0.827	-0.20
2000/01	7.843	16.268	1.092	14.576	1.265	1.69
2001/02	7.859	17.140	1.128	13.816	1.316	3.32
2002/03	7.962	20.763	1.195	17.120	1.299	3.64
2003/04	8.176	26.868	1.256	16.724	1.393	10.14
2004/05	8.460	46.031	1.230	31.832	1.332	14.20
2005/06	8.894	60.610	1.281	38.345	1.355	22.27
Annual growth rate (%)						
1990/91 to 1999/2000		27.75 (8.27)		20.40 (7.32)		
2000/01 to 2005/06		17.33 (11.81)		13.86 (11.60)		
1990/91 to 2005/06		38.22 (12.84)		28.90 (11.890)		

Source: Calculated based on Reserve Bank of India, 2007 and Central Statistical Organisation, 2007.
Notes: Taken at current prices. Numbers in parentheses are world growth in corresponding period.

Nevertheless, the performance of India's services trade sector so far is very impressive. An increase of only one percentage point in the services sector contribution to GDP from 2000/01 to 2005/06 was associated with about a four-fold rise in services exports, about a three-fold increase in services imports and about a 13-fold rise in the

country's balance of services trade (table 1). With an average growth of 38.22 per cent per annum, services exports as a proportion of world exports of services increased from 0.56 per cent to 1.28 per cent between 1990/91 and 2005/06. Indeed, the growth of India's services exports (at 17.33 per cent) during 2000/01 to 2005/06 not only outstripped the corresponding import growth but was also higher than that of world exports. With this impressive growth and positive services trade balance all through the past decade and a half (except 1995/96),[3] India has been successful in contributing more than 2.52 per cent of global trade in services. This phenomenal rise underlines the country's strong competitive edge in the sphere of production and trade.[4]

1. Composition of India's services trade

India's emerging services trade sectors are no more traditional sectors like transport, travel and tourism services. It is financial services, information and communication technology services presently dominating India's services export basket. This is reflected in table 2. Despite the rise in absolute volume of exports during 2001 and 2005, shares of transport and travel services in country's total services exports have fallen over time. Earnings from software services (US$ 23.98 billion), communication services (US$ 2.18 billion), financial services (US$ 1.70 billion) and insurance services (US$ 1.05 billion) in 2005/06 were the most remarkable achievements witnessed by India in recent years. In general, export from all the major services sectors has seen steep rise from 2001 to 2005.

On the other hand, growth in India's services imports was equally high (table 3), particularly from 2000/01 to 2005/06, which was mostly driven by communication, construction and insurance services. Even though the decline in transport services imports was quite steep, transport and travel services together still share about one third of the country's services imports.

Table 2. Composition of India's services exports

Major components	Volume 2001 (US$ million)	Share* 2001 (%)	Volume 2005 (US$ million)	Share* 2005 (%)
Transport services	2 050.05	11.82	6 291.00	10.25
Travel and tourism services	3 198.07	18.45	7 853.00	12.79
Communication services	1 103.90	6.37	2 182.00	3.55
Construction services	65.05	0.38	403.00	0.66
Insurance services	281.99	1.63	1 050.00	1.71
Financial services	306.10	1.77	1 704.00	2.78
Computer and information services, of which:	7 407.38	42.73	23 980.00	38.81
Software services	6 341.00	36.26	23 600.00	36.45
Miscellaneous services	2 924.06	16.87	18 321.00	29.84
Total services	17 336.60	100.00	61 404.00	100.00

Sources: Calculated based on Reserve Bank of India, 2007 and International Monetary Fund, 2008.
* Share in total services exports.

Table 3. Composition of India's services imports

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[3] Recorded as US$ -0.20 billion in 1995/96.
[4] In some cases (for example, World Bank, 2004), this has been termed as India's "Services Revolution".

Major components	Volume 2001 US$ million	Share* 2001 (%)	Volume 2005 US$ million	Share* 2005 (%)
Transport services	8 498.08	42.28	7 841.00	20.90
Travel and tourism services	3 005.90	14.96	6 464.00	17.23
Communication services	266.78	1.33	808.00	2.15
Construction services	470.25	2.34	1 756.00	4.68
Insurance services	810.85	4.03	1 028.00	2.74
Financial services	1 780.06	8.86	1 308.00	3.49
Computer and information services, of which:	910.90	4.53	1 454.00	3.89
Software services	476.00	2.37	1 338.00	3.57
Miscellaneous services	4 356.48	21.67	16 980.00	45.25
Total services	20 099.30	100.00	37 523.00	100.00

Sources: Calculated based on Reserve Bank of India, 2007 and International Monetary Fund, 2008.

* Share in total services exports.

What is interesting is that with rising imports and exports (US$ 1.39 billion and US$ 23.6 billion, respectively) of software services in 2005, intra-sector trade in services is fast emerging in software services, thus showing substantial growth potential in the global services trade.

FDI is a key source of financing for service sector projects and has positively affected India's growth, employment and technology transfer (Joshi, 2006). FDI in the service sectors in India in the post-liberalization period grew much faster than that in manufacturing and the country total. During 1991-2006, FDI in services increased by about 69 per cent per annum, whereas in manufacturing and country total it was about 29 per cent and 31 per cent, respectively. Due to this high growth rate, the services sector shares about 18.35 per cent of the country's FDI stock,[5] with information technology and telecommunications, energy and financial services having become the major beneficiaries by attracting significant FDI, and enjoying faster growth and the creation of more employment opportunities.

2. India's export competitiveness in services trade

Services exports in country's GDP in general are associated with higher levels of development, but not all developing countries – including India – are yet in a position to be large-scale exporters (De, 2006). Developing countries successfully export a variety of services to both developed and developing countries, whereas a relatively limited number of developing countries appear to be heavily involved in services exports across a range of sectors. At the same time, developed countries are increasingly outsourcing their services to developing countries, thereby showing some services trade complementarities between the two income groups as well as reflecting their rising trade competitiveness.

As in manufacturing, the most important potential contribution of competitiveness in the services sector lies in the level and scale of technology. Services industries differ greatly in their hard and soft technology mix. Sectors such as air and rail transport, communications, broadcasting, electricity, gas and water are highly

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[5] From 1991 to December 2006 (calculated based on Reserve Bank of India, 2007).

capital-intensive, whereas the construction services sector is relatively labour-intensive. Nevertheless, most of the developing countries have registered a considerable expansion of total services trade in recent years; however, very few of them have been able to sustain their services trade specialization and not all are experiencing rising competitiveness in services trade (De, 2006). In general, as in trade in goods, developing countries as service exporters benefit from labour and natural resource abundance. Therefore, in their initial years of development, those countries gain comparative advantage in labour-intensive services (construction services, tourism, data processing, and so forth) and, as they grow, their production and trade specialization patterns also evolve towards higher-skilled and technologically advanced services.

The aforesaid argument was further exemplified by Banga (2006) who indicating India's export basket in services remained non-diversified. In addition, despite India's near double-digit growth and comparative advantage in areas such as commercial services, it is losing revealed comparative advantage in traditional areas such as travel and tourism. A plethora of studies have indicated that India has been gaining revealed comparative advantage in emerging areas such as financial services, and information and communication technology, but losing advantages in traditional areas such as transport, travel and tourism services.

Nevertheless, the rising services trade competitiveness relies more on substantial liberalization carried out through the removal of trade and investment barriers. The removal of barriers to trade in services is likely to result in lower prices, improved quality and higher competitiveness. As with trade in goods, restrictions on trade in services reduce welfare because they create a wedge between domestic and foreign prices, thereby squeezing the consumer surplus.[6] While dealing with barriers to India's trade in higher education services, Raychaudhuri and De (2007 and 2008) found the higher cost of living to be a negative element in the movement of students for studying abroad.[7] At the same time, non-price factors, such as the quality of services, play a pivotal role in determining the bilateral trade in services.[8] A competitive and well-regulated financial or telecom sector leads to the efficient transformation of savings to investment, ensuring that resources are deployed wherever they have the highest returns while facilitating better risk-sharing in the economy.[9]

To understand the pattern of India's services trade specialization, and to find whether or not the sector (in India) is globally competitive, the relative competitiveness of services trade can be reviewed with the help of the Revealed Comparative Advantage (RCA)[10] of different services trade sectors (table 4). This index shows the

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[6] See Fink and others, 2002 and 2005, and Clark and others, 2004, which are among the relevant studies.

[7] For a detailed commentary on the barriers affecting South Asia's services trade see Chanda, 2005 and 2006.

[8] For example, Rahman (2000) concluded that relative cost differentials together with differences in quality and the satisfaction of services seekers were the prime factors for rising services trade between India and Bangladesh.

[9] While dealing with India's telecommunication sector in context of its international and national commitments, Narsalay (2006) commented that India's successive domestic reforms had already enticed a healthy competition and recommended the adoption of consistent services negotiations at WTO in order to make India a vibrant knowledge-driven society. See also Kumar and Joseph, 2005.

[10] The RCA has been calculated based on following equation: RCA = $(X_{iw}^k / X_{iw}^{\Sigma k}) / (X_w^k / X_w^{\Sigma k})$, where X_{iw}^k is country i's world exports of services k, $X_{iw}^{\Sigma k}$ is country i's total exports, X_w^k is world

country's specialization in individual services subsectors and therefore their comparative advantage.

Table 4. Estimated RCA scores of services exports from India

Sector	1991	2001	2005
Transport services	0.78	0.58	0.59
Travel services	1.24	0.69	0.92
Communications services	-	0.37	0.39
Construction services	-	0.56	0.57
Computer and information services*	-	28.19	29.89
Financial services	0.79	1.01	1.09
Total services	1.14	1.44	1.97

Sources: Calculated based on World Trade Organization, 2008, and Reserve Bank of India, 2007.
* Includes software services.

The results reported in table 4[11] show that the estimated RCA scores of India's services exports are favourable and are constantly rising, thereby indicating India's strong comparative advantage in services trade.[12] To a great extent, it can be said that India has achieved revealed comparative advantage in financial, and computer and information services, whereas the country is losing the advantage in traditional sectors such as transport and travel services. In the case of India, in particular, the emerging services trade sectors such as financial, telecommunications and information technology services clearly possess growth-generating characteristics. In other words, compared to other sectors, India's comparative advantage and specialization has been transformed from labour-intensive services trade to technology and knowledge intensive services trade (such as financial, and computer and information services), where Mode 1 (cross-border trade) and Mode 4 (movement of natural persons) are the two key modes of service delivery. India's liberalization in services trade in GATS has thus been devoted to Mode 1 and Mode 4 liberalization, since these two modes are fast emerging as important modes of delivery of a wide range of services from India.

B. Services trade and pro-poor growth in India

Generally speaking, India has been relatively successful in delivering pro-poor growth in the past few decades.[13] Due to higher growth, India witnessed a continuous rise in per capita income (PCI) from US$ 470.04 in 1981 to US$ 2,468.90 in 2006. This PCI rise is also associated with a rise in per capita income from services exports (PCISE), which increased from US$ 3.93 in 1981 to US$ 67.90 in 2006 (table 5).

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exports of services k, and $X_w^{\Sigma k}$ is world's total exports. If the estimated RCA index of a sector is found to be greater than one, then it is considered as globally competitive (Balassa, 1965).

[11] It should be noted that these results need to be interpreted with care, given the numerous inconsistencies in the underlying statistical databases.

[12] According to Rakshit (2007), India's comparative (revealed) advantage in services exports in fact was higher than industry and agriculture and also merchandise exports during the period 1991 to 2005.

[13] However, India's success (or failure) in reducing poverty is widely debated and challenged. For an interesting discussion, one can refer, Ahluwalia (1977), Jha (2000), Ravallion (2000), Deaton and Dreze (2002), Bhalla (2002, 2003), Banerjee and Piketty (2003), Bhanumurthy and Mitra (2004), Tendulkar and Jain (1995), among others.

Higher income has helped India to deliver a successful pro-poor growth.[14] For example, India has done relatively well in reducing rural and urban poverty (measured by Head-Count Ratio) from 1981 to 2004, when poverty ratios declined from 45.31 per cent to 21.80 per cent in case of rural India, and from 35.65 per cent to 21.70 per cent in case of urban India (table 5). However, when income inequality is considered (measured by the Gini coefficient), the result is mixed. While rural inequality declined from 30.10 per cent in 1981 to 26.20 per cent in 2004, urban inequality showed neither a declining nor a rising trend; in fact, the latter increased marginally during the past two years.

Table 5. Income, poverty, inequality and employment trends

Year	PCI (US$)	PCISE (US$)	Poverty rate (%)		Inequality rate (%)		Unemployment rate (%)	
			Rural	Urban	Rural	Urban	Rural	Urban
1981	470.04	3.93	45.31	35.65	30.10	34.08	1.75	6.40
1991	892.17	5.80	37.42	33.23	29.91	37.98	3.15	7.30
1992	944.96	5.36						
1993	994.17	5.85	37.27	32.36	28.60	34.30	1.70	6.85
1994	1 063.30	6.70	43.47	33.73	29.88	35.51	1.73	6.89
1995	1 146.50	7.88						
1996	1 234.70	7.88						
1997	1 283.60	9.77						
1998	1 354.80	13.43						
1999	1 451.00	15.72	27.09	23.62	26.30	34.70	1.80	5.95
2000	1 516.80	16.01						
2001	1 608.10	16.60						
2002	1 671.00	19.80						
2003	1 822.50	25.24						
2004	2 001.40	40.06	21.80	21.70	26.20	34.94	2.60	6.75
2005	2 221.70	55.89						
2006	2 468.90	67.90						

Sources: PCI was drawn from the World Bank, 2008; PCSE was estimated based on services exports, collected from the International Monetary Fund, 2008; the poverty rate (HCR) was drawn from various rounds of the National Sample Survey (NSS); the inequality rate (Gini) was taken from Bhalla, 2002 and 2003, based on NSS; and the unemployment rate was taken from the National Sample Survey Organization, 2006.
Notes: Poverty, inequality and unemployment rates correspond to financial years. PCI stands for Per Capita Income in PPP terms, taken at the current US$ 3.00. Poverty is represented by the Head-Count Ratio. The poverty rate for 2004/05 is taken on the Mixed Recall Period (MRP) basis. Inequality is represented by the estimated Gini coefficient. The unemployment rate average is taken in terms of the country's labour force.

Income inequality evolves in response to a host of forces, with economic growth being only one of them (Helpman, 2004). Growth changes the distribution of income over the long term; in the short term, trade generates an unfavourable income distribution where wage inequality (or unemployment) plays a major role in the distribution of income.

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[14] There are a good number of studies to justify why and how higher income helped India to deliver pro-poor growth. One can refer, Ravallion and Dutt (2001).

However, explaining poverty and inequality from the angle of services exports is the most daunting task. This issue is important and has received considerable attention at a time when India has been facing the "jobless growth" syndrome and rising income inequality. Theoretically, services exports lead to increased per capita income, thereby reducing poverty and income inequality, *ceteris paribus*. Most obviously, the relationships between services export, poverty and inequality are certainly not linear. Thus, a relevant question is whether such non-linearities in services exports do exist and, given the simultaneous causality bias, how services exports affect poverty and inequality in India. In order to test the hypothesis, the TSLS method, which endogenizes services export, is employed here.

We relate poverty and inequality with PCISE, where PCISE is an endogenous regressor (potentially correlated with the error term). We have a set of exogenous (included) regressors, which are uncorrelated with the error term such as an economic liberalization dummy (ELD) (1 for the years from 1991 onwards, and 0 otherwise), and an exogenous time trend (t). [15] To solve the potential simultaneity bias, four instrumental variables (IVs) are employed: that are exogenous (excluded) variables and uncorrelated with the error term, namely, services export infrastructure, represented by two variables – telephone mainline (TM) and personal computers (PC); tax on international trade (TIT); and the official exchange rate (ER). Annex table 3 provides variable description and data sources. The instrumental variables detect movements in exogenous regressors which are uncorrelated with the error term, and use them to estimate the regression parameters. We presume the IVs are strictly uncorrelated with the error term (exogenous), but are correlated with relevant regressors. To check relative robustness, we replace PCISE with services trade as percentage of GDP (STGDP) in the model. The long time series of 32 years (1975 to 2006) is sufficient to understand the evolving relationship between poverty, inequality and services exports in India. We use the Durbin-Wu-Hausman test to check the suspected measurement error between OLS and TSLS, and the J-test to solve the over-identification restriction. Therefore, the final estimable TSLS regression takes the following form:

$$Ln(Y_{it}) = \beta_0 + \beta_1 Ln(PCISE_t) + \beta_2 ELD_t + \beta_3 t + e_i \quad (1)$$

where Y_{it} stands for head count (HC) ratio (to represent poverty) and Gini ratio (to represent income inequality) interchangeably, *t* is the time period (1975 to 2006), and *e* is the error term. Here, instrumental variables are TM, PC, ITI and ER, all taken in logarithmic scale.

Table 6 presents the estimated coefficients of TSLS. Variables being natural logarithms, the estimated coefficients show elasticity. The elasticity is useful as an indicator of the effect of services trade exports on poverty and inequality. The models perform well as most of the variables do have expected signs. The estimated models explain about 97 per cent of the variations in poverty (models 1 and 2) and about 53 per cent of the variations in inequality (models 3 and 4). The econometric evidence presented here appears to strengthen the existing trade and poverty linkage. Although the impact of services exports on poverty and inequality appears marginal, the

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[15] See annex table 2 for the correlation matrix.

empirical estimations do not raise any doubt that poverty reduction has benefited from services exports.

Table 6. Two-stage last squares estimates

	Model 1		Model 2	
	Dependent variable: Poverty rate			
	Coefficient	**t-value**	**Coefficient**	**t-value**
Constant	4.193 [a]	89.890	4.115 [a]	158.550
PCISE			-0.074 [b]	-2.210
STGDP	-0.167 [b]	-2.630		
ELD	0.096	1.130	0.065	1.020
t	-0.034 [c]	-7.452	-0.033 [c]	-6.523
Instrumental variables	Telephone mainline (TM); personal computer (PC); tax on international trade (TIT); exchange rate (ER)			
First Stage F	229.35		421.00	-
Adj. R^2	0.964		0.961	-
No. of observations	32		32	-
	Model 3		**Model 4**	
	Dependent variable: Inequality rate			
	Coefficient	**t-value**	**Coefficient**	**t-value**
Constant	3.485 [a]	97.880	3.447 [a]	144.200
PCISE			-0.045	-1.430
STGDP	-0.086	-1.560		
ELD	0.067	1.070	0.048	1.350
t	0.004	1.090	0.005	1.090
Instrumental variables	Telephone mainline (TM); personal computer (PC); tax on international trade (TIT); exchange rate (ER)			
First Stage F	229.35		421.00	-
Adj. R^2	0.531		0.528	-
No. of observations	32		32	-

Notes:
Individual coefficients are significant at:
[a] 1 per cent level
[b] 5 per cent level
[c] 10 per cent level
Values are taken in log scale.

The estimated coefficients in table 6 indicate that poverty is influenced significantly by most of the explanatory variables, whereas that is not the case for inequality. Also, the time trend shows declining poverty, whereas the reverse is true for inequality. It appears that poverty has responded effectively to growth and services exports over time, but the same result does not hold in the case of inequality. This points to the knowledge and skill-intensive nature of services exports, which promotes

growth and a rise in income level, but at the same time favours the skilled workforce over the unskilled. Hence, the growth of services exports (which is a major source of demand for the entire service sector in India) has alleviated poverty through expansion of income, and which presumably has led to expanded inequality (that is, urban inequality).

It must be noted, however, that the above TSLS regression method does not conclusively show the role of services exports in rising urban inequality, although it points to the possible impact of a subset of infrastructure in exacerbating this inequality in the urban areas, where the services-related industries are located.

Contrary to popular belief, the economic liberalization dummy (ELD) does not show the correct signs and is statistically insignificant in all the models, thereby showing that poverty and inequality have yet, by far, to be influenced by India's economic liberalization programmes adopted since 1991. However, we should not read much into this result. Rather, the significance of the time dummy in the first two models with correct signs clearly indicates that poverty reduction in India is perhaps a mere natural discourse. The usual caveat is that perhaps the time dummy and economic liberalization dummy were both worked in same direction in TSLS, thereby reducing ELD significance in TSLS.

The estimates also show that the extent of the effects does not vary widely in models 3 and 4. The Adj. R^2 in models 3 and 4 explain only half of the variation in the observations. Perhaps the inappropriateness of the structural model or omitted variable bias could be the plausible reason for such a fit. Although the effects of growth on inequality cannot be isolated, rising inequality (in urban India) presumably offsets the gains arising from services exports. To a great extent, the majority of services suppliers (for export) are, in the present context, concentrated in urban India, where inequality has increased disproportionately over time (table 4).

Finally, from the estimated elasticities and their significance level it can be concluded that India's services exports have been positively influencing poverty reduction, but are not particularly effective in inequality (urban) reduction. Most obviously, infrastructure related to services – mainly software and Business Process Outsourcing (BPO) exports – as well as depreciated currency and disappearing tax on trade have been instrumental in enhancing India's services exports.

The above-mentioned observations also corroborate the findings of Raychaudhuri and De (forthcoming, 2009). They argue that accelerated growth in the IT services sector in India has played an important role in reducing overall poverty, particularly among women, which has come at a cost of widening inequality as mainly educated, higher skilled and selected urban labour benefit from IT services growth.

From the above, a possible hypothesis can be developed about trade in services, specially the IT sector in India, and its impact on poverty and inequality. We have three ingredients for this hypothesis. The rapidly growing services sector in India, led by software and BPO, are concentrated in certain cities in India having excellent research and development facilities, plus complementary educational facilities in the neighbourhood. This sector is clearly biased towards highly- and medium-skilled labour.

Trade in services, including outsourcing activities – especially for the IT sector – provide a boost to the expansion of these sectors. This certainly helps in the reduction of poverty, but at the same time creates more inequality in urban India as well as between rural and urban regions in the country.

C. Conclusion

Trade in services in India has witnessed rapid growth in the past 15 years. India's emerging services trade sectors are no more traditional sectors such as transport, travel and tourism. They now provide the bulk of employment for the skilled and unskilled workforce, both in the organized and unorganized sectors. In contrast, financial services as well as information and communication technology services, which currently dominate India's services exports basket, offer employment only to the skilled workforce. Therefore, the most challenging task is how to balance this structural shift in order to minimize the short-term maladies of globalization.

The econometric evidence presented in this chapter appears to strengthen the existing linkage between trade and poverty. The findings detailed in this chapter show that India has been relatively successful in delivering pro-poor growth in the past few decades. Although the impact of services exports on poverty and inequality appears to have been marginal, the empirical estimations do not raise any doubt that poverty reduction has benefited from services exports. Therefore, higher income from services exports has been helping India to deliver a successful pro-poor growth.

Although poverty has responded effectively to growth and services exports over time, the same does not hold true in the case of inequality. This points to the knowledge and skills-intensive nature of services exports, which promote growth and rising income levels, but which at the same time favour the skilled workforce more than the unskilled workforce. Hence, the growth of services exports has alleviated poverty through the expansion of income, although it has not been particularly effective in reducing (urban) income inequality. It must be added that although the econometric results do not conclusively show the role of services exports in rising urban inequality, they do point out that some of the infrastructural variables (for example, personal computers or telephone mainlines) have selectively benefited the urban workforce. Nonetheless, infrastructure related to services (mainly software and BPO) exports, depreciated currency and disappearing tax on trade have been instrumental in enhancing India's services exports.

Declining urban poverty and increasing urban income inequality are associated with growth in services exports. The change in skills composition and the rising wage inequality in services sector employment offer a plausible explanation of the rise of income inequality in urban India, from where the majority, if not 100 per cent, of India's software and BPO services exports are sourced. The issue is, therefore, how far the rise in India's software and BPO exports, which together currently share about one-third of India's services exports, can be attributed in delivering pro-poor growth.

As India continues to expand its services sector, both for domestic consumption and international trade, the challenge facing industry and the Government is how to put in place measures to that address the inequality gaps. Therefore, the key message is that services trade may tend to aggravate inequalities in the absence of policies and

programmes for guaranteeing "inclusive" economic growth. By effective pro-poor targeting, the Government can make services exports better for the poor, and reduce the divide between them and the richer segments of society.

Further research that explores causality and linkage between services sector growth and poverty reduction is needed, possibly at both the micro and the sectoral levels. This can only be done on the basis of primary surveys of the composition, the workforce and its dimensions, output and its sales markets, wage structure, and so forth, of service providers. Combining the findings of such surveys with secondary data can then further establish the hypotheses framed in this chapter on services trade and poverty alleviation.

Annex

Annex table 1. India's share in world services trade

Year	Exports	Imports	Total
	(%)		
1981	0.675	0.693	0.684
1991	0.540	0.629	0.585
2001	1.108	1.286	1.197
2002	1.175	1.285	1.229
2003	1.253	1.334	1.293
2004	1.665	1.610	1.638
2005	2.181	1.966	2.076
2006	2.662	2.375	2.523

Source: Calculated based on World Bank, 2008.

Annex table 2. Correlation matrix

	PCISE	STGDP	TM	ER	PC	TIT	Gini	HC
PCISE	1.000							
STGDP	0.9642*	1.000						
TM	0.8055*	0.9143*	1.000					
ER	0.6698*	0.8298*	0.9200*	1.000				
PC	0.9662*	0.9653*	0.9017*	0.7381*	1.000			
TIT	-0.7065*	-0.8436*	-0.9037*	-0.9738*	-0.7657*	1.000		
Gini	-0.025	0.137	0.241	0.4416*	-0.005	-0.3780*	1.000	
HC	-0.7104*	-0.8497*	-0.9070*	-0.9485*	-0.7599*	0.9576*	-0.3881*	1.000

*Significant at the 5 per cent level.

Annex table 3. Variable description and data sources

Variable	Description	Sources
Gini ratio	National aggregate inequality rate, time series 1975-2006. Missing data filled through simple averages of close years.	Bhalla, 2002 and 2003, based on National Sample Survey Organization, 2006.
Head-Count (HC) ratio	National aggregate poverty rate, time series 1975-2006.	National Sample Survey Organization, 2006, National Sample Survey (various

		rounds), United Nations University-WIDER, 2007.
PCISE	Per capita income from services exports in United States dollars.	World Bank, 2008.
STGDP	Services trade's share in GDP in percentage.	World Bank, 2008.
TM	Telephone mainline per 100 people	World Bank, 2008
ER	Official exchange rate (rupees per United States dollar, period average).	World Bank, 2008
PC	Personal computers (per 100 people).	World Bank, 2008
TIT	Taxes on international trade (percentage of revenue).	World Bank, 2008

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