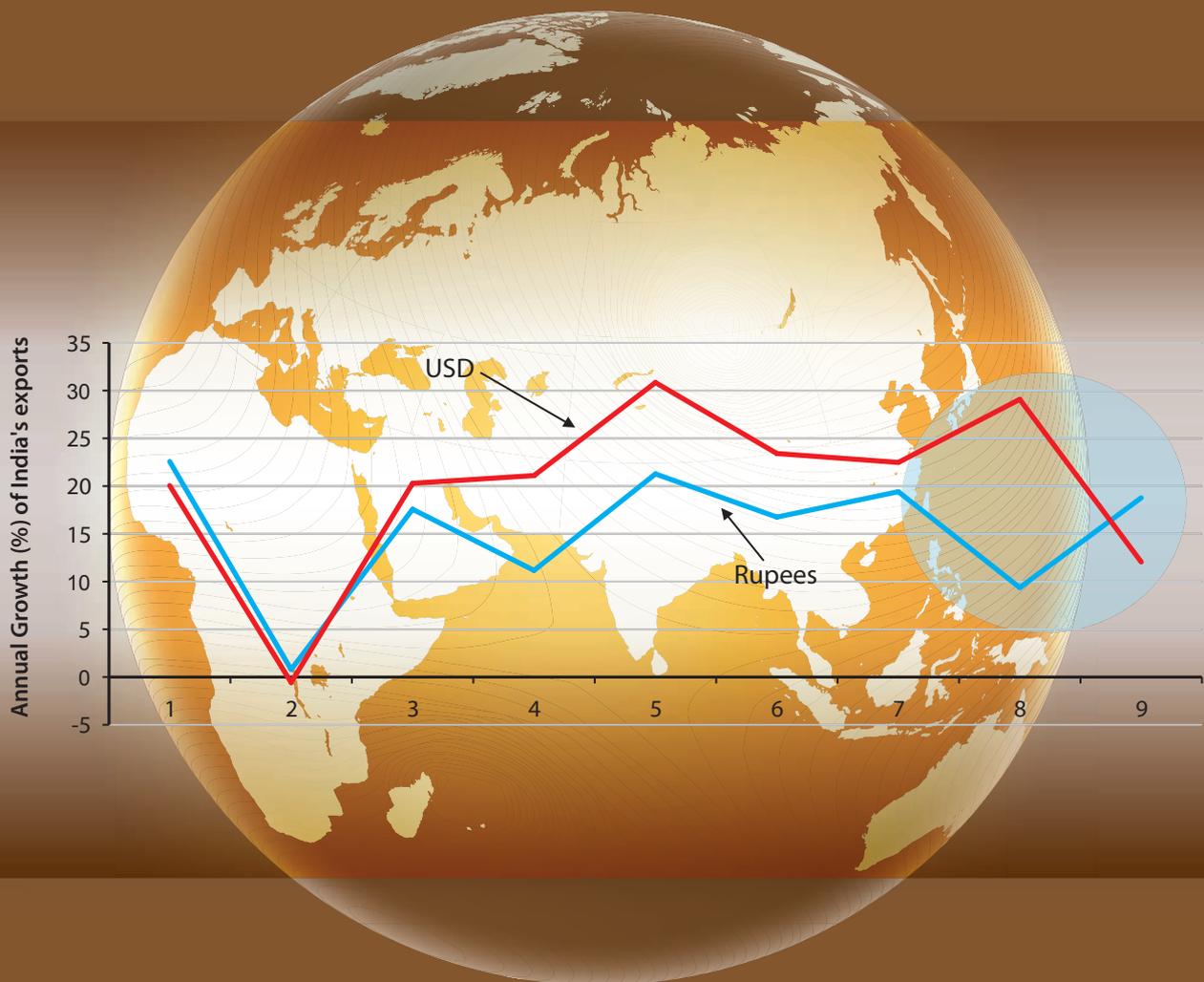


GLOBAL DOWNTURN AND EXPORT SECTOR IN INDIA

*Impact on Production, Export
and Employment*



S. K. Sasikumar
Anup K. Karan



V. V. Giri National Labour Institute 2010

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This publication is based on a detailed research study undertaken by the Institute and commissioned by the Department of Commerce, Ministry of Commerce and Industry, Government of India. The main objective of the study is to assess the impact of the economic slowdown on exports, production and employment in three specific export intensive sectors, namely textiles, diamond and handicrafts. The study also evaluates the efficacy and efficiency of the stimulus packages initiated by the Government of India to counter the slowdown and ensure recovery.

India is currently on the path of economic recovery and aims to put in place long-term strategies to counter instabilities like the recent global financial crisis. Viewed in this perspective, I hope that the results of this research study would not only provide valuable information related to the impact of the crisis, especially at the micro level, but also furnish critical inputs for evolving medium- and long-term policies to counter instabilities and ensure sustainable growth.

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Acronyms and Abbreviations

ADB	Asian Development Bank
ASI	Annual Survey of Industries
CAGR	Compound Annual Growth Rate
Cenvat	Central Value Added Tax
CGS	Credit Guarantee Scheme
CPI-IW	Consumer Price Index for Industrial Workers
CQGR	Cumulative Quarterly Growth Rates
CSO	Central Statistical Organisation
DEPB	Duty Entitlement Pass Book
DGCI&S	Directorate General of Commercial Intelligence and Statistics
EAC	Economic Advisory Council
ECB	External Borrowing
EPCG	Export Promotion Control Guarantee
EPL	Employment Protection Legislations
EUS	Employment and Unemployment Survey
FII	Foreign Institutional Investment
GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
GNP	Gross National Product
GoI	Government of India
HS	Harmonized Commodity Description and Coding System
IIFCL	India Infrastructure Finance Company Limited
IIP	Index of Industrial Production
ILO	International Labour Organization
IMF	International Monetary Fund
MFN	Most Favoured Nation
MoCI	Ministry of Commerce and Industry
MoF	Ministry of Finance
MoLE	Ministry of Labour and Employment
MoT	Ministry of Textiles
NBFC	Non Banking Financial Company
NCUES	National Commission on Unorganised Enterprises
NHB	National Housing Bank
NIC	National Industrial Classification
NSSO	National Sample Survey Organisation
PPP	Public Private Partnership
RBI	Reserve Bank of India
SPV	Special Purpose Vehicle
TWRFSS	Textiles Workers Rehabilitation Fund Scheme
UNCTAD	United Nations Conference on Trade and Development
UPSS	Usual Principal and Subsidiary Status
VKGUY	Videsh Krishi aur Gram Udyog Yojana
WPI	Wholesale Price Index
WTO	World Trade Organization
YoY	Year on Year

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Introduction

1.1 CONTEXT OF THE STUDY

The recent (2007–09) global financial meltdown and the related economic recession are seen as the worst since the Great Depression of 1930s. Given the increased (as compared to the pre-liberalisation period) integration of the Indian economy with the world economy, India could in no way remain unaffected by the negative fallout of this recession. However, the total impact of the global recession on developing economies (including India) is considered to be relatively less severe as compared to developed ones.

In fact, for a few initial months of the global slowdown, first evident in August 2007, India witnessed an upsurge in capital inflows (Economic Survey [2008–09]). This is widely referred to as a ‘positive shock’ and ‘decoupling’ impact in literature.¹ This led to an unprecedented surge in stock prices and other commodity prices in India. The real effect of the global slowdown, however, did impact the Indian economy and this was from the last quarter of 2007–08. The growth of Gross Domestic Product (GDP) declined to 8.6% during this quarter (year on year [YoY] basis) for the first time in the last decade. Following this, there was a sudden withdrawal of capital from the Indian markets, leading to busting of the capital markets in general and stock prices in particular. Some literature refers to this phenomenon as ‘sudden stop’ (Joseph et al., 2009).

Of the different impacts and implications of the global slowdown on the Indian economy, those pertaining to the export sector assume tremendous significance. The export sector in India has been recording phenomenal growth during the last decade and has acted as a catalyst in stimulating India’s overall economic growth. For instance, Indian exports recorded an average growth rate in excess of 20% during 2003–04 to 2007–08

¹ When recession begins, capital starts moving out from affected country (ies) to less affected country (ies) until the impact becomes global in nature. However, a sudden increase in capital inflows in any developing country poses a variety of threats such as disturbance of the exchange rate stability, price rise, rise in stock prices, etc. This is known as the ‘positive shock’ of recession.

and was one of the major contributing factors to the 9% economic growth achieved by India during this period (Acharya, 2009; Reddy, 2009). The significant expansion of the export sector in recent years has also contributed to a rapid rise in the number of persons engaged in various export oriented activities. The global financial crisis and the deepening recession in major economies of the world drastically slowed down the world import demand and thus adversely affected the growth performance of the export sector in India. In fact, the growth of Indian exports declined from 20% during 2003–04 to 2007–08 to around 13% in 2008–09 (Ministry of Finance [MoF], 2010).

The slowdown in overall GDP growth and exports has serious implications for the employment situation in the country. The falling profitability of the Indian industries led to job cuts in general and in export oriented sectors in particular. Further, it is important to recognise that the impact of the crisis on employment is likely to have been beyond job losses. In particular, the negative impact on informal employment and working poverty is likely to be most severe. Again, since the slowdown in the Indian economy is linked to the global economy through the external sector, the employment loss in labour intensive export sectors, such as textiles, gems & jewellery, handicrafts, etc is likely to be more than in other sectors of the economy. Presently, in the wake of signs of recovery of the world economy (including the Indian economy), it is of paramount importance to examine the magnitude and nature of job loss in the export oriented sectors in India.

The Government of India (GoI) announced a number of policy measures to deal with the negative fallout of the economic slowdown in general and for the revival of the external sector in particular (Reserve Bank of India [RBI], 2009). The policy initiatives of the GoI in this regard were in consonance with the global response to the crisis and ranged from general macroeconomic measures to specific schemes pertaining to boosting of exports. It is of great significance to assess and examine the adequacy of these policy measures in tackling the crisis in India as it can provide directions to revisions or continuance of these measures. Further, it is important to assess how these policy measures have been viewed by Indian industries and what are the needs and aspirations at the ground level.

Another issue that deserves immediate attention is the adoption of economic protectionism by the developed economies. It is important to highlight that such measures will only aggravate vulnerabilities, especially of the developing countries, reduce incomes and increase global inequalities further, and will be counter-productive in stalling the process of recovery (International Labour Organization [ILO], 2009).

The above context clearly highlights the need for assessing the impact of the economic downturn on the export sector with a holistic and integrated perspective so that measures

can be suggested for the simultaneous expansion of output, export, jobs and quality of employment. Against this background, the present study aims to systematically document what we know about the crisis and its impact, scientifically analyse what we can expect in the coming years, and suggest pragmatic measures for stimulating output, exports and quality jobs in export oriented activities.

1.2 THEORETICAL FRAMEWORK

Economic recession and slowdown has been widely discussed in neo-classical literature on the 'business cycle'. The early neo-classical theories linked the business cycle fluctuations with changes in 'real factors' such as demand and supply of goods and productive factors. The Great Depression of the 1930s, however, marked a paradigm shift in the understanding of the business cycle as Keynesian and post-Keynesian literature markedly stressed macroeconomic conditions such as monetary conditions, fiscal measures, aggregate demand and consumption of the economy² as the major reasons for fluctuations in the business cycle. Accordingly, government management of the economy came to be seen as not only desirable but also essential (King and Rebelo, 1999). Post-Keynesian literature (through the 1950s and 1960s) on the business cycle was further bolstered by incorporating the role of 'dynamic macroeconomic factors' such as population growth, productivity growth and capital formation in causing fluctuations. The classic works of Solow (1956), Cass (1965) and Koopmans (1965) integrated the business cycle theories with the 'growth model' and highlighted the role of labour supply and technology in determining business cycle fluctuations.

The measurement of the extent of fluctuations and their impact on output and employment has been equally debated in the neo-classical model of the business cycle. While analysing the volatility of the business cycle on the basis of long-term data from the US economy, King and Rebelo (1999) highlight the following 'stylised facts':

- * Consumption of non-durables is less volatile than output
- * Purchase of consumer durables is more volatile than output
- * Investment is three times more volatile than output
- * Government expenditures are less volatile than output
- * Total hours worked have about the same volatility as output
- * Capital is much less volatile than output but capital utilisation in manufacturing is more volatile than output
- * Employment is as volatile as output, while hours per worker are much less volatile than output

² This included factors like the psychology of households and firms.

- * Labour productivity is less volatile than output
- * Real wage rate is much less volatile than output

The lessons learnt from the above findings are of crucial importance for the present crisis. First of all, it is important to note that during a downturn, the demand for non-durables does not fall as systematically as that of food items. Decline in demand emanates from postponing the purchase of consumer durables. The purchase of consumer durables falls mainly in the expectation of lower prices in future. On the employment side it is very important to note that most of the cyclical variations is reflected in changes in employment, i.e. employment declines during the downturn with the same magnitude as the output. Further, since the real wage rate is much less volatile than output, the total wage bill of firms may increase during the downturn.

The total employment (not the working hours per worker)–output (production) relationship during the downturn holds true also through the neo-classical mechanism of the production function. Within the production function theory, the famous Pigovian model on the employment–wage relationship identifies an inverse employment–wage relationship. The production function clearly identifies the levels of employment at different levels of output. The relationship is widely known as ‘employment elasticity’ with respect to output. One such celebrated relationship is the Cobb-Douglas production function.³ The Cobb-Douglas production function has been widely used in literature to calculate employment elasticity and hence assess the employment–output relationship under different settings.

The neo-classical production theory identifies that when the production function curve shifts downward (say, during an economic downturn), labour productivity falls. In order to maintain the same levels of labour productivity, firms adjust the levels of employment downward. However, sometimes the downward adjustment of employment may not be a profitable business for firms mainly because of two reasons: (a) major employment adjustment may lead to under-utilisation of fixed capital (or capacity utilisation), leading in turn to more losses; and (b) in highly competitive labour markets, availability of skilled labour may be costlier during the recovery phase (Becker, 1971). This essentially leads to a situation of what is referred to as ‘labour hoarding’ (International Monetary Fund [IMF], 2009, p. 13). The higher the scale of labour hoarding, the larger the wage bill of firms. More job cuts, on the other hand, will maintain the original labour productivity and the wage bill of firms.

3 The functional form of the Cobb-Douglas production function is $Q = AL^{\alpha}K^{\beta}$. Where, Q is total production, A is a scalar, L is employment and K is capital. Further, α and β are the parameter estimates which represent the employment and capital elasticity with respect to total production.

The trade and employment relationship has been one of the core areas of research of the neo-classical trade theories. The standard theory used by economists to analyse the effect of trade (particularly trade liberalisation) on employment and returns to different factors of production is the Heckscher-Ohlin (HO) model. The model clearly identifies that trade will lead to increased demand of unskilled labour from less developed countries if the less developed countries participate in international trade. The related predictions in terms of the distributive consequences of international trade are: greater openness should increase the relative demand and the prices of unskilled labour and lead to more equal distribution of wages in low-skilled-labour-abundant countries (Meschi and Vivarelli, 2009). Accordingly, the business cycle link to this theory exemplifies that during a downturn, unskilled labour may be the first factor of production which is adversely affected, both in terms of job loss as well as wages.

The labour supply principle is equally important in determining the level of employment during the slowdown period. However, the relationship here seems uncertain. On the one hand, the grim employment prospects emanating from the downturn may discourage labour force participation because of low earning prospects and incentives, and on the other hand, the declining earnings of the existing workforce may lead second income earners to participate in the labour market. The 'second partner income' hypothesis of the labour markets, although evolved from the experiences of less developed countries, may provide a strong base for increased labour supply during the downturn even in many developed or emerging economies.

Labour market flexibility and employment protection legislations also play a very important role in determining levels of employment in a country during the slowdown period. Even if a firm perceives the downturn to be persistent for a fairly long time, firing of labour may not be possible because of stricter employment protection legislation. Further, many welfare governments may introduce new employment protection legislation during the time of crisis, at least for a temporary phase.

The business cycle has a complex and unclear relationship at the sectoral and subsectoral levels in terms of employment and output. Since different sectors of an economy usually have varied degrees of employment elasticity with respect to output, the impact of uptrends and downturns is likely to be different on subsectors. The business cycle does not affect different sectors with the same magnitude, leading to a complex inter-sectoral employment–output relationship. Various sectors of the economy may also work as a 'sponge' to job cuts in other sectors. As a result, the overall employment loss at the macro level may not be as visible as in the case of sectoral and subsectoral disaggregation.

The theoretical framework discussed above essentially highlights the following issues in relation to the current crisis:

1. There is always a lag between slowdown and job loss; employment adjusts to output with a lag during the initial periods of downturn but adjusts very fast when the downturn persists
2. Impact on jobs may be direct or indirect:
 - ▶ Direct: net job loss => layoff
 - ▶ Indirect: no job loss => only wage cut (labour hoarding)
 - ▶ Mixed: part layoff and part wage cut
3. Assessment of job loss:
 - ▶ Aggregate level: hides sub-sectoral losses
 - ▶ Disaggregate level: exposes sub-sectoral losses but cannot be generalised
4. Labour force participation may increase:
 - ▶ Second Partner Hypothesis
 - ▶ Multiple Employment Hypothesis

All these issues are worth exploring in order to assess the extent of employment loss during the current economic slowdown. Although it may not be possible to adequately assess some of these because of the lack of sufficient data, the broad theoretical framework provides the direction on the behaviour of these parameters. In the wake of the current crisis, there has been a large and growing literature, some to identify the reasons of the current crisis and others to assess the impact of the crisis on output and employment. Yet another set of literature aims to identify the policy gaps. The ensuing paragraphs provide a brief review of these literatures and the emerging gaps, particularly on the assessment of employment loss in India.

1.3 REVIEW OF CURRENT LITERATURE

The recent slowdown and job loss have much wider implications for the Indian economy in general and the export sector in particular. Soon after the economic downturn hit the Indian economy, the Labour Bureau, Ministry of Labour and Employment (MoLE, 2009a), in its survey of nearly 2,500 units covering sectors like textiles, metals & metal products, gems & jewellery, construction, automobiles, etc estimated that there was a job loss of nearly 0.5 million during September–December 2008. The survey also observed that export oriented sectors like textiles and gems & jewellery recorded a much higher decline in employment than the other sectors. The Labour Bureau survey, however, captures the employment loss only in the formal sector of the Indian economy.

Since the survey takes the sample of firms from the Annual Survey of Industries (ASI) frame, constituting an employment size of 20 or more, the impact of the slowdown in the informal sector enterprises is not represented in the survey. There is enough reason to believe that the extent of job loss may be higher in the informal sector as it has less employment protection legislations.

A study by the United Nations Conference on Trade and Development (UNCTAD, 2009) forecasts the impact of the slowdown on India's total exports and imports in ten major sectors and estimates economy-wide and sectoral employment impacts in 2009–10 and 2010–11. It also identifies sectors with a high potential for employment loss and highlights immediate policy implications. The study, however, is focused on assessing the trends in future exports of India. Instead of following a general macroeconomic framework of output–employment relationship, the study adopts an external sector model in isolation from the internal dynamics to project employment for different sectors. The policy implication of the study is focused on promoting exports and recovery only in relation to the external sector of India.

The changing status of unskilled and other vulnerable workers has been one of the areas of research in recent years. It is widely believed that during an economic downturn, vulnerable workers bear the real brunt. The study by the ILO (2009) focuses on 'decent work' implications of the present crisis and explores the issues related to vulnerable workers in detail (discussed in detail below). Included here are six rapid assessments in the subregion facilitated by the ILO, Sub-regional Office, Delhi, to get a better understanding of the global crisis from the social angle at the national level. These studies highlight tendencies like reduced employment creation, job losses particularly in export sectors, higher vulnerability of migrant and contract workers, and deterioration of the quality of employment across different sectors in India in the wake of the crisis. In this regard, the ILO study by Sharma and Rothboeck (2009) adopts a macroeconomic framework to assess the impact of economic slowdown on output and employment in India. The strength of this study lies in using a widely accepted methodology of impact assessment and measuring the impact particularly on vulnerable workers in India. The findings of this study have far-reaching policy implications in India. However, because the informal sector of India is less represented in the study, it notes that 'the most likely affected workers are from urban areas—the regular wage employed in organised establishments'. In fact, the extent of job loss on account of the current economic slowdown can only be captured by primary survey, which was not done in the referred studies.

There have been significant contributions from the ILO, Asian Development Bank (ADB) and IMF to the existing literature relating to the recent economic crisis and its impact. ILO (2009) analyses the impacts and implications of the global downturn within the

'decent work' framework.⁴ It argues that global coordination of financial rescue and fiscal stimulus packages will be effective only if they are synergised by concerted global action in boldly adopting the decent work approach as a means for a sustainable economic recovery. The report particularly examines the differential impacts of the crisis on the vulnerable sections and highlights the role of social dialogue as a mitigating strategy.

IMF (2009) assesses the impact of the downturn on a wide range of issues such as employment, output, exports, financial markets, real markets and so on at the international level and also individually for a number of developed and developing countries. The study also explores the issues related to the recovery of different economies. The study particularly notes that since the current crisis is not only linked to, but has emerged largely from the busting of asset prices, the role of 'macro-financial' factors attains crucial importance in tackling the problem.

In the backdrop of these reviews, the present study identifies several crucial issues related to the current slowdown and its impact on the Indian economy. Keeping in view the fact that the current global economic slowdown has penetrated India mainly through the external sector, the present study aims to study the impact of the crisis by integrating the external sector into the major macroeconomic framework of output–employment relationship. More importantly, in addition to presenting the broader picture of Indian exports at the national level, the study focuses on three labour intensive export sectors, viz. textiles, diamond and handicrafts. Secondly, the study focuses on the informal sector and assesses the extent of job loss and wage cut in the informal sector vis-à-vis the formal sector.

The main features of the present study are as follows:

- * Based on macro and micro level information
- * Focused on export, production and employment linkages
- * Analyses three major labour intensive export subsectors
- * Generates employment coefficient with respect to exports
- * Analyses impact of slowdown across formal and informal sectors
- * Examines wage loss in the contest of the slowdown
- * Measures efficiency and efficacy of stimulus packages

⁴ The 'decent work' approach entails opportunities for women and men to obtain decent and productive work in conditions of freedom, equity, security and human dignity.

1.4 OBJECTIVES

The main objective of the present study is to assess the impact of the economic slowdown on the actual and potential output and employment in three export oriented sectors: textiles, diamond cutting & polishing, and handicrafts.

More specifically, the study aims to:

1. Assess the impact of the economic slowdown on the output and exports of the three sectors
2. Estimate the impact of the slowdown on current as well as potential employment growth in the three sectors
3. Review the efficacy and adequacy of the stimulus packages announced by governments to bail out the sectors
4. Suggest policy measures and an action plan to boost output, exports and employment in the context of economic slowdown in the three referred sectors

1.5 METHODOLOGY

In the present study, the impact of the economic slowdown on employment, output and exports has been measured on the basis of data collected from both primary and secondary sources. While the impact on output and exports has been measured by a simple method of calculating cumulative and average annual growth rates and comparing the same for the pre-slowdown and slowdown periods, the impact of employment has been calculated by following a general framework of calculating employment elasticity for pre-slowdown and slowdown periods.

1.6 STRUCTURE OF THE REPORT

The report is organised into six chapters. After presenting the context of the study and theoretical framework in the present chapter (Chapter 1), Chapter 2 presents the detailed methodology of the study. In addition to discussing methodology and the analytical tools adopted for the analysis, the chapter also provides details on data sources and sampling design and sample size. Chapter 3 presents the current state of exports, production and employment in India. The chapter particularly focuses on the dynamics of exports and production and employment in the manufacturing sector in India. This chapter also analyses the current levels of and trends in exports, production and employment in the three specific sectors under study, viz. textiles, diamond and handicrafts.

Chapter 4 estimates employment elasticity and employment loss at broad sectoral and subsectoral levels as a result of the economic slowdown of the Indian economy. The

chapter particularly discusses the differential impact of the slowdown across formal and informal sectors in terms of production loss, job loss and wage reduction. Chapter 5 discusses the efficiency and efficacy of the stimulus packages announced by the GoI to counter the adverse implications of the economic slowdown and provide a boost to the economy. The concluding chapter presents an analysis on the recovery of the Indian economy and makes policy recommendations for ensuring sustainable growth. The policy recommendations have been provided at two levels: (a) at a cross-cutting level; and (b) at sector specific levels for textiles, diamond and handicrafts.

2

Methodology and Data Sources

As mentioned in Chapter 1, this study follows a production function approach to measure the impact of the economic slowdown on production, exports and employment. The study is based on data collected from both secondary as well as primary sources. While primary data has been collected to assess the ground level situation along with the needs and aspirations of exporters and employers, the secondary data is used mainly to evaluate the situation and projection of employment at the macro level, and highlight relevant policy implications. This chapter presents methodology, tools of analysis and sources of data used for the study.

2.1 METHODOLOGY

One of the objectives of the present study is to assess the impact of the economic slowdown on production, exports and employment in the three selected export intensive sectors. The broad method of measuring the impact will be to compare the growth pattern of the economy across the pre- and post- (or during) economic slowdown periods. Indian export and GDP data reflects the first warning of the slowdown during mid-2008. However, the first real impact of the slowdown was recorded by the end of 2007–08 itself, when the GDP and exports showed negative growth. Since most of the analysis in the present study is based on yearly data, the present study considers the period prior to the year 2008–09 as the pre-slowdown period and 2008–09 as the slowdown period. However, the impact on production and exports is also measured on the basis of quarterly data to capture the mid-year impact of the slowdown.

2.1.1 Impact of the Slowdown

The impact of the economic slowdown on employment, output and exports has been measured by a simple method of calculating cumulative and average periodical growth rates and comparing the same for the pre- and slowdown periods. Further, in order to observe the short-term trends in the growth rates of outputs and exports, the slowdown period has been broken down into smaller periods and quarterly growth has been assessed. The cumulative growth of production and export is calculated by using the

following formula:

$$r_e = n \sqrt[n]{\frac{E_t}{E_{t-1}}} - 1$$

1

Where,

r_e is rate of growth in export (production, employment)

n is number of years (months)

E_t is total export (production, employment) in time period t (say, any year or month in the slowdown period)

E_{t-1} is total export (production, employment) in time period $t-1$ (say, any year or month in the pre-slowdown period)

Based on the formula (1), growth rates of income (measured by domestic product), employment and exports, to be referred to as r_{eg} , r_{ee} and r_{ex} respectively, have been calculated for the pre-slowdown and slowdown periods separately. The difference in the rates of growth across the two periods measures the impact of the slowdown.

2.1.2 Employment Elasticity and Projections

The impact of the slowdown on employment has been worked out on the basis of projected employment at major sectoral and subsectoral levels. Projection of employment has been done for the post-2004–05 period as comprehensive and reliable employment data is not available for this period. Projection of employment for the post-2004–05 period has been done on the basis of employment elasticity calculated using the latest available data on domestic products (production) and employment. A typical method of calculating employment elasticity with respect to production is fitting the Cobb-Douglas production function as below:

$$Q = AL^\alpha K^\beta$$

2

Taking a double-log function of the equation (2) reduces to

$$\log Q = A + \alpha \log L + \beta \log K$$

3

Where,

Q is total production (domestic product)

A is a scalar

L is employment and

K is capital

Further, α and β are the parameter estimates which represent the employment and capital elasticity with respect to total production

Estimation of equation (3) requires a time series (or cross-section) data on production, employment and capital. However, the estimation is constrained by availability of data on the following fronts:

1. Comprehensive and reliable time series data on employment is not available particularly at disaggregated/subsectoral levels as required for the study. It may be noted that employment data from the annual rounds of the National Sample Survey Organisation (NSSO) is not reliable because of the very small sample size at subsectoral levels.
2. Production (domestic product) and employment data is not available from one common set of database to enable cross-section analysis for the entire Indian economy (particularly taking both formal and informal sectors into consideration).
3. Subsectoral level data on GDP is not available for the slowdown period, the year 2008–09.
4. Since the present study focuses on the three specific export sectors (textiles, diamond and handicrafts), there is lack of perfect concordance between the National Industrial Classification (NIC) classification of industries (to be used for employment data from the NSSO) and the Harmonized Commodity Description and Coding System (HS) classification of export data at subsectoral levels.

Alternatively, when the annual subsectoral level data on GDP and employment is not available, the employment elasticity can be worked out with respect to sectoral GDP and exports on the basis of the discrete data for two points of time, say, for the years 1999–2000 and 2004–05. These are the latest two years for which subsectoral level data on employment is available from the quinquennial surveys of the NSSO.

The formula to be used for the calculation of employment elasticity will be as follows:

Employment elasticity with respect to income (GDP):

$$\frac{\delta N / N}{\delta Y / Y} \quad \text{—————} \quad \text{4}$$

Where,

δN and δY are changes in sectoral employment and gross domestic product (GDP) respectively between the two referred periods and N and Y are base year sectoral employment and income (GDP)

The employment elasticity so calculated will be utilised for estimating employment in any terminal year (t), say, for the years 2007–08 and 2008–09. The exact formula to be used is as follows:

$$E_t = E_0 (1 + r_e)^t \quad \text{—————} \quad \text{5}$$

Where,

E_t is total employment in the t^{th} year
 E_0 is total employment in the base year
 r_e is rate of employment growth

And,

$$r_c = \eta r_g$$

Where,

η is employment elasticity

r_g is growth of exports/GDP

However, as has been well documented, the estimate of employment elasticity has been typically high for the period 1999–2000 to 2004–05 (see Rangarajan et al., 2007). Three different scenarios will be considered to work out ranges of employment elasticity during the last one decade or so. These three different scenarios will involve calculating the employment elasticity for three different time periods, viz. (a) between 1993–94 and 1999–2000; (b) between 1999–2000 and 2004–05; and (c) between 1993–94 and 2004–05. Hence, three estimates of employment elasticity will be used in equation (6) and finally equation (5) will be estimated to arrive at employment estimates in the terminal year(s). However, final calculations will be based on the long-term employment elasticity calculated for the period 1993–94 to 2004–05.

Subsectoral elasticity. Since the present study aims to assess the impact of the slowdown at the subsectoral levels of textiles, diamond cutting and polishing, and handicrafts, the elasticity of employment with respect to the subsectoral domestic product will be calculated accordingly, following the same principle as mentioned above. Further, since most of the domestic product data is not available at the levels of disaggregation that is required (particularly in case of diamond cutting and polishing and handicrafts), a higher level of aggregation has been considered for working out the subsectoral elasticity. More issues related to data availability have been discussed in the section on data sources.

Assessment of Employment Elasticity from Primary Data. In addition to the above, employment elasticity has also been worked out on the basis of the actual data reported at the firm level for the pre- and slowdown periods. The actual employment data for the slowdown period has been collected through a primary survey of approximately 1,250 firms spread across the three sectors and different regions of the country. In addition to other information, the primary data has been collected on sales, production, export and employment trends during 2004–05 to 2008–09. The elasticity of employment, hence, has been calculated by using equation (3) as mentioned earlier.

The advantages of calculating the employment elasticity from the primary data are three-fold.

1. Since the primary data pertains to the slowdown period, the employment elasticity on the basis of the cross-section firm level data provides the latest estimates of the same.

2. The employment elasticity so calculated will represent the specific subsectors.
3. The robustness of the employment elasticity can be compared across the two sets of data, i.e. secondary sources and primary sources.

2.1.3 Export–Employment Relationship

As discussed in Chapter 1, the export–employment relationship has been analysed in great detail in development economics. This linkage has been explored particularly in view of trade liberalisation and its impact on export and employment. Based on this theoretical background, we explore the role of exports in generating employment in India in general and for the three sectors being studied in particular. The relationship is explored by fitting a multivariate regression with employment being a function of exports and other control variables such as volume of total production, input costs, real wage rates, proportion of domestic markets, role of technology, and extent of contracting in (out) at firm level. Effectively, the postulated relationship takes the following form:

$$\text{Ln}(N_i) = \alpha + \beta_1 \text{Ln}(X_i) + \beta_2 (Z_i) + \mu_i \quad \text{—————} \text{7}$$

Where,

N_i , X_i and Z_i are employment, export and other control variables at firm levels

β_1 , and β_2 are parameter estimates

μ_i is standard error term

Some literature also considers lagged employment (i.e. employment of the previous year) as one of the main explanatory variables in the model. We preferred to capture the impact of the time variant by introducing time as an independent variable at the firm level. Through the primary survey we have collected information on almost all the control variables as mentioned above for the last five years, i.e. since 2004–05 to 2008–09. In the light of the time variant being used as dummy, the equation (7) takes the following form⁵:

$$\text{Ln}(N_{it}) = \alpha + \beta_1 \text{Ln}(X_{it}) + \beta_2 (Z_{it}) + (\nu_t + \mu_{it}) \quad \text{—————} \text{8}$$

In equation (8) ν_t is the year effect that is the same for all firms in a single year and it can be thought of either as a ‘random effect’ or as a ‘fixed effect’. The term μ_{it} is the standard error term as also reported in equation (7) but in the presence of the time variant.

From equation (8) we can get the value of export elasticity with respect to employment. The elasticity of exports with respect to employment, estimated from the equation (8), can also be utilised for projecting the quantum of employment on the basis of exports at the national level. In other words β_1 stands for the percentage variation in employment because of percentage variation in exports, which may also be referred

⁵ Note that by distinguishing firms according to time periods, the model has a data structure that is similar to a ‘panel data regression’ though coming out of a single cross-section.

to as the employment coefficient of exports. Further, primary data will also help in calculating employment elasticity at different disaggregated levels, say, across organised and unorganised sectors.

2.1.4 Impact on Wages and Labour Welfare

In addition to estimating the impact of the slowdown on employment, production and exports, the study also proposes to assess the impact on wages and overall labour welfare during the slowdown period. The growth in real wages and other benefits to labour will be calculated on the basis of simple tabulation of real wages during the last five years at the firm level.

2.1.5 Efficacy of Stimulus Packages

The present study also aims at analysing the efficacy and efficiency of the recent 'stimulus packages' announced by the government. However, unlike in the previous sections, the analysis in this section will be based on qualitative data collected from the primary survey. The analysis will also focus on the emerging needs and aspirations of entrepreneurs/employers with regard to the government's policy towards encouraging industrial production in general and exports in particular. Juxtaposing the aspirations of entrepreneurs/employers with the major policy initiatives of the government, the study aims to recommend new policy initiatives at both the subsectoral levels and broad cross-cutting levels.

2.2 DATA SOURCES

As indicated earlier, the study is based on data collected from both secondary and primary sources. While the analyses related to the impact of the slowdown on exports, production and employment have been carried out largely on the basis of the secondary data compiled at major sectoral and subsectoral levels, the analyses related to the employment coefficient with respect to exports, impact of slowdown on wages, differential impacts across formal and informal sectors, etc have been undertaken on the basis of primary data. The details of the secondary and primary data used in this study are elaborated below.

2.2.1 Secondary Sources

A large number of secondary sources of information has been used for the present study. The study has used annual reports and other information available from the Ministry of Commerce and Industry (MoCI), Ministry of Textile, Office of the Commissioner of Textiles and Export Promotion Councils (Textiles, Diamond and Handicrafts), and other literature available on the subject. In addition, for various statistical calculations the study uses data from the following sources:

1. Employment and Unemployment Survey (EUS) of the NSSO
2. GDP and sectoral domestic product, Index of Industrial Production (IIP), Wholesale Price Index (WPI) and Consumer Price Index for Industrial Workers (CPI-IW) data from Central Statistical Organisation (CSO)
3. Export–Import data from the MoCI
4. Number of economic enterprises by employment size–class in the three sectors under reference from the Economic Census

Unit level EUS data from the NSSO has been used mainly to calculate employment at subsectoral, major sectors and all-India levels. The study uses the last three quinquennial rounds, i.e. 50th round (1993–94), 55th Round (1999–2000) and 61st Round (2004–05) for generating employment figures at the sectoral and subsectoral levels. All the employment figures reported in the study are weighted by the in-built weighting system of the NSSO and adjusted for the interpolated Census population for the respective years. It is important to note here that as no large sample employment data is available after the 61st round of NSSO, we have projected employment for the slowdown period.

GDP and subsectoral domestic product data is available from the CSO. While the GDP data is available for 2008–09, i.e. the terminal year of the period of reference for this study, the subsectoral domestic product data only up to 2007–08 has been released by the CSO. Using the IIP (which is available for the year 2008–09) we projected the subsectoral domestic product data for the period 2008–09. At the macro level, the projections were done for five subsectors, viz. a) weaving, spinning etc of textiles, b) wearing apparel, c) wood & wood products, d) metal & metal products, and e) other manufacturing. Since the domestic product data is not available for handicrafts and diamond, we approximated the employment elasticity with respect to domestic product at a higher level of aggregation. For handicrafts, wood and metal sectors were considered and for diamond other manufacturing was considered.

Export data was directly accessed from the website of the MoCI. Most of the export data used in the study pertains to the section ‘System on Foreign Trade Performance Analysis (FTPA)’. This section provides the export data at ‘principal commodity’ level. However, for some specific purposes, the detailed data bank (export–import data bank) of the Department of Commerce has also been considered. In addition, some recent quarterly estimates of the export data has been collected directly from the Department of Commerce.

Unit level data from the Economic Census has been used mainly to determine the sampling frame for the primary survey. From the Economic Census the number of enterprises across size–class of employment was mapped in seven major cities.

2.2.2 Primary Sources

Primary data at the firm level was collected using a well designed sampling for the three specific sectors under the study. The sampling followed a two-stage stratified random sample of approximately 1,250 firms selected from different centres. The firms were selected in a proportionate manner so that the final sample would be representative of the specific sectors. The first level of stratification of the sample was done on the basis of sectors of study and the centres where the samples were located. As mentioned above, the sectors of study, textiles, diamond and handicrafts, were purposively selected in order to assess the impact of the slowdown in export and labour intensive sectors. In order to optimise the logistic arrangements, time and resources, the sample was located in urban centres of high concentrations of these industries. The sector specific location of samples in different centres is mentioned in Table 2.1.

As mentioned in Table 2.1 the sample of textiles firms were spread across three major centres, viz. Ludhiana in Punjab, Noida in Uttar Pradesh and Tirupur in Tamil Nadu. In addition to this, the sample of carpet producing firms from Varanasi in Uttar Pradesh also constitutes a part of the overall sample of textiles. By spreading the sample across four centres we were able to capture two major segments of textiles, viz. wearing apparel from Noida, Ludhiana and Tirupur, and weaving & spinning from Varanasi and Ludhiana. Ludhiana constituted the sample for both the segments in textiles.

For diamond, we preferred to locate our entire sample in the city of Surat. The Economic Census shows a concentration of more than 90% of the country's diamond cutting and polishing firms in Surat. The sample for handicrafts was again distributed across different centres. Handicrafts, being a highly heterogeneous sector, required the sample to be spread across a variety of products. Across different handicrafts products we made selections keeping three specific products in mind, viz. metal art ware, wood ware and carpets. The latest export data indicates these three groups taken together constitute around 80 per cent of the total handicrafts export from India (Table 2.2).

Accordingly we selected four centres to locate the sample of firms for the handicrafts. These centres were Moradabad for brassware, Mysore for wood ware, and Bhadohi and Varanasi for carpets. In all these centres the final sample was again proportionately distributed across different size-class of employment. Finally, approximately 1,250 sample firms were selected for the data collection. Out of these 1,250 firms, 7 firms were dropped from further analysis because of inadequate data provided by the firms.

All the primary data analysis in the present study hence is based on 1,243 firms spread across the different sectors and centres. Distribution of the total sample across all the three sectors and all the centres by size-class of employment is provided in Table 2.3.

Table 2.1: Primary Field Centres

SECTORS	CENTRES
Textiles	Ludhiana (Punjab), Noida (Uttar Pradesh) and Tirupur (Tamil Nadu)
Diamond	Surat
Handicrafts	Moradabad for brassware, Mysore for wood ware and Bhadohi-Varanasi for carpets

Table 2.2: Total Value (in ₹ Crores) of Exports of Handicrafts Products and Proportionate (%) Share in 2008–09

ITEM	VALUE IN CRORES	PERCENTAGE CONTRIBUTION
Art metal ware	1790.27	21.88
Wood ware	622.78	7.61
Hand printed textiles & scarves	1116.86	13.65
Embroidered & crocheted goods	2936.98	35.89
Shawls as art ware	119.07	1.46
Zari & zari goods	175.13	2.14
Imitation jewellery	208.28	2.55
Miscellaneous handicrafts	1213.75	14.83
TOTAL	8183.12	100

Source: Department of Commerce, MoCI.

Table 2.3: Distribution of Firms across Different Sectors and Centres by Size–Class of Employment

SECTORS AND CENTRES	SIZE–CLASS OF EMPLOYMENT				TOTAL
	1–9	10–40	40–100	>100	
Textile1: Noida, Ludhiana	24	187	94	45	350
Textile2: Tirupur	10	177	8	0	195
Total textiles including carpets in Bhadohi	46	413	121	46	626
Diamond: Surat	18	322	18	1	359
Handicraft1: Moradabad	133	19	1	1	154
Handicraft2: Mysore	79	20	5	0	104
Handicraft3: Bhadohi	12	49	19	1	81
Total Handicrafts	224	88	25	2	339
TOTAL SAMPLE	276	774	145	48	1,243

Approximately 62% of the total sample was in the informal sector with the bulk (85%) of the handicraft firms falling under the informal sector. Table 2.4 presents the distribution of the sample by informal and formal sectors.

Table 2.4: Percentage Distribution of All Firms in Each Sector by Informal and Formal Enterprises in Sample

SECTOR	PERCENTAGE DISTRIBUTION OF FIRMS		
	INFORMAL	FORMAL	TOTAL
Diamond	79.67	20.33	100
Handicraft	84.73	15.27	100
Textile	36.13	63.87	100
TOTAL	62.03	37.97	100

Within the textiles sector, approximately 64% of the firms belonged to the formal sector mainly because most of the sample firms were of medium size with 10 to 40 workers and reported to have registered under the Factories Act, 1948.

All the sample firms were given a common questionnaire seeking information of both types, quantitative as well as qualitative. The information from all the firms was collected with the declaration of keeping the individual information secret. It was declared to each firm in the beginning that the information collected would be used only for research purposes and recommending policy implications to the Department of Commerce, MoCI, GoI. The questionnaire contained information on the location of the firms, size of employment, production and exports, contracting in or contracting out practices, problems faced by firms, and entrepreneurs' response to and suggestions regarding the stimulus packages announced by the government from time to time.

Interactive interviews. Other than collecting quantitative and qualitative data at firm levels, we also conducted a number of interactive interviews with representatives of a wide range of stakeholders such as Export Promotion Council of India for textiles, diamond and handicrafts. Interviews were also conducted with local level export houses and entrepreneurs' associations. Most of these interviews focused on soliciting information on problems being faced by firms in respective sectors and entrepreneurs' response to stimulus packages of the government. Interviews also divulged information on the needs and aspirations of entrepreneurs and exporters.

On the whole we collected a large volume of quantitative and qualitative information spread across different centres and firms. Along with the secondary sources of information available through various sources as mentioned earlier, the primary data was analysed to provide the basis for the present report.

3

Sectoral Trends *Exports, Output and Employment*

This chapter deals with the current trends in India's exports, sectoral domestic products and employment. The chapter is divided into three sections. The first section (section 3.1) presents the major trends in India's exports with a focus on the three sectors under study, viz. textiles, diamond and handicrafts. The overall and sectoral domestic product is set forth in section 3.2. Section 3.3 presents the trends in employment over the last two decades.

3.1 TRENDS IN INDIA'S EXPORTS

3.1.1 Trends in India's Merchandise Trade

The economic downturn in the world economy, fuelled by the global financial crisis during the period 2008–09, significantly affected world trade. India was no exception to that. During the downturn period, India's trade showed a significant slowdown. The Annual Report of the MoCI, 2008–09, notes, 'An export target of US \$ 200 billion was set for the year 2008–09. As against this, exports reached a level of US \$ 168.7 billion during the year registering a growth of 3.5 percent. The setback was primarily on account of global recession which resulted, as per WTO, in shrinkage of world trade, in volume terms, to 2 percent in 2008 from a growth of 6 percent in 2007' (MoCI, 2009).

However, it is important to note that in the face of the global slowdown and financial crisis, Indian exports showed a good measure of resilience as the deceleration in exports growth was less marked in the case of India as compared to a sharp decline in exports growth recorded by other leading exporting countries like the USA, Germany, Japan, China, etc. In fact, India recorded a significantly positive growth of approximately 12% in \$ terms during 2008–09 over 2007–08. It may be noted that during 2008–09, world export declined by approximately –10% to –12% (–16% in developed economies and –8% in developing economies). Although the country's exports registered a significant decline in 2008–09 (12%) over 2007–08 (29%), the fact that there was a positive growth even in the slowdown period demonstrates the internal strength of India's exports.

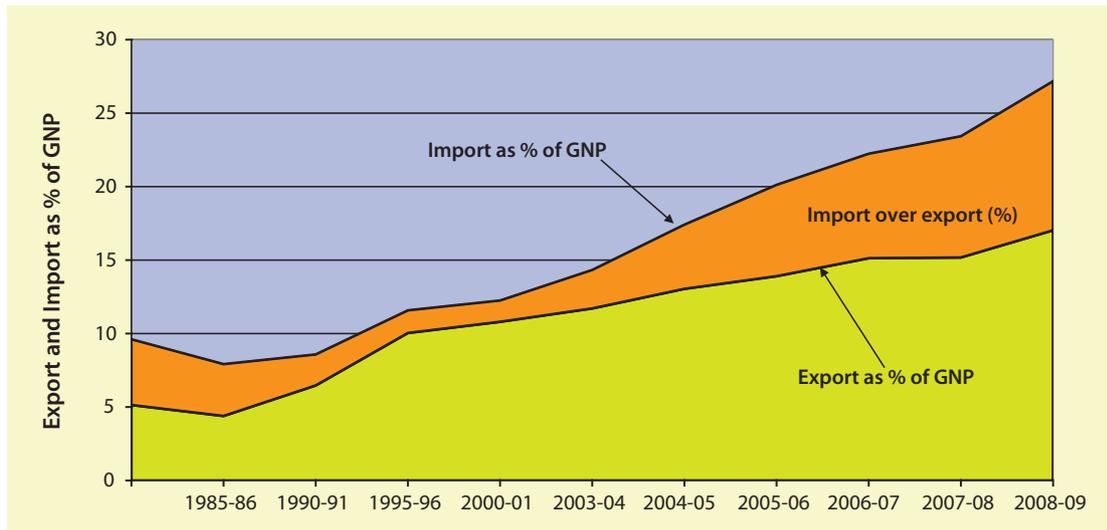
A long-term trend in India's commodity trade is essentially of a steady and sustained growth, both in imports and exports. India's trade share in GNP rose from a bare less than 10% during the period of pre-liberalisation (before 1991–92) to approximately 14% by the beginning of this century and reached 27% during 2008–09. In fact, during the entire post-liberalisation period, it was only during 2007–08 that India's trade (both imports and exports), for the first time, reflected signs of downturn or at least stagnation. However, it picked up soon and 2008–09 saw a significant increase in the share of total trade in India's GNP (Fig. 3.1).

Further, what is evident from Fig. 3.1 is that imports have grown at much higher rates than exports, particularly since 1995–96. It is important to note here that although trade liberalisation in India was started almost co-terminus with the overall economic reform process, 1995–96 marked the end of the old system of world trade, the General Agreement on Tariffs and Trade (GATT), and the emergence of the World Trade Organisation (WTO).⁶ This led India to formulate its long-term Export–Import Policy (Exim Policy) in 1999 with far greater trade liberalisation measures than planned in the 1993–94 Exim Policy. The first long-term Exim Policy presented India's vision of trade liberalisation with an emphasis on the reduction in tariff rates and the removal of various quota systems. All these provided a great boost to Indian imports over the years.

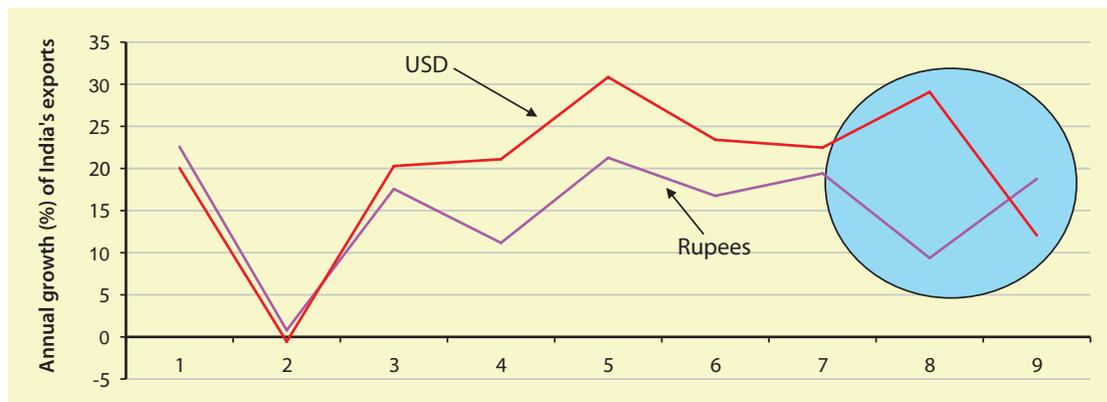
The sluggish growth in exports, however, is evident from the fact that over the years the gap between the share of imports and exports in GNP has widened significantly. Since exploring the reasons of sluggish overall growth in exports as compared to that in imports, over a long period of approximately two decades or so, is not the mandate of the present study, we do not stretch this issue further, other than noting that the growth of exports has lagged behind that of imports continuously through the 1990s and 2000s.

Despite sluggish exports as compared to imports over a long period of time, the annual growth of the value of exports has not only been positive but has also improved over the years both in Rupee and Dollar (USD) terms. All through the period 2000–2009, the annual growth of exports both in terms of Rupees and Dollars was significantly positive except in 2001–02 when the growth was negligible in Rupee terms while it was marginally negative in Dollar terms (Appendix Table 1). What is worth noting from the data presented in Appendix Table 1 is that towards the end of the period 2008–09, the annual growth rates in Rupee and Dollar terms show very divergent trends (Fig. 3.2). This is mainly because of the high fluctuations in the exchange rates during this period.

⁶ The period of the Uruguay Round, 1986 to the end of 1994, was the last round of the old world trade system GATT. With the final agreement of the UR, which came into force on 1 January 1995, the GATT changed into WTO with a wider coverage, including those areas having no direct link with the trade of goods.

Fig. 3.1: Share (%) of Import and Export in Total GNP in India

Source: Data collated from Central Statistical Office (CSO) for GNP and MoCI for exports and imports.

Fig. 3.2: Trends in Annual Growth of Exports in Rupee (Constant 1999–2000 Prices) and Dollar Terms for the Period 2000–09

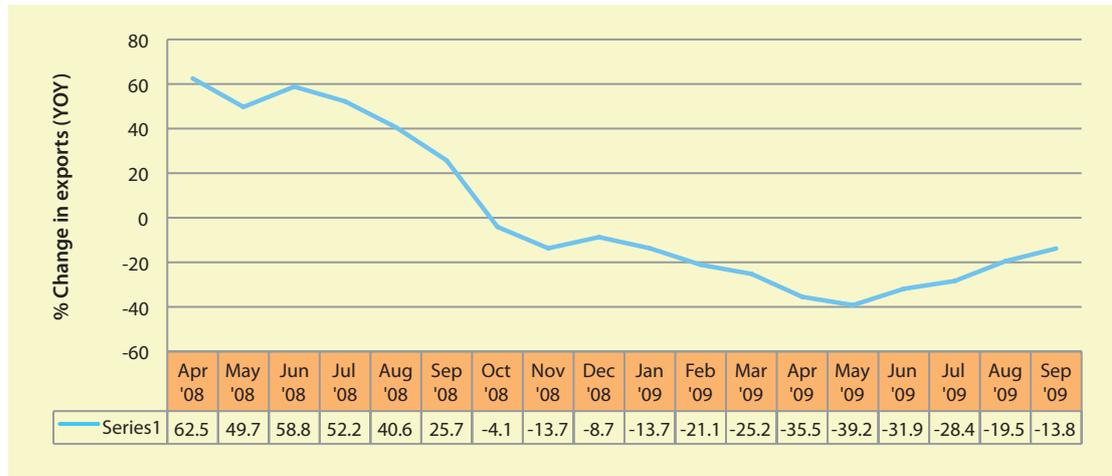
Note: GDP deflators have been used to convert to constant prices.

Source: Based on Appendix Table 1.

It is evident from Fig. 3.2 that the Rupee–Dollar exchange rates have played an important role in determining the export growth in India, particularly since 2005–06. The strengthening Dollar against Rupee during 2006–07 dampened the export growth in Dollar terms in that year while the reverse was the case in 2007–08. The recent economic slowdown has adversely affected the export performance in Dollar terms as reflected in the data released by the MoCI. On a YoY basis, Indian exports in Dollar terms registered a net decline of 28.5% during the period April–September 2009 as compared to the same period in 2008. However, it is worth noting that although the monthly export

growth during 2009–10 (YoY basis) continued to be in a negative territory, the intensity of the decline in exports from the level of –35.5% in April 2009 to –13.8% in September 2009 is encouraging and indicates steady recovery. This essentially implies a positive trend in exports since May 2009, after a negative trend for the previous year (Fig. 3.3).

Fig. 3.3 : Monthly Percentage Change (YOY) in Exports during 2008 and 2009



Source: Data taken from MoCI Press Release, 29 October 2009.

3.1.2 Exports of Textiles, Diamond and Handicrafts

India's exports stood at approximately ₹ 840 thousand crores during 2008–09, showing an annual growth of approximately 28% over the previous year at current prices. Since the present study is focused on three important export sectors of India, viz. textiles, diamond and handicrafts, the discussion in the rest of the chapter is focused on these three sectors. While considering the composition of the three referred 'principal commodities' of exports, we have treated carpets as a separate category mainly because the product relates to both textiles and handicrafts; hence, to avoid any possibilities of double counting, we have constantly mentioned carpets and its components as a separate category.

Most of the analysis in the following sections pertains to the period since 2000. The year 1999–2000 has been considered mainly as a base of comparison. That year has been considered as the base of comparison also because many other comparable and relevant statistics such as price indices, GDP, National Industrial Classification (NIC), etc for the period since 2000 are available on the same base.

Magnitude of Exports and Relative Importance of the Three Sectors. The total values of exports of the three referred principal commodities, along with carpets and raw cotton mentioned separately, are presented in Table 3.1 for the period 1999–2000 to

2008–09. Among the three principal commodities, textiles and diamond show phenomenal increase in the values of exports at current prices over the years. However, even at current prices, handicrafts registered a net decline.

Table 3.1: Values (₹ Crores) of Exports of Selected Principal Commodities, at Current Prices

COMMODITIES	1999–2000	2004–05	2005–06	2006–07	2007–08	2008–09(P)
Textiles	39,733	58,045	68,823	74,391	74,399	88,498
Carpets	2,306	2,860	3,775	4,199	3,798	3,564
Cotton raw incl waste	566	423	2,904	6,108	8,865	2,866
Diamond	28,135	46,607	51,411	47,935	57,188	47,907
Handicrafts	2,897	1,696	2,045	1,982	2,046	1,375

Note: (P) is provisional.

Source: MoCI website: <http://commerce.nic.in/ftpa/comgrp.asp>

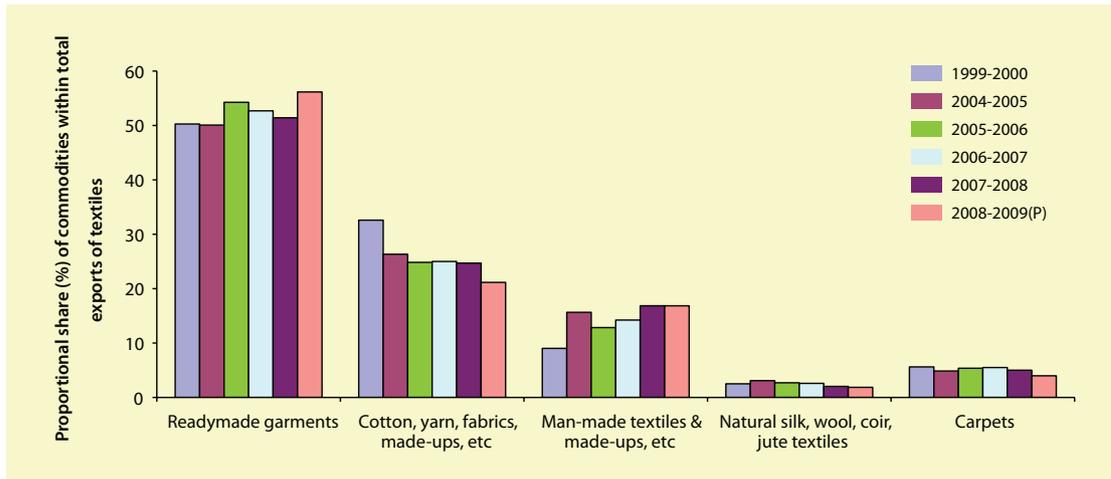
Table 3.2: Share (%) of Textiles, Diamond and Handicrafts in Total Merchandise Exports (₹ Crores) of India

PRINCIPAL COMMODITIES	1999–2000	2004–05	2005–06	2006–07	2007–08	2008–09(P)
Textiles	24.97	15.46	15.08	13.01	11.34	10.54
Carpets	1.45	0.76	0.83	0.73	0.58	0.42
Cotton raw incl waste*	0.36	0.11	0.64	1.07	1.35	0.34
Diamond	17.68	12.42	11.26	8.38	8.72	5.70
Handicrafts	1.82	0.45	0.45	0.35	0.31	0.16
Textiles, Diamond & Handicrafts	72.71	45.43	44.16	37.29	34.23	28.13
TOTAL EXPORTS	159,095	375,340	456,418	571,779	655,864	839,978

Note: (P) is provisional.

Source: MoCI website: <http://commerce.nic.in/ftpa/comgrp.asp>

The three sectors, i.e. textiles, diamond and handicrafts, taken together constituted approximately 28% of the total Indian exports (Table 3.2) in 2008–09. Trends in proportional contribution over the years, particularly since 1999–2000, of the three sectors show interesting patterns. It is evident from the export data that the share of these three sectors in total Indian exports has declined over the years. These sectors taken together constituted up to 73% of the total exports in 1999–2000, which steadily declined to 28% during 2008–09. The contribution of textiles alone declined from approximately a quarter of total Indian exports in 1999–2000 to just 11% by 2008–09. Similarly, the export share of diamond and handicrafts declined from around 18% and 2% respectively in 1999–2000 to barely 6% and 0.2% respectively in 2008–09.

Fig. 3.4: Share (%) of Different Main Commodities in Total Textile Exports in Different Years

Textiles. Although the share of all the three sectors under reference in the total exports of India has declined over the years, textiles has not only maintained its share of over 10% in the year 2008–09 but also showed the least decline in share over the years as compared to that of the other two sectors. Within the total textiles exports, the share of readymade garments (RMG) has in fact increased over the years, mainly at the cost of decline in the share of cotton, yarn, fabrics, made-ups, etc; natural silk textile; wool, coir & jute; and related products. Similarly, carpets, both handmade non-silk and silk carpets, witnessed significant and continuous decline in their shares over the years (Fig. 3.4).

RMG and man-made textiles & made-ups are the two commodities within textiles which are also classified as ‘textile products’ or ‘wearing apparel’ by the NIC. These textile products have shown phenomenal export potential in recent years and have probably defied all the major impacts of the current economic slowdown.

The overall trends in proportional contributions of the principal commodities necessarily indicate two different types of developments in India’s external sector:

1. Increased competition because of liberalised imports of commodities in the three referred sectors
2. Gradual replacement of traditional sectors of India with modern export sectors

These issues need to be explored in more detail for any conclusive statements.

3.1.3 Growth of Sectoral Exports

At the 'principal commodity' level, the values of textile exports at current prices show a positive growth in 2008–09 over 2007–08. However, as mentioned earlier, even at current prices, diamond and handicrafts show a net decline in total export values in 2008–09 over 2007–08. Similar trends are also visible with respect to carpets and raw cotton.

The growth in textile exports during the year 2008–09 has not only been perceptible but has also negated all previous forecasts. For instance, the study by UNCTAD (2009), based on the calculated 'price' and 'income' elasticity, had predicted a negative (–8.9%) growth of textile exports during 2008–09 over 2007–08. However, the provisional figures of 2008–09 clearly indicate a big jump in the exports of textiles after near stagnation for the last two consecutive years of 2006–07 and 2007–08.

The growth of textile exports during 2008–09, however, was not uniform across different segments. The trends at the disaggregated commodities levels indicate that many textile items such as cotton, yarn, fabrics, made-ups, etc; natural silk textiles; coir & coir manufactures; and jute manufactures show an absolutely insignificant increase in exports during the year 2008–09 (Table 3.3). Further, the first three commodities registered a net decline even at the current prices during 2007–08 over the previous year.

Table 3.3: Values (₹ Crores) of Exports of Commodities within the Selected Principal Commodities, at Current Prices

	1999–2000	2004–05	2005–06	2006–07	2007–08	2008–09(P)
TEXTILES						
Readymade garments	20,648	29,481	38,154	40,237	39,001	50,291
Cotton, yarn, fabrics, made-ups, etc	13,388	15,502	17,465	19,089	18,734	18,942
Man-made textiles & made-ups, etc	3,705	9,214	9,030	10,863	12,785	15,088
Natural silk textiles	1,030	1,818	1,895	1,977	1,541	1,664
Wool & woollen manufactures	217	314	378	386	374	457
Coir & coir manufactures	200	474	590	660	645	681
Jute	545	1,241	1,312	1,178	1,319	1,376
CARPETS						
Handmade excl silk	2,161	2,732	3,671	4,067	3,726	3,505
Silk carpets	145	127	103	132	72	59

Note & Source: Same as for Table 3.1

Similarly, within carpets, both the major commodities, viz. handmade non-silk and silk carpets, registered a net decline during the last two consecutive years, bringing the total value of exports of these two commodities to less than the export values of the year 2005–06 even at current prices.

Exports of these sectors at constant prices show an even more dismal picture. The export values of the three principal commodities, components of these three principal commodities, and the total exports of India at 1999–2000 prices are presented in Table 3.4. At the constant 1999–2000 prices, India's total exports stood at approximately ₹ 522 thousand crores in 2008–09, showing a percentage increase of 18% over the previous year. The value of exports from the three sectors clearly indicates that except for a few subsectors of textile products, most of the subsectors show a net decline in export value during the slowdown year of 2008–09 at constant prices.

Table 3.4: Values (₹ Crores) of Exports of Principal Commodities within the Selected Commodities, at Constant 1999–2000 Prices

	1999–2000	2004–05	2005–06	2006–07	2007–08	2008–09 (P)
Textiles	39,733	49,190	61,259	64,663	65,362	73,324
Readymade garments	20,648	24,984	33,960	34,976	34,264	41,667
Cotton, yarn, fabrics, made-ups, etc	13,388	13,137	15,545	16,593	16,459	15,694
Man-made textiles & made-ups, etc	3,705	7,809	8,037	9,443	11,232	12,501
Natural silk textiles	1,030	1,541	1,687	1,718	1,354	1,379
Wool & woollen manufactures	217	266	336	335	328	378
Coir & coir manufactures	200	402	525	574	567	564
Jute manufactures	545	1,052	1,167	1,024	1,159	1,140
Carpets	2,306	2,423	3,360	3,650	3,337	2,953
Handmade excl silk	2,161	2,315	3,268	3,535	3,273	2,904
Silk carpets	145	108	92	115	63	49
Cotton raw incl waste	566	358	2,585	5,309	7,789	2,374
Diamond	28,135	36,156	38,190	33,778	38,523	29,760
Handicrafts	2,897	1,316	1,519	1,397	1,378	854
TOTAL EXPORTS	159,095	291,174	339,047	402,907	441,803	521,799

Notes: (P) is provisional; Sectoral WPI has been used as a deflator for textile products while general WPI has been used for the diamond and handicrafts sectors.

Source: Same as for Table 3.1.

The annual growth of export value at constant prices indicates that the decline in exports in most of the subsectors had started from the year 2007–08. In 2008–09, the impact of the slowdown was further accentuated.

Among the three sectors, handicrafts has been the worst affected as the sector registered a decline in export continuously for the three consecutive years starting from 2006–07. During 2008–09 the decline was up to 38% over the previous year (Table 3.5).

Export of raw cotton & waste registered a decline as high as 70% in 2008–09. In fact, most of the subsectors in the textile group, except RMG, man-made textile made-ups, and woollen products, registered an absolute decline in total export value at constant 1999–2000 prices. Within the textile sector, the export of carpets declined continuously for the second year in 2008–09. Similarly, export of diamond registered a decline of approximately 23% during 2008–09.

Table 3.5: Annualised Growth (%) of Values of Exports of Principal Commodities at Constant 1999–2000 Prices

	2004–05*	2005–06	2006–07	2007–08	2008–09(P)
Textiles	4.4	24.5	5.6	1.1	12.2
Readymade garments	3.9	35.9	3.0	-2.0	21.6
Cotton, yarn, fabrics, made-ups, etc	-0.4	18.3	6.7	-0.8	-4.6
Man-made textiles & made-ups, etc	16.1	2.9	17.5	18.9	11.3
Natural silk textiles	8.4	9.5	1.9	-21.2	1.8
Wool & woollen manufactures	4.2	26.5	-0.3	-2.1	15.2
Coir & coir manufactures	15.0	30.7	9.2	-1.3	-0.4
Jute manufactures	14.1	11.0	-12.3	13.2	-1.7
Carpets	1.0	38.6	8.6	-8.6	-11.5
Handmade excl silk	1.4	41.1	8.2	-7.4	-11.3
Silk carpets	-5.8	-14.8	25.1	-44.9	-23.2
Cotton raw incl waste	-8.7	621.9	105.4	46.7	-69.5
Diamond	5.1	5.6	-11.6	14.0	-22.7
Handicrafts	-14.6	15.5	-8.1	-1.3	-38.0
TOTAL EXPORTS	12.8	16.4	18.8	9.7	18.1

Note: Compound Annual Growth Rate (CAGR) over 1999–2000.

Trends in the growth of exports for the three principal commodities during the period 2005-09 are also presented in Fig. 3.5.

Fig. 3.5: Annual Growth of Exports of the Three Sectors, 2004–05 to 2008–09, at Constant 1999–2000 Prices

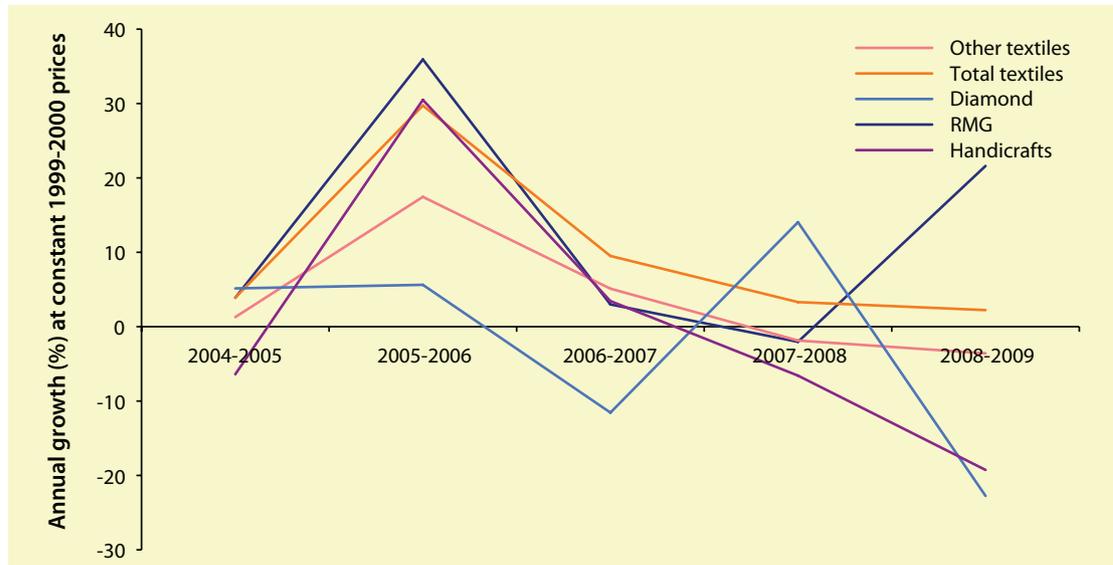


Fig. 3.6: Quarterly Export Growth (YOY) of Readymade Garments



Source: Data taken from MoCI Press Release, 29 October 2009.

RMG. One of the most important features emerging from the slowdown has been the highly impressive growth pattern of RMG. After a sluggish export growth during 2006–07 and 2007–08, the growth of RMG exports reached as high as approximately 22% during 2008–09. In fact, the bulk of the positive export growth of the textile sector is

accounted for by the very high growth of this subsector. The export growth of RMG stands out among all the major commodity exports during the slowdown year of 2008–09. It is not that the slowdown did not affect exports of RMG; the export growth of RMG fluctuated highly through 2008 and 2009, ultimately attaining a high growth at the end of 2008–09 and reversing its negative growth during the second quarter of 2009–2010 (Fig. 3.6).

Handicrafts. Among the three principal commodities under reference, handicrafts needs special mention as it constitutes a highly heterogenous group. The Export Promotion Council of India for Handicrafts enumerates a whole range of items to be considered under the category. Products such as art metal ware and wood ware have not been included in the above analysis. All these items form a dominant proportion (up to 85%) of the total handicrafts export of India.

Including all these items in handicrafts increases the total export of the sector to the tune of more than ₹ 10 thousand crores at current prices. At constant 1999–2000 prices this works out to approximately ₹ 6.5 thousand crores. However, even after including all these items, the export of handicrafts reflects a conclusive trend of downturn consecutively in 2007–08 and 2008–09 (Table 3.6).

Table 3.6: Exports of Handicrafts (₹ Crores) at Current Prices

ITEM	1999–2000	2000–01	2001–02	2002–03	2003–04	2004–05	2005–06	2006–07	2007–08	2008–09*
Art metal ware	1,687	1,785	1,461	2,115	2,642	3,365	3,663	4,135	3,308	1,790
Wood ware	407	517	498	688	609	721	853	1,180	1,039	623
Handprinted textiles & scarves	879	910	757	857	1,611	1,849	2,054	2,465	1,774	1,117
Embroidered & crocheted goods	2,350	3,119	3,005	3,611	3,286	4,200	4,711	5,860	5,145	2,937
Shawls as art ware	204	245	94	99	43	54	110	217	214	119
Zari & zari goods	184	262	264	304	211	252	347	392	349	175
Imitation jewellery	119	126	103	135	162	201	275	386	351	208
Misc handicrafts	1,340	1,525	1,526	2,036	1,900	2,391	2,514	2,652	1,832	1,214

Note: * Figures up to December 2008.

3.1.4 Focus Product

The GoI has recently introduced the ‘focus product’ scheme to incentivise exports of certain commodities which are considered ‘dynamic products’ and ‘drivers of global exports’. Using the commodity-wise Indian export data, the Economic Survey (2008–09) identified 20 such products at 4-digit HS classifications. Using a similar methodology, we have identified 15 commodity groups across the three sectors under the present study which show high export share in the total export of India and high growth over the years. Within the three sectors, diamond and articles of jewellery top the list with approximately 10% and 3.36% share in the total export basket of India. The annual growth of these commodities since 2004 has been also quite impressive (Table 3.7).

Table 3.7: Textile, Diamond and Handicraft Products with High Share in Exports and High Export Growth

HS CODE	COMMODITY	PRINCIPAL COMMODITY CATEGORY	AVERAGE SHARE (%) IN TOTAL EXPORTS	ANNUAL GROWTH (%) IN 2005–08
7102	Diamonds cut but not mounted	Diamond	9.83	11.07
7113	Articles of jewellery, unset & set with diamond & pearls	Handicrafts	3.36	17.56
6204	Women’s/girls’ suits, ensembles, jackets, dresses, skirts, trousers, bibs, etc.	RMG	1.35	19.94
6109	T-shirts, singlets & other vests, knitted/crocheted	RMG	1.09	25.08
5205	Cotton yarn containing 85% or more by weight of cotton not put up for retail sale	Textiles	1.00	31.17
6206	Women/girls’ blouses, shirts & short blouses	RMG	0.96	5.70
6304	Bed sheets, bedcovers, cushion covers, mosquito nets & other furnishing articles	Made-up textiles	0.92	7.09
5201	Cotton, not carded or combed	Textiles	0.89	201.17
6205	Men’s or boy’s shirts	RMG	0.65	1.74
6203	Men’s or boys’ suits, ensembles, jackets, blazers, trousers, bibs, etc	RMG	0.52	22.35
5208	Woven fabrics of cotton by weight of cotton weighing not more than 200 g/m ²	Textiles	0.42	12.51
6105	Men’s/boys’ shirts, knitted/crocheted	RMG	0.37	4.88

HS CODE	COMMODITY	PRINCIPAL COMMODITY CATEGORY	AVERAGE SHARE (%) IN TOTAL EXPORTS	ANNUAL GROWTH (%) IN 2005-08
6302	Bed linen, table linen, toilet linen & kitchen linen	Made-up textiles	0.30	32.20
6214	Shawls, scarves, mufflers, mantillas, veils, etc	RMG	0.28	17.14
6106	Women'/girls' blouses, shirts & shirt blouses, knitted or crocheted	RMG	0.27	16.98

Source: Calculated from export data accessed from the MoCI website.

Out of a total of 15 commodities so identified, 8 are from RMG and an additional 2 are made-up textiles. Further, it is interesting to note that out of these 15 commodities, 2, viz. articles of jewellery (HS 7113) and t-shirts, singlets & other vests, knitted/crocheted' (HS 6109) have also been identified as 'dynamic products' and 'drivers of global export' by the Economic Survey (2008-09). Detailed data on exports for the last four years for these 15 commodities is provided in Appendix Table 2

3.1.5 Dynamics of the Textile Trade

As noted earlier, exports of RMG during the economic downturn recorded an impressive growth in spite of inter-quarterly fluctuations during the years 2007-08 and 2008-09. One of the reasons for the expansion of RMG exports even during the slowdown period has been the diversification to new world markets. The USA, UK (along with some other European countries such as Italy and Spain) and UAE have been the traditional export markets for Indian RMG. The percentage contribution of these destinations to the total RMG exports from India has been fast changing over the years. The share of the USA has consistently declined from more than 33% of the total RMG exports of India during 2005-06 to 26% in 2008-09. Similarly the share of total RMG exports to Canada and Japan has considerably declined over the years (Table 3.8).

In contrast, shares of countries such as the UAE, France and Belgium in total RMG exports from India have increased considerably over the years. In addition, RMG markets for India seem to have expanded to countries like Germany, Saudi Arabia, Netherlands, South Africa and Mexico. However, it is important to mention here that India's RMG exports need to target many other emerging markets. In recent years, many South American countries such as Argentina, Brazil and Peru have shown significant growth in clothing imports over the years. In addition, some other economies such as Australia, Singapore, South Korea, Norway and Turkey are fast-expanding markets for clothing exports.

Table 3.8 : Shares of Top 20 Countries in India's Total RMG Exports

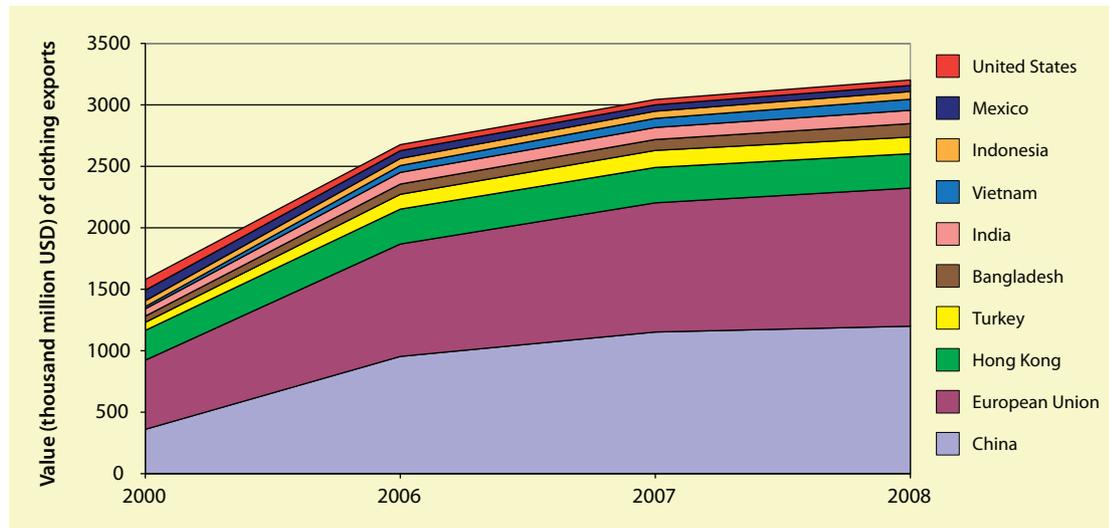
COUNTRIES	2005–2006	2006–2007	2007–2008	2008–2009
USA	33.08	32.49	29.24	25.79
UK	10.95	10.63	12.35	10.62
Germany	7.87	7.27	8.89	8.11
UAE	5.19	5.89	7.12	9.77
Italy	4.44	4.99	4.37	4.00
Spain	4.18	3.47	3.79	4.63
Netherlands	3.40	3.93	3.83	4.29
Canada	3.18	3.07	2.60	2.55
France	2.97	3.42	7.29	7.07
Saudi Arab	2.28	2.15	2.21	2.61
Denmark	2.14	2.19	2.10	2.19
Belgium	1.54	1.88	1.94	2.48
Japan	1.37	1.38	1.08	1.12
Sweden	0.85	0.84	0.94	0.99
Ireland	0.74	0.53	0.67	0.37
Finland	0.69	0.37	0.37	0.38
South Africa	0.69	0.59	0.65	0.80
Switzerland	0.64	0.62	0.57	0.56
Mexico	0.64	0.71	0.69	0.74
Top 20 Countries (%)	87.1	87.2	91.3	89.4
Total Exports (₹ crores)	38,193	40,280	39,028	32,918

Source: www.commerce.nic.in

Since the Indian RMG exports have not been able to capture many emerging markets, the export growth of this subsector has been much lower in comparison with leading RMG exporting countries. In fact, India's share (around 3% of the total world clothing export) has remained almost stagnant since 2000, while China has significantly increased its volume as well as share in world clothing exports from approximately 18% in 2000 to more than 33% in 2008. Similarly, the European Union has increased its share from 28% to 31% during the same period. Some smaller economies such as Vietnam, Bangladesh and Turkey have also raised their shares (Fig. 3.7). A detailed list of all RMG exporting countries with total RMG exports in the world is provided in Appendix Table 3. Even during the slowdown period of 2008–09, the world demand for clothing did not decline

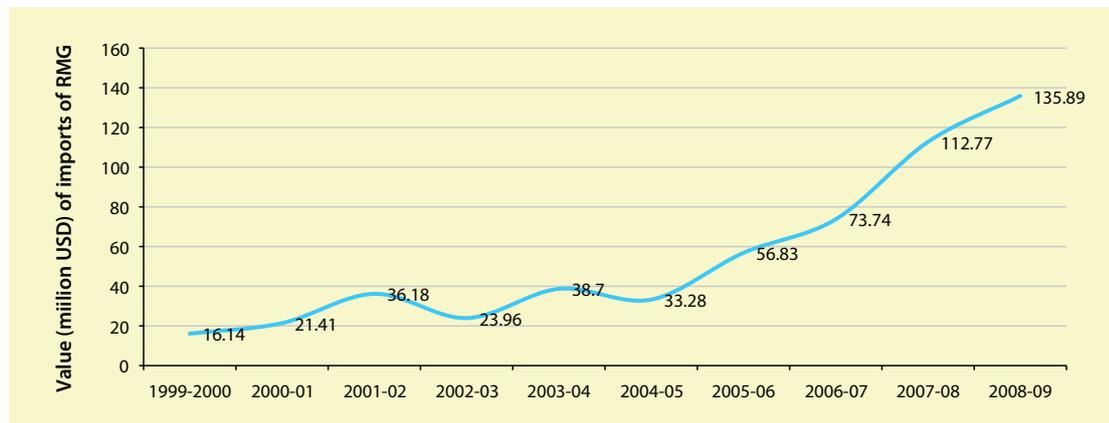
significantly as the decline in demand from leading importing countries such as the USA, UK and European countries was offset to a great extent by increased demand from the Middle East and South American countries.

Fig. 3.7: Values (Thousand Million \$) of Clothing Exports of Top 10 Economies, 2000–08



Source: Based on WTO data on clothing exports.

Fig. 3.8: Value (Million \$) of Imports of RMG over the Years 1999–2000 to 2008–09



The world market for clothing is fast expanding and India needs to capitalise on this. This issue has not been explored in great detail in the present study, but we can mention that, apparently, China and the European Union countries provide much higher levels of incentives to their clothing exporters to compete in the world markets and India needs to take serious note of this fact. Further, it is important to note that along with the fairly satisfactory growth of Indian clothing exports, the growth of imports of man-

made textiles & made-ups and RMG has been at unprecedentedly high levels, registering an increase of 70% between 2007–08 and 2008–09. The total value of RMG imports expanded from \$ 16.14 million in 1999–2000 to \$ 136 million in 2008–09, registering a growth of approximately 20% even during the slowdown period of 2008–09 (Fig. 3.8). Detailed trends of the import of man-made textiles & made-ups and RMG are presented in Table 3.9.

Table 3.9 : Value (Million \$) of Imports of Made-up Textile Articles and Readymade Garments and Annual Change (%)

YEARS	VALUES OF IMPORTS			% ANNUAL CHANGE OVER PREVIOUS YEAR		
	MADE-UP TEXTILE ARTICLES	READY- MADE GARMENTS	TOTAL	MADE-UP TEXTILE ARTICLES	READY- MADE GARMENTS	TOTAL
1999–2000	26.41	16.14	42.55			
2000–01	41.82	21.41	63.23	58.35	32.65	48.60
2001–02	36.05	36.18	72.23	-13.80	68.99	14.23
2002–03	39.52	23.96	63.48	9.63	-33.78	-12.11
2003–04	81.75	38.7	120.45	106.86	61.52	89.74
2004–05	59.96	33.28	93.24	-26.65	-14.01	-22.59
2005–06	61.98	56.83	118.81	3.37	70.76	27.42
2006–07	71.25	73.74	144.99	14.96	29.76	22.04
2007–08	98.65	112.77	211.42	38.46	52.93	45.82
2008–09	222.07	135.89	357.96	125.11	20.50	69.31

Source: WTO statistics.

A comparison of the import and export statistics of RMG reflects the fact that although the recent economic slowdown has adversely affected RMG exports, the imports have, in contrast, increased over the years, particularly during the slowdown period.

Unlike clothing exports, other textile products in India have not evidenced an impressive growth in exports over the years. As noted in Table 3.5, the export growth of most commodities such as cotton, yarn, fabrics; natural silk; wool; coir and jute manufactures has been barely 2 to 3% through the 2000s. Also, during the slowdown period of 2008–09, these were the commodities to reflect the steepest fall in exports. In fact, the exports of these commodities witnessed a downturn even before the present global economic slowdown. In contrast, as in the case of RMG, the imports of these commodities registered a significant increase over the years. Among the major commodities which registered a high import growth were silk raw; synthetic fibres; man-made filament; and raw cotton.

It is evident that one of the reasons for the increased imports of RMG, made-up textile articles and other textiles has been the abysmally low Most Favoured Nation (MFN) applied rates in India. The average MFN applied rates are at very low levels as compared to the 'binding' rates (Table 3.10).

Table 3.10 : Annual Growth in Imports of Major Textile Commodities, Average MFN (Tariff) Rates and Bound Rates (%)

MAJOR COMMODITY GROUPS	% ANNUAL GROWTH IN IMPORTS			MFN APPLIED RATES (%)	BOUND RATES (%)
	2008-09/ 2007-08	2008-09/ 2005-06	2008-09/ 1999-2000		
Wool raw	-17.14	2.41	7.86	5 to 10	100
Silk raw	7.29	2.69	8.34	25	100
Synthetic fibres	23.77	15.23	13.90	5 to 10	20
Other textile yarn, fabrics, etc	0.67	6.32	18.41	10 to 15	25
Woollen yarn & fabrics	-20.90	-5.35	35.85	10	25
Cotton yarn & fabrics	-18.39	-1.73	29.85	10	25
Man-made spun yarn	1.44	3.75	12.59	5 to 10	20
Silk yarn & fabrics	-14.64	-5.10	32.23	10	Unbound
Jute raw	-57.91	-7.39	-7.80	10	100
Woollen & cotton rags	-17.44	-18.69	-1.92	10 to 15	Unbound
Cotton raw & waste	62.13	23.31	2.69	15	100
TOTAL AVERAGE	0.84	4.70	12.46	10	40

Source: Import data from the Directorate General of Commercial Intelligence and Statistics (DGCI&S), Kolkata, and MFN and bound rates from WTO.

Although the 'bound' rates for these items in India has been agreed at more than 40% on an average, the average ad valorem applied rate is 10 to 15%. India has created this policy space mainly to deal with a situation like the one experienced during the downturn. The country has enough space to restrict the growth of imports of clothing and other textile items by increasing the MFN rates, at least temporarily, to deal with the situations of economic slowdown. The temporary increase (maybe for a year or two) in MFN rates will reduce the level of competition for Indian manufacturers and the large domestic markets of India can support the growth of these industries during the slowdown period.

During the economic slowdown period, different economies have resorted to a variety of import restriction measures to contain imports in order to protect their domestic industries. For example, the European Commission introduced anti-dumping duties

on imports of leather footwear from China and Vietnam. Ukraine also increased tariff duties for six months for all the footwear products during the slowdown period. The Russian Federation increased import tariff for nine months on cars, buses and trucks. A detailed list of various trade restrictions measures initiated by different economies is available in WTO (2009).

3.2 TRENDS IN GDP AND SECTORAL DOMESTIC PRODUCT

India has been witnessing high economic growth since 2000. At the constant 1999–2000 prices the GDP growth reached more than 9.5% per annum for the first time in 2005–06, which further increased to 9.75% during 2006–07. Almost all the major sectors during this period registered impressive growth, with most of the service segments posting double-digit growth rates. This has been a clear departure from the growth pattern achieved by the Indian economy during the 1990s. The manufacturing sector maintained a growth of approximately 9 to 10% per annum during this period until the economic slowdown struck the sector in 2008–09.

Table 3.11 : Annual Growth (%) of Sectoral and Gross Domestic Products at Constant 1999–2000 Prices

SECTORS	COMPOUND ANNUAL GROWTH RATES (%)		% CHANGE OVER PREVIOUS YEAR			
	1999–2000 OVER 1993–94	2004–05 OVER 1999–2000	2005–06	2006–07	2007–08	2008–09
Agriculture	3.31	1.58	5.84	3.95	4.86	1.60
mining	5.20	4.80	4.89	8.84	3.27	3.62
Manufacturing	6.90	6.46	9.06	11.77	8.20	2.40
Utilities	6.98	4.22	5.06	5.27	5.26	3.40
Construction	6.36	9.17	16.22	11.79	10.11	7.18
Trade	9.29	7.87	10.27	10.42	10.13	5.56
Transport	8.66	12.90	14.90	16.31	15.51	13.64
Financing	7.78	6.71	11.39	13.78	11.75	7.82
Community	7.83	4.99	7.07	5.71	6.79	13.05
TOTAL	6.51	5.98	9.52	9.75	9.01	6.70

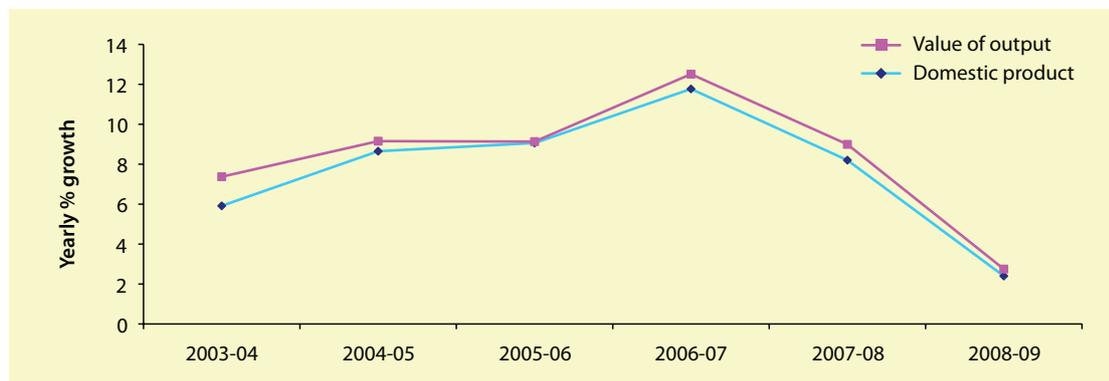
Source: CSO.

The GDP data shows approximately 14% increase in 2008–09 over 2007–08 at current prices. This implies an annual increase of 6.7% between the same years at constant 1999–2000 prices. This indicates a significant decline in GDP growth during 2008–09 as compared to that during the previous three consecutive years. During the period

2005–06 to 2007–08 the GDP maintained a significantly high growth of more than 9% at constant 1999–2000 prices (Table 3.11).

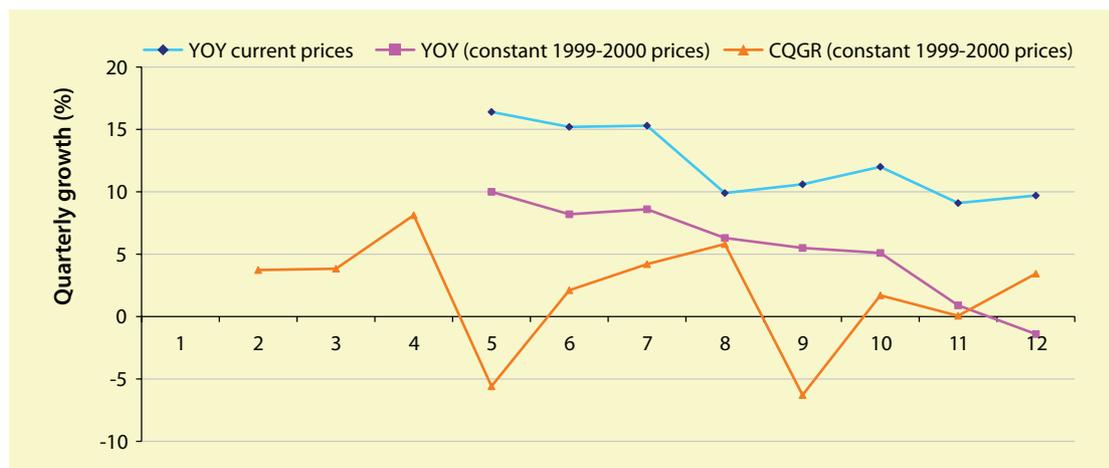
The impact of the economic slowdown is clearly visible in the sectoral domestic product. During 2008–09, all the major sectors, except community, social & personal services, witnessed a decline in the growth of domestic products. One of the worst hit sectors during the slowdown has been the manufacturing sector. The IIP indicated a substantial deceleration in industrial production during the period 2007–08 and 2008–09 (Fig. 3.9).

Fig. 3.9: Yearly % Growth of Domestic Product and Value of Output of Manufacturing Sector at Constant 1999–2000 Prices



Source: Based on Table 3.11 and IIP.

Fig. 3.10: Quarterly Growth of Manufacturing Domestic Products, 2007–2009



Notes: CQGR is Cumulative Quarterly Growth Rates.

Source: Based on quarterly estimates of GDP, 2008–09, by CSO, Statements 5 & 6.

Although none of the major sectors witnessed negative growth on a cumulative annualised basis, the quarterly GDP data clearly indicates that manufacturing realised a sustained decline in growth starting from 2007–08. Further break-up of the GDP data on a quarterly basis suggests that the deceleration in industrial production started as early as the second quarter of 2007–08 when the manufacturing domestic product growth declined from more than 10% during the first quarter to 8.2% during the second quarter. By the end of 2007–08, i.e. during the fourth quarter of the year, it was just 6.3%, and finally showed a negative growth during the fourth quarter of 2008–09. During the fourth quarter of 2008–09, manufacturing growth was –1.4% over the same quarter of 2007–08. The worst decline in the manufacturing growth, however, was witnessed during the first quarter of 2008–09, when a net fall in total manufacturing domestic products was registered even at current prices, as compared to that during the last quarter of 2007–08 (Fig. 3.10).

Within the manufacturing sector, two of the three export intensive sectors under study, viz. diamond and handicrafts, can be identified only at the 4- to 5-digit level of the NIC (1998). Carpets are also identifiable only at the 4-digit classification. It is only textiles and wearing apparel that can be identified at 3-digit NIC. The domestic product data is not available at a highly disaggregated level to perfectly match the analysis for two of the referred three export intensive sectors. The domestic product data is, however, available for textiles in two separate categories, viz. spinning, weaving & finishing of textiles (NIC 171+172+173) and wearing apparel (NIC 181). For diamond, the domestic product is merged with the ‘other manufacturing’ classifications of the NIC codes (NIC 33+369). Handicrafts is a highly heterogeneous category spanning a range of subsectors such as carpets within textiles; wood & wood products; metal products & machinery; gems & jewellery; zari works; etc. In order to calculate the growth of the handicrafts sector, the domestic product of the respective major groups has been considered. The adopted concordance scheme for the three sectors under reference is presented in Table 3.12.

Table 3.12 : Concordance Scheme for the Three Sectors

NIC 1998 CODES	SECTORS
171+172+173	Spinning, weaving & finishing of textiles (including carpets)
181–18105	Wearing apparel
20+361	Wood & wood products (for handicrafts)
28+29+30	Metal products & machinery (for handicrafts)
33+369	Other manufacturing (including diamond)

Source: CSO.

It is important to note that three subsectors, viz. carpets, wood & wood products, and metal products & machinery, cover approximately 60% of the total value of exports of the handicrafts sector. For many miscellaneous handicraft items, domestic product data is not available at the disaggregated levels. For all other subsectors mentioned in Table 3.12, domestic product data is available at both current and constant 1999–2000 prices. Since the IIP is available for the year 2008–09, the domestic product of the referred subsectors were projected for 2008–09 by using the IIP of 2008–09. The domestic product at the constant 1999–2000 prices and the yearly growth figures of the selected subsectors are presented in Table 3.13.

The textiles sector registered a fairly high growth from 2004–05 until the economic slowdown affected the economy and textile growth (excluding wearing apparel) went down to approximately 5% in 2007–08 and –5% in 2008–09. As mentioned earlier, more disaggregated data on domestic products is not available to check which segments of the textiles sector faced a major downturn. The production data from the Office of Textile Commissioner, Mumbai, shows that the handloom and power loom segments of textile fabrics posted negative growth to the extent of –4% and –3% respectively during 2008–09 (Economic Survey [2008–09]). However, the hosiery and mill sectors still maintained a marginal positive growth in production during the slowdown period.

Out of the five subsectors mentioned in Table 3.13, only two, viz. wearing apparel and other manufacturing, show positive growth during 2008–09. Although total textiles show a marginal negative growth of –0.63 during 2008–09, a major part of the textiles sector, viz. spinning, weaving & finishing of textiles, shows a definite negative growth of –4.9% during 2008–09. The broad sectors of the two major subsectors of handicrafts, viz. wood & wood products and metal products, show significant negative trends during the slowdown period of 2008–09.

Amidst all these negative trends, as discussed in detail above, a part of the textile sector, viz. wearing apparel (or textile products as it was classified in NIC 1987 or readymade garments as classified in the export codes), stands out markedly. In fact, the 2.8% growth in textiles during the slowdown period, as indicated in Table 3.13, is mainly due to wearing apparel, which registered a high growth of 17% during the same period. Wearing apparel maintained a sustained high growth of approximately 10 to 12% all through the 2000s. The only exception to this high growth was the year 2007–08 when the growth rate of the subsector declined to 0.5%, but was still positive. This result is also in conformity with the export data where exports of RMG show high growth during the slowdown period and earlier.

Table 3.13 : Domestic Product (₹ Crores) from Selected Manufacturing at Constant 1999–2000 Prices and Annual Growth Rates (%)

	1999-2000	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09*
SECTORS	DOMESTIC PRODUCTS (₹ CRORES) AT CONSTANT 1999–2000 PRICES						
Spinning, weaving & finishing of textiles	28,422	30,656	33,653	36,348	40,302	42,275	40,204
Wearing apparel	9,231	10,903	12,989	15,112	16,854	16,946	18,641
Textiles Total	37,653	41,559	46,642	51,460	57,156	59,221	58,845
Wood & wood products	10,894	8,776	8,029	7,573	9,774	13,735	12,046
Metal products & machinery	31,789	35,818	39,722	42,391	47,383	50,387	46,860
Other manufacturing	15,326	19,487	21,762	27,057	28,225	32,839	33,332
		2003-04**	2004-05	2005-06	2006-07	2007-08	2008-09*
SECTORS	ANNUAL GROWTH (%) OVER PREVIOUS YEAR						
Spinning, weaving & finishing of textiles		1.9	9.8	8.0	10.9	4.9	-4.90
Wearing apparel		4.2	19.1	16.3	11.5	0.5	10.00
Textiles Total		2.5	12.2	10.3	11.1	3.6	-0.63
Wood & wood products		-5.3	-8.5	-5.7	29.1	40.5	-12.30
Metal products & machinery		3.0	10.9	6.7	11.8	6.3	-7.00
Other manufacturing		6.2	11.7	24.3	4.3	16.3	1.5

Note: * 2008–09 is projected on the basis of IIP; compound annual growth over 1999–2000.

3.3 TRENDS IN EMPLOYMENT

The latest reliable estimates of total employment in India are available only for the year 2004–05, when the last quinquennial round of the Employment and Unemployment Survey (EUS) was conducted by the NSSO. A couple of annual rounds (with thin sample) of the EUS are also available but for a variety of reasons the estimates are not always considered reliable, particularly for the disaggregated sector, for scientific analysis. Hence for the present study, we rely mainly on the estimates from the quinquennial survey of the NSSO. This section presents the employment estimates for the major sectors and for the subsectors under reference.

The analysis in the section relates primarily to the periods 1993–94 to 1999–2000, and 1999–2000 to 2004–05. Total employment in India is worked out to be approximately 458 million in 2004–05, which is around 60 million higher as compared to total employment in 1999–2000 and around 84 million higher than that about one decade ago in 1993–94. This essentially shows approximately 1.84% per annum growth over the longer period 1993–94 to 2004–05 (Table 3.14). However, the first half of the period, 1993–94 to 1999–2000, was marked by a low employment growth of less than 1% per annum (Unni and Ravindran, 2006). In fact, this period experienced a deceleration in the growth of employment, from 2% per annum during 1983–84 to 1993–94. Rangarajan et al. (2007) notes that there was a distinct upswing in employment growth from an annual 0.98% in 1993–94 to 1999–2000, to 2.89% in 1999–2000 to 2004–05, with 60 million jobs having been added in the five-year period.

Table 3.14 : Total Employment (UPSS*) and Growth of Employment in India

SECTORS	EMPLOYMENT (MILLION)			COMPOUND ANNUAL GROWTH (%)		
	1993–94	1999–2000	2004–05	1999–2000 OVER 1993–94	2004–05 OVER 1999–2000	2004–05 OVER 1993–94
Agriculture	242.46	237.56	267.57	-0.34	2.41	0.9
Mining	2.7	2.27	2.74	-2.85	3.84	0.13
Manufacturing	42.5	48.01	53.51	2.05	2.19	2.12
Utilities	1.35	1.28	1.37	-0.88	1.37	0.13
Construction	11.68	17.62	25.61	7.09	7.77	7.4
Trade	27.78	37.32	47.11	5.04	4.77	4.92
Transport	10.33	14.69	17.38	6.04	3.42	4.84
Financing	3.52	5.05	6.86	6.2	6.32	6.25
Community	32.13	33.2	35.67	0.55	1.45	0.95
TOTAL	374.45	397.0	457.82	0.98	2.89	1.84

Note: Usual Principal and Subsidiary Status.

Source: Rangarajan et al., 2007.

The slow employment growth during the period 1993–94 to 1999–2000 had led to major concerns about the phenomenon of ‘jobless growth’ and scepticism about the ability of economic growth to tackle the problem of unemployment. Rangarajan et al. (2007), however, note that this period was marked by an improvement in real earnings across the majority of rural and urban occupational groups. The rapid economic growth had a greater impact on the quality dimension of employment than on the quantum of employment. It is important to note that the late 1990s was the period when the Indian economy for the first time broke the jinx of the traditional ‘Hindu Rate of Growth’

of 3 to 3.5% to enter into a higher growth path of 5 to 6%. Such a trend was further consolidated during the decade 2000–10 with the Indian economy achieving nearly 9% growth during 2004–2007. Analysts suggest that while the late 1990s was a period of ‘consolidation’, the period 1999–2000 to 2004–05 essentially marked an expansion of the Indian economy on all fronts, particularly employment, production and exports (Karan and Sakthivel, 2008). The export and GDP data as discussed in sections 3.1 and 3.2 above also corroborates this fact.

Employment in the manufacturing sector grew at an annual rate of more than 2% during both the periods under consideration, viz. 1993–94 to 1999–2000 and 1999–2000 to 2004–05, registering a long-term growth of 2.12% per annum during 1993–94 to 2004–05. Within manufacturing, textiles witnessed a decline in employment during 1993–94 to 1999–2000 but a positive growth of more than 11% during the following period, i.e. 1999–2000 to 2004–05 (Table 3.15).

Table 3.15: Total Employment (Million) and Annual Rate of Growth (%) in Selected Subsectors

SECTORS OF EMPLOYMENT	TOTAL EMPLOYMENT (MILLION)			ANNUAL EMPLOYMENT GROWTH (%)		
	1993–94	1999–00	2004–05	1999–2000 OVER 1993–94	2004–05 OVER 1999–2000	2004–05 OVER 1993–94
Spinning, weaving & finishing of textiles	6.95	6.03	10.42	-2.33	11.55	3.75
Wearing apparel	3.96	4.59	7.84	2.47	11.32	6.40
Total textiles	10.91	10.62	18.26	-0.45	11.45	4.79
Wood & furniture	5.17	6.16	7.44	2.97	3.83	3.36
Metal products & machinery	3.65	3.74	4.34	0.40	3.02	1.58
Other manufacturing	2.33	2.72	3.56	2.56	5.57	3.92

Again, wearing apparel stands out clearly as the sector which witnessed positive growth in employment during both the periods under consideration. Overall, wearing apparel registered a long-term growth of more than 6.4% per annum during the period 1993–94 to 2004–05. All other sectors of reference registered a modest positive growth in employment to the extent of 3 to 4% during both periods. On an average, the long-term growth of employment was 3.4% in wood, 1.6% in metal and approximately 4% in other manufacturing sectors during the period 1993–94 to 2004–05 (Table 3.15).

From the above analysis it is evident that the three sectors under the ambit of this study recorded significantly higher growth rates as compared to that of overall manufacturing employment during 1993–94 to 2004–05 in general and 2004–05 in particular.

Table 3.16 : Total Employment in Textiles

SECTORS OF EMPLOYMENT	YEARS	
	2004–05	1999–2000
AGRICULTURE		
Growing of cotton	13,756,943	6,659,348
Cotton ginning, cleaning & baling	94,569	91,573
Producing wool & silk	970,125	964,432
MANUFACTURING		
Spinning, weaving & finishing of textiles	10,420,743	6,034,467
Manufacture of wearing apparel, except fur apparel	7,846,514	4,593,468
TRADE		
Sale of cotton, wool, silk, jute fibre, etc	38,551	57,791
Sale of textiles, household linen, articles of clothing, floor coverings, etc	2,492,717	2,247,480
Sale of RMG, incl hosiery goods	1,293,900	800,880
TOTAL	36,914,062	21,449,439

Note: Total employment includes principal as well as subsidiary status workers separately for each sector as defined by the EUS of the NSSO.

Source: Unit level records from EUS, 61st and 55th rounds.

Employment in the textiles sector, however, spreads beyond the manufacturing sector as a large number of workers are also engaged in growing cotton, production of raw silk and wool, and overall trading of a large number of textile products. The total number of workers engaged in all these activities is estimated to be approximately 37 million in 2004–05 (Table 3.16).

Although the total employment in the textiles sector is reported in Table 3.15, the present study considers only the manufacturing sector employment for calculations of employment elasticity, employment projections and the extent of job loss due to the economic slowdown.

Similarly, at a higher level of disaggregation of the NSSO data, exact numbers of employment in the diamond and handicraft sectors can be captured. For this, we analysed 5-digit level data of the NSSO for the last two quinquennial rounds, 2004–05 and 1999–2000. The 1993–94 NSSO data (50th Round) does not provide information at the 5-digit level. The employment figures in diamond and handicrafts are presented in Table 3.17.

Table 3.17 : Total Employment (Million) in Diamond Cutting & Polishing and Handicrafts and Annual Growth (%)

SECTORS OF EMPLOYMENT	EMPLOYMENT (MILLION)		CAGR (%)
	1999–2000	2004–05	2004–05 OVER 1999–2000
Diamond	679.9	897.8	5.72
Handicrafts	2072.2	3527.3	11.22
SUBSECTORS OF HANDICRAFTS			
Cotton carpet	93.7	190.4	15.24
Embroidery	604.4	1385.9	18.06
Zari work	291.9	776.6	21.62
Embroidery & embossing on leather	62.4	60.9	-0.49
Manufacture from cane & bamboo	190.1	284.0	8.36
Manufacture from palm leaf	427.8	352.0	-3.82
Manufacture of basic precious metal	115.2	104.2	-1.98
Metal art ware	51.2	113.5	17.27
Umbrella & walking sticks, etc	7.1	16.3	18.03
Candles and wax products	4.4	4.0	-1.87
Other decoratives	224.2	239.5	1.33

Employment in diamond cutting & polishing grew at an annual rate of 5.7% which is very close to the growth rates of 'other manufacturing', (which includes the diamond sector) during the same reference period. The employment growth of the handicrafts sector was approximately 11% per annum, which is largely contributed by the high employment growth in carpets, embroidery and zari work. It is important to note that these three subsectors are also part of the overall textiles sector which recorded more than 11% growth in employment. Hence, handicrafts excluding textile products basically reflected an employment growth of 2 to 3% per annum with a net decline in employment in a few traditional subsectors such as embroidery & embossing on leather; manufacture from palm leaf; manufacture of basic precious metal; and candles & wax products during the period 1999–2000 to 2004–05.

4

Impact of the Slowdown *On Employment, Wages and Employment Projections*

This chapter assesses the impact of the slowdown on employment and wages of workers and gives projections of employment for future years. The chapter is divided into three major sections. Section 4.1 details the elasticity function of employment as well as wages and earnings with respect to production and exports. This is used to arrive at estimations of employment and the levels of wages of workers during the pre- and slowdown periods separately, so that the impact of the slowdown on employment and wages can be measured. Section 4.2 estimates employment for future years. Because of the paucity of data from secondary sources, the chapter also uses data collected from primary sources. The primary data has been used particularly to work out the changes in employment and wages during the slowdown period across different categories of employment and firms. Section 4.3 analyses the export–employment relationship and works out employment coefficients on the basis of a multivariate analysis at the firm level.

4.1 EMPLOYMENT ELASTICITY, GROWTH AND PROJECTIONS

An observed elasticity of employment, which measures the relationship of employment growth to GDP growth, is considered an important tool for forecasting employment. As Rangarajan et al. (2007) note, ‘employment elasticities are commonly used to track sectoral potential for generating employment and in forecasting future growth in employment’ (see also Islam, 2002). Based on this framework, we first present observed employment elasticity separately for two periods: (a) 1993–94 to 1999–2000; and (b) 1999–2000 to 2004–05. Following this, we present the projected annual employment for the period 2005–06 to 2008–09. Accordingly, the difference in the estimates of employment between the years 2007–08 and 2008–09 will stand for the impact of the slowdown on the magnitude of employment.

The relationship is not simple and straightforward as factors other than GDP, such as wage rate, technology and improvements in infrastructure, also impact employment

growth rates. However, it is important to note that in a short period of time many of these parameters may not be as highly sensitive to employment elasticity as the growth of GDP. In order to discount this factor we base part of our analysis on primary data by considering the size of employment as one of the explanatory variables (proxy) for the change in technology across firms. At the secondary data level the final projection analysis will be done on the basis of average employment elasticity of the periods 1993–94 to 1999–2000 and 1999–2000 to 2004–05, i.e. for the period 1993–94 to 2004–05.

As mentioned in Chapter 2 employment elasticity will be measured by using the formulae below:

$$E_t = E_0 (1 + r_c)^t \quad \text{—————} \quad \text{5}$$

Where,

E_t is total employment in the t^{th} year
 E_0 is total employment in the base year
 r_c is rate of employment growth

And,

$$r_c = \eta r_g \quad \text{—————} \quad \text{6}$$

Where,

η is employment elasticity
 r_g is growth of exports/GDP

Equations (5) and (6) taken together essentially imply that the projection of employment mainly depends on the rate of employment growth (r_c) to be worked out on the basis of GDP growth (r_g) and elasticity of employment (η). Further, it is easy to comprehend that the elasticity of employment can be calculated simply by using the formula:

$$\frac{\delta N / N}{\delta Y / Y} \quad \text{—————} \quad \text{4}$$

Where,

δN and δY are changes in sectoral employment and gross domestic product (GDP) respectively between the two referred periods and N and Y are base year sectoral employment and income (GDP)

In equation (4) $\delta N/N$ is nothing but the annual growth of employment while $\delta Y/Y$ is the annual growth of income (GDP). Hence, equation (4) essentially implies the ratio of rate of change in employment to rate of change in income (GDP). Further, these annual rates of changes in employment and income (GDP) are the same as the compound annual rates of growth of income and employment presented in Table 3.11 and Table 3.14 in Chapter 3. Taking the ratios of these rates provides the employment elasticity for the corresponding periods as presented in Table 4.1.

It is evident from Table 4.1 that the period from 1993–94 to 1999–2000 shows significantly low employment elasticity across all sectors.

Table 4.1: Sectoral Employment Elasticity with Respect to GDP

SECTORS	1999–2000 OVER 1993–94	2004–05 OVER 1999–2000	2004–05 OVER 1993–94
Agriculture	–0.10	1.52	0.36
Mining	–0.55	0.80	0.03
Manufacturing	0.30	0.34	0.32
Utilities	–0.13	0.32	0.02
Construction	1.11	0.85	0.97
Trade	0.54	0.61	0.57
Transport	0.70	0.27	0.46
Financing	0.80	0.94	0.86
Community	0.07	0.29	0.15
TOTAL	0.15	0.48	0.29

Source: Calculated on the basis of growth rates presented in Tables 3.11 and 3.14.

The trend has been reversed in the later period 1999–2000 to 2004–05. A quick comparison with the earlier period (1993–94 to 1999–2000) reveals that the aggregate elasticity of employment has practically tripled from a low of 0.15 to a figure of 0.48. This increase in elasticity is seen in all sectors except for construction, transport, storage & communication where the elasticity has declined.

We can observe a few negative employment elasticity figures for the period 1993–94 to 1999–2000 in Table 4.1. For example, agriculture, mining and utilities reflect a negative employment elasticity for the period 1993–94 to 1999–2000. Technically this implies a decline in employment as a result of increase in income (domestic products). This is possible under two different types of scenarios:

1. If employment diversification takes place from the sector, for example in the case of such sectors as agriculture and mining, as a result of increased earnings of workers
2. Income of the sector increases because of technological innovations but employment does not expand, at least in the short period

Some scholars have set the ‘negative’ elasticity values to ‘zero’ for the purpose of employment projections (see, for example, Rangarajan et al., 2007).

In contrast to other sectors, the manufacturing and trade sectors reflect a fairly steady employment elasticity across the two periods under reference, with a marginal increase during the later period. The longer period employment elasticity calculated for the period 1993–94 to 2004–05, hence, is not significantly different from those for the two shorter

periods for these two sectors. This has led us to base most of our following analyses on the longer period employment elasticity. Also, a wide fluctuation in employment in a few sectors such as textiles as reported from the NSSO data, particularly during 1999–2000, required us to consider the longer-term trend instead of inter-quinquennial trends. However, we will be simultaneously presenting the inter-quinquennial trends for the purpose of comparison.

As discussed earlier, the employment growth for future years can be worked out simply by multiplying the GDP growth for the corresponding years with the existing employment elasticity. Before employment projections at the major sectoral levels, we first present the numbers on annual change in GDP (as reported in Table 3.11 in Chapter 3) and long-term employment elasticity (Table 4.1 in the present chapter) together so that it is easy to observe the trends and comprehend the mechanism of working out the employment projections for different years (Table 4.2).

Table 4.2: Annual Real GDP Growth and Employment Elasticity

SECTORS	ANNUALISED REAL GDP GROWTH RATE (%)				EMPLOYMENT ELASTICITY WITH RESPECT TO GDP
	2005–06	2006–07	2007–08	2008–09	2004–05 OVER 1993–94
Agriculture	5.84	3.95	4.86	1.60	0.36
Mining	4.89	8.84	3.27	3.62	0.03
Manufacturing	9.06	11.77	8.20	2.40	0.32
Utilities	5.06	5.27	5.26	3.40	0.02
Construction	16.22	11.79	10.11	7.18	0.97
Trade	10.27	10.42	10.13	5.56	0.57
Transport	14.90	16.31	15.51	13.64	0.46
Financing	11.39	13.78	11.75	7.82	0.86
Community	7.07	5.71	6.79	13.05	0.15
TOTAL	9.52	9.75	9.01	6.70	0.29

Source: Calculations on the basis of GDP data from CSO and employment data from NSSO.

We have considered only long-term employment elasticity (for the period 1993–94 to 2004–05) for the employment projections mainly to avoid the inter-quinquennial fluctuations. Employment growth figures have been arrived at by applying the equation (6) (i.e. by using the formula ' $r_e = \eta r_g$ '). Finally, applying the employment growth on the base employment numbers (2004–05 in the present case), employment projections for the corresponding future years can be arrived at.

Table 4.3: Sectoral Annual Employment Growth (%) and Employment Projections (Million) for the Post 2004–05 Period

SECTORS	ANNUAL EMPLOYMENT GROWTH (%)				EMPLOYMENT (MILLION)			
	2004–05 TO 2005–06	2005–06 TO 2006–07	2006–07 TO 2007–08	2007–08 TO 2008–09	2005–06	2006–07	2007–08	2008–09
Agriculture	2.09	1.41	1.73	0.57	273.15	277.00	281.81	283.42
Mining	0.13	0.24	0.09	0.10	2.74	2.75	2.75	2.76
Manufacturing	2.86	3.72	2.59	0.76	55.04	57.09	58.57	59.01
Utilities	0.12	0.12	0.12	0.08	1.37	1.37	1.38	1.38
Construction	15.72	11.43	9.80	6.96	29.64	33.02	36.26	38.78
Trade	5.84	5.93	5.76	3.16	49.86	52.82	55.86	57.63
Transport	6.83	7.47	7.11	6.25	18.57	19.95	21.37	22.71
Financing	9.77	11.82	10.08	6.70	7.53	8.42	9.27	9.89
Community	1.03	0.83	0.99	1.91	36.04	36.34	36.70	37.40
TOTAL	3.52	3.13	3.11	1.73	473.94	488.77	503.97	512.17

Source: Calculations based on Table 4.2 for employment growth and Table 3.14 for employment projections.

It is evident from Table 4.3 that most of the sectors faced a severe setback in terms of employment growth during 2008–09 except community & social services which, in fact, saw some expansion during the slowdown period. This is understandable in the sense that the community & social services sector must have worked as a safety valve for the labour force. Manufacturing, trade and financial sectors bore the real brunt of the slowdown. These results are also in conformity with the existing literature and other available evidences that the slowdown started from the financial sector and spread across the manufacturing and trade sectors. The employment growth in manufacturing declined from about 2.5 to 3% during the pre-slowdown period to barely 0.76% in 2008–09. Similarly, in trade, employment growth declined from 5 to 6% per annum to 3% per annum during 2008–09.

On the whole, despite the significant decline in employment growth during 2008–09, total employment increased from 504 million in 2007–08 to 512 million in 2008–09, an increase of approximately 8 million. However, employment in manufacturing, utilities and financial sectors almost stagnated during the slowdown period. The trade sector also witnessed a relatively smaller increase in employment during 2008–09 as compared to the earlier periods.

Employment growth in 2008–09 reflects that there has been no net job loss although the

rate of growth in employment has decelerated. However, it is not difficult to understand that since the employment growth decelerated during the slowdown period, the net addition of total as well as sectoral employment was less than what it would have been under the normal circumstances, i.e. in the absence of the economic slowdown. Had the GDP growth increased at the same rate as in the year 2007–08, assuming the economic slowdown had not occurred, the employment growth would have maintained the same rate as in 2007–08. In such a scenario the total employment in 2008–09 would have been approximately 520 million (Table 4.4).

Table 4.4: Assessments of Sectoral Employment without and with Impact of Economic Slowdown (Million)

SECTORS	EMPLOYMENT IN 2007–08	EMPLOYMENT GROWTH (%)	EXPECTED EMPLOYMENT IN 2008–09	REALISED EMPLOYMENT IN 2008–09	NET SHORTFALL
Agriculture	281.81	1.73	286.69	283.42	-3.27
Mining	2.75	0.09	2.75	2.76	0.01
Manufacturing	58.57	2.59	60.09	59.01	-1.08
Utilities	1.38	0.12	1.38	1.38	0.00
Construction	36.26	9.80	39.81	38.78	-1.03
Trade	55.86	5.76	59.08	57.63	-1.45
Transport	21.37	7.11	22.89	22.71	-0.18
Financing	9.27	10.08	10.20	9.89	-0.31
Community	36.70	0.99	37.06	37.4	0.34
TOTAL	503.97	3.11	519.97	512.17	-7.80

Source: Calculations based on Table 4.1 for GDP growth and Table 4.3 for employment growth.

The results essentially exemplify that the economic slowdown has reduced the employment generation capacity to the tune of approximately 8 million jobs in 2008–09. Out of this, the net job loss in the manufacturing and trade sectors has been to the extent of approximately 1 million and 1.5 million respectively. The projected job loss in the agriculture sector may be to some extent discounted as in all likelihood the high growth of employment in this sector may not be accepted as sustainable (Rangarajan et al., 2007).

Employment elasticities of all the three sectors of our reference have been calculated in a similar way as for the major sectors. Prima facie employment elasticities for the three referred sectors are higher than that of manufacturing in general. However, during the period 1993–94 to 1999–2000 all these three sectors had lower elasticities as compared to that of manufacturing. This reflects virtual stagnation of additional labour absorption in these sectors during that period.

Table 4.5: Employment Elasticity in Different Sectors

SECTORS	1999–2000 OVER 1993–94	2004–05 OVER 1999–2000	2004–05 OVER 1993–94
Spinning, weaving & finishing of textiles	-0.22	3.36	0.51
Wearing apparel	0.24	1.60	0.72
Total textiles	-0.04	2.62	0.62
Wood & furniture (used for handicrafts)	0.22	-0.65	0.81
Metal products & machinery (used for handicrafts)	0.02	0.66	0.15
Other manufacturing (used for diamond)	0.20	0.77	0.39

Source: Calculations based on employment growth computed on the basis of NSSO data on employment and unemployment for the years 1993–94, 1999–2000 and 2004–05 and GDP growth as reported by CSO for the relevant years.

Employment projections for the period 2005–06 to 2008–09 have been done on the basis of the long-term employment elasticity calculated for the period 1993–94 to 2004–05. Based on the long-term employment elasticity and annual GDP growth as reported in Tables 3.4 and 4.5, the projected annual employment growth rates are presented in Table 4.6.

Table 4.6: Projected Annual Growth (%) of Subsectoral Employment Using 1993–94 to 2004–05 Elasticity

SECTORS	ANNUAL EMPLOYMENT GROWTH (%)			
	2004–05 TO 2005–06	2005–06 TO 2006–07	2006–07 TO 2007–08	2007–08 TO 2008–09
Spinning, weaving & finishing of textiles	4.07	5.53	2.49	-2.49
Wearing apparel	11.76	8.29	0.39	7.19
Total textiles	6.36	6.82	2.23	1.85
Wood & furniture (for handicrafts)	-4.60	23.53	32.82	-9.96
Metal products & machinery (for handicrafts)	0.98	1.71	0.92	-1.02
Other manufacturing (for diamond)	9.43	1.67	6.33	0.58

Although the textile sector as a whole was adversely impacted by the economic slowdown, the RMG or wearing apparel segment maintained a significantly high share in the domestic product. Accordingly, the annual employment growth of wearing apparel never went into the negative territory. It was in just one year, 2007–08, i.e. just before the onset of the economic slowdown, that wearing apparel faced near stagnant growth in employment. In contrast to this, other segments of the textile sector recorded severe decline in production, leading to negative employment growth during the slowdown period. Wood & wood products, one of the mainstays of handicrafts production, was

severely affected due to the economic slowdown, registering around 10% decline in employment in 2008–09. The metal products and diamond sectors registered marginal negative and positive growth respectively in employment during the slowdown period. On the whole, among all the three sectors, it was only wearing apparel which was not adversely affected by the economic slowdown. The net changes in total employment worked out on the basis of the annual growth of employment are presented in Table 4.7.

Table 4.7: Projected Textiles Sector Employment and Change in Employment during the Slowdown Period

SECTORS	2005–06	2006–07	2007–08	2008–09	%CHANGE 2008–09	TOTAL CHANGE
Spinning, weaving & finishing of textiles	10,839,466	11,438,578	11,723,101	11,431,353	-2.49	-291,747
Wearing apparel	8,765,389	9,492,182	9,529,452	10,214,910	7.19	685,458
Total textiles	19,604,855	20,930,760	21,252,552	21,646,263	1.85	393,711

Table 4.8: Projected Employment and Change in Employment in Diamond and Handicrafts Sectors during the Slowdown Period

SECTORS OF EMPLOYMENT	PROJECTION				CHANGE 2008–09	
	2005–06	2006–07	2007–08	2008–09	NET	%
Diamond	982,455	998,887	1,062,152	1,068,325	6,173	0.58
Total Handicrafts	3,360,846	3,646,616	3,962,021	3,820,708	-141,313	-3.57
TEXTILES SEGMENT						
Cotton carpet	198,120	209,071	214,271	211,116	-3,155	-1.47
Embroidery on textiles	1,442,309	1,522,027	1,559,886	1,536,917	-22,969	-1.47
Zari work	808,213	852,884	874,098	861,228	-12,870	-1.47
Embroidery & embossing on leather	63,382	66,885	68,549	67,540	-1,009	-1.47
WOOD SEGMENT						
Cane & bamboo manufactures	270,960	334,730	444,576	400,295	-44,281	-9.96
Palm leaf mfrs	335,799	414,829	550,960	496,084	-54,876	-9.96
METAL SEGMENT						
Basic precious metal manufactures	105,255	107,053	108,039	106,941	-1,098	-1.02
Metal art ware	114,570	116,528	117,600	116,405	-1,195	-1.02
OTHER SEGMENTS						
Umbrella, walking sticks, etc	17,861	18,159	19,310	19,422	112	0.58
Candles & wax products	4,377	4,450	4,732	4,760	28	0.59

It is discernible from Table 4.7 that although the total textiles sector does not show net fall in employment during the slowdown period, the spinning, weaving & finishing of textiles segment registered a net decline of approximately 3 lakhs (2.92 lakhs) during the year 2008–09.

The diamond sector does not show a net fall in employment during 2008–09. However, this may have some methodological limitations, as we could not get the exact domestic product data for the diamond sector to exactly work out the employment elasticity and employment growth for this sector. Nevertheless, even if we apply employment elasticity calculated at the broad sectoral level of ‘other manufacturing’, the employment in 2008–09 in diamond reflects near stagnation.

The employment in the handicrafts sector is spread across different sectors such as textile, wood, metal and so on. Applying the employment elasticity of these different sectors, the employment growth and projections show a significant fall in employment during the slowdown period (Table 4.8).

The handicrafts sector as a whole shows a net decline in employment to the extent of more than 1.4 lakhs. Further, within the handicrafts sector, products based on wood suffered a major loss as this segment registered approximately 10% fall in total employment in 2008–09. This essentially implies a lay-off of more than 1 lakh workers from wood based handicrafts.

The projected employment figures presented in Tables 4.7 and 4.8 reflect a total job loss of approximately 4.3 lakhs across the three sectors. Although there were more jobs in wearing apparel than the total job loss that took place in other sectors, the job loss in other subsectors in no way may be considered as having been offset by the wearing apparel employment growth. This is because the growth recorded by the wearing apparel sector was far less than what was anticipated in the absence of economic slowdown. It is evident that the growth of the domestic product and employment growth in wearing apparel would have registered approximately the same rate as in previous years even in the absence of the economic downturn.

We now calculate the extent of job growth in the absence of the economic slowdown and hence calculate a new projection of job loss by assuming that economic slowdown has not affected the economy. The aggregate figures for the three sectors indicate that approximately 1.1 million jobs were lost in 2008–09 as a result of the economic slowdown.

Table 4.9 : Employment Projections for 2008–09 with and in the Absence of Economic Slowdown

SECTORS	PROJECTED EMPLOYMENT ON THE BASIS OF REALISED DOMESTIC PRODUCT				EXPECTED IN THE ABSENCE OF ECONOMIC SLOWDOWN		
	2007–08 ('000')	GROWTH (%)	2008–09 ('000')	TOTAL CHANGE ('000')	GROWTH (%)	2008–09 ('000')	NET SHORTFALL ('000')
Spinning, weaving & finishing of textiles	11,723	-2.49	11,431	-292	4.03	12,195	-764
Wearing apparel	9,529	7.19	10,215	685	8.29	0,319	-105
Total textiles	21,253	1.85	21,646	373	5.14	22,344	-869
Diamond	1,062	0.58	1,068	6	9.05	1,158	-90
Handicrafts	3,962	-3.57	3,821	-141	5.81	4,192	-372

4.2 EVIDENCES FROM FIRM LEVEL DATA

4.2.1 Employment Growth

The primary data collected at the firm level shows more or less the same trend as reflected from the secondary data. The only difference we observe at the firm level, from Table 4.9, is that the diamond sector shows a marginal decline in employment to the extent of -0.6% in 2008–9 over 2007–8 as against a marginal increase of 0.6% during the same period as reflected from the secondary data. However, as noted above, because of the paucity of domestic product data at highly disaggregated levels, the diamond sector was clubbed together with 'other manufacturing' for calculating employment elasticity and the projected employment growth. Since the approximation is not very far away from the reality as reflected from the primary data, the estimation of job loss in the diamond sector is quite reliable.

Table 4.10 : Number of Enterprises, Average Employment per Enterprise and Extent of Job Loss

SECTORS OF EMPLOYMENT	NUMBER OF ENTERPRISES	EMPLOYMENT PER ENTERPRISE (MILLION)					% CHANGE IN 2008–09 OVER 2007–08
		2004–05	2005–06	2006–07	2007–08	2008–09	
Textiles	617	46.1	46.1	46.4	47.1	46.4	-1.6
Diamond	359	22.9	22.7	22.0	21.8	21.7	-0.6
Handicrafts	334	13.8	13.6	13.6	13.2	12.2	-7.3
TOTAL	1229	30.8	31.2	31.0	31.0	31.0	-1.3

Source: Primary data.

The firm level data, however, shows slight variations in the extent of decline in employment during the slowdown period for the textiles and handicrafts sectors. As

regards the textiles sector, the assessment from the primary data is lower, while for the handicrafts the assessment is higher. In handicrafts, the assessment of higher employment decline can be explained in terms of concentration of sample firms in a few sectors. The handicraft sample firms were dominated by wood, metal products and cotton carpets firms, all of which registered a significant employment decline during the slowdown period. Similarly, in the textiles sector, the sample firms show approximately 1.6% decline in employment mainly because of the higher representation of carpets and weaving textiles in the sample (Table 4.10). On the whole, the assessment of the extent of employment change from the primary data is not very different from that deduced on the basis of the secondary data.

4.2.2 Impact of the Slowdown on Informal Manufacturing

In addition to examining the robustness of the assessment of projected employment for the slowdown period, the primary data is also helpful in calculating the impact of the slowdown on exports, output and employment in informal sector manufacturing. Table 4.11 presents sales per enterprise across informal and formal sectors for all the three sectors separately.

Table 4.11 : Sales Per Worker across Informal and Formal Sectors

SECTOR	SALES (₹ THOUSAND) PER ENTERPRISE					% CHANGE
	2008-09	2007-08	2006-07	2005-06	2004-05	2008-09 OVER 2007-08
INFORMAL						
Textiles	9,849	12,131	11,377	9,300	8,197	-18.8
Diamond	3,178	4,290	5,399	12,445	6,581	-25.9
Handicrafts	1,523	1,842	1,866	1,937	2,031	-17.3
TOTAL	2,734	3,208	3,337	3,653	3,323	-14.8
FORMAL						
Textiles	24,575	31,076	29,553	27,113	24,727	-20.9
Diamond	20,758	40,201	41,753	38,544	38,846	-48.4
Handicrafts	22,455	23,917	20,528	19,929	17,244	-6.1
TOTAL	23,086	33,238	32,104	29,448	27,421	-30.5

Source: Primary data.

As far as the impact of the slowdown on production is concerned, formal sector enterprises demonstrate a more severe impact. In fact, the total sales in 2008-09 fell by as much as 31% as compared to 2007-08. The decline in the informal sector was approximately 15%. Hence the fall in output (presently being measured in terms of sales)

is approximately two times higher in the formal sector enterprises than in the informal sector enterprises. Further, what is important to note is that the fall in sales value was the highest in the diamond sector, both in the formal and informal sectors. The handicrafts sector, however, shows a very small decline in sales in the formal sector, only to the extent of 6%, as against approximately 17% in the informal sector. This may be because of the bias of the distribution of handicrafts across formal and informal sectors with most of the handicrafts enterprises being concentrated in the informal sector.

The loss in employment across formal and informal enterprises, however, portrays a different picture. Percentage fall in employment is much higher in informal enterprises than in formal enterprises across all the sectors of employment under reference. The total loss of employment in the three sectors of textiles, diamond and handicrafts was approximately 7% in informal enterprises as against only 0.28% in formal enterprises. The highest fall was registered in informal handicrafts, which is approximately 9% (Table 4.12). The result is very much consistent with the trends reflected from the analysis based on secondary data.

Table 4.12 : Per Enterprise Employment across Formal and Informal Sectors and Percentage Change in Employment in 2008–09 over 2007–08

SECTOR	EMPLOYMENT PER ENTERPRISE					% CHANGE 2008–09 OVER 2007–08
	2008–09	2007–08	2006–07	2005–06	2004–05	
INFORMAL						
Textiles	7.7	7.9	7.9	7.9	7.8	-2.14
Diamond	7.7	7.8	8.3	8.2	8.4	-1.29
Handicrafts	5.9	6.5	6.6	6.6	6.6	-8.75
TOTAL	6.3	6.7	6.9	6.9	6.9	-6.87
FORMAL						
Textiles	48.8	49.3	48.7	48.8	49.2	-0.99
Diamond	22.1	22.5	22.7	23.3	23.5	-1.76
Handicrafts	25.1	25.4	23.5	22.6	21.7	-1.17
TOTAL	37.6	37.7	37.0	37.1	37.0	-0.28

Source: Primary data.

Among the different sectors under reference, handicrafts shows the highest decline in employment, followed by textiles. Despite a significant fall in production (sales) values, the diamond sector shows a comparatively moderate fall in employment, across both formal and informal enterprises. Another important fact that emerges from the analysis

is that employment in most of the informal enterprises started falling from the year 2007–08. The quarterly data collected at the firm level clearly indicates that most of the informal sector enterprises started downsizing employment from the last quarter of the year 2007–08. The big enterprises (formal sector) did not resort to downsizing until late 2008–09, resulting in comparatively lower fall in employment.

The textiles sector on the average experienced two-and-a-half times higher fall in employment in the informal sector than in the formal sector. The average of formal and informal textiles enterprises show a fall of approximately 1% in total employment as against a marginal increase as reflected from the secondary data. However, the results from the primary data are consistent as the textiles sector in the primary data also includes comparatively higher proportion of carpets and weaving units from Varanasi, Tirupur and Ludhiana.

Further disaggregation of employment loss data at the firm level indicates that most of the informal sector enterprises first retrenched casual workers and other unskilled workers. Because of lower levels of overall output during the year 2008–09, the employment of contract workers was also reduced significantly. However, even within the informal enterprises most of the skilled workers were not retrenched. But many kinds of non-wage payments such as overtime and increments were not provided even to skilled workers. One diamond merchant from Surat explains, 'Diamond cutting and polishing workers are in high demand in this city. Once they are retrenched from the firms, they will go back to their village and it will be very difficult for the firm to call back them in the next season.' Similarly in textiles, most of the workers are migrants from other cities. Firm owners in Noida and Ludhiana reported that skilled workers are not easily available. Workers take almost six to nine months to learn the skill of fine stitching.

Comparatively higher production losses and lower displacement of labour in formal sector enterprises led to increased wage–sales ratio during the slowdown period. The wage to sales ratio (which may also be referred to as 'wage bill' of enterprises) was significantly lower in the textiles sector in the informal enterprises. The lower wage bill in formal enterprises for the diamond and handicrafts sectors essentially reflects the higher use of capital and technology in the formal sector. Overall wage to sales ratio in the informal sector increased from 9.6% in 2007–08 to 11.4% in 2008–09, registering an increase of approximately 19% in the total wage bill, i.e. wage–sales ratio. The highest increase in the wage bill in informal enterprises was registered in handicrafts, followed by the textiles sector (Table 4.13). In the formal sector the highest increase in the wage bill, to the tune of approximately 73%, was registered in the diamond sector.

Table 4.13 : Wage Sales Ratio and Increase in Wage Bill in Formal and Informal Sectors during the Slowdown Period

SECTOR	% OF TOTAL WAGES TO TOTAL SALES					% CHANGE
	2008-09	2007-08	2006-07	2005-06	2004-05	2008-09 OVER 2007-08
INFORMAL						
Textiles	4.2	3.4	3.4	4.6	4.0	21.83
Diamond	14.6	13.4	21.0	5.6	10.1	9.37
Handicrafts	18.6	14.7	14.2	13.5	11.6	26.21
TOTAL	11.4	9.6	10.1	8.5	8.2	18.88
FORMAL						
Textiles	14.9	12.0	12.1	11.3	11.5	24.36
Diamond	5.3	3.1	3.0	3.3	3.4	72.58
Handicrafts	4.9	4.4	4.6	4.5	5.5	11.01
TOTAL	11.0	7.8	7.7	7.4	7.5	41.40

Source: Primary data.

Table 4.14 : Average Annual Wage of Worker and Extent of Wage Cut in Formal and Informal Enterprises

SECTOR	ANNUAL WAGE (₹) PER WORKER					% CHANGE
	2008-09	2007-08	2006-07	2005-06	2004-05	2008-09 OVER 2007-08
INFORMAL						
Textiles	53,088	52,522	49,829	54,340	42,501	1.08
Diamond	67,434	73,386	72,363	84,731	79,161	-8.11
Handicrafts	48,011	41,981	40,065	39,475	35,732	14.36
TOTAL	50,386	45,786	43,923	44,971	39,625	10.05
FORMAL						
Textiles	74,935	75,443	73,696	62,610	57,692	-0.67
Diamond	49,669	54,757	55,363	54,397	55,583	-9.79
Handicrafts	40,280	41,465	40,409	40,060	43,997	-2.86
TOTAL	67,362	68,659	67,211	58,950	55,876	-1.89

Source: Primary data.

Table 4.13 reflects an important feature of the economic slowdown across the formal and informal sector enterprises. While the informal sector adjusted to the impact of economic slowdown by laying off workers, the formal sector enterprises were not able to

do so. This justifies the demand for economic packages from the government to the big enterprises to partly offset their dwindling profitability. However, it is very evident that the social cost of the impact of a slowdown is more pronounced in the case of informal sector enterprises as the laying off of workers may lead to a wider significance in terms of accentuating the slowdown through the shortfall in 'effective demand' of the society.

However, it is not true that workers in big (formal) enterprises were not affected by the economic slowdown. Most of the formal enterprises compensated their production loss partially by lowering the wages of workers and hence their wage bill. The lowering of wages was not visible in informal sector enterprises as most of these enterprises resorted to directly laying off workers instead of curtailing the prevailing wages. In contrast, instead of laying off workers, formal enterprises adopted the method of wage cut, the extent of wage cut being to the tune of 2% (Table 4.14).

In general, what emerges from the above analysis is that the impact of the economic slowdown has been widely different across formal and informal sector enterprises. Most of the direct job loss took place mainly in the informal sector, while in the formal sector the job loss has been indirect, i.e. through wage cuts. Wages are usually very low in most informal sector enterprises, probably leaving no scope for further wage cuts. In contrast to this, formal sector enterprises found it easier to resort to wage cuts without attracting much attention from trade unions and government monitoring agencies. It is important to note that both informal as well formal enterprises suffered production losses during the slowdown period, with the formal sector experiencing a higher incidence of loss.

4.3 EMPLOYMENT–EXPORT RELATIONS

The income (GDP) and employment relationship at the macro level is straightforward and the production function approach, through 'demand for labour elasticity with respect to income', helps in estimating and projecting employment on the basis of income. In contrast to this, the relationship between employment and export is rather complex as export itself is a function of an array of economic factors. Goldar (2009) notes that 'there are reasons to believe that trade liberalisation (leading to increased exports) will lead to an increase in the (absolute value of) labour demand elasticity, i.e. the elasticity of labour demand with respect to wage rate' (see also Hamermesh, 1993; Rodrik, 1997).

One empirical advantage of estimating such a relationship is that the said elasticity may be treated as the 'employment coefficient' of exports. This essentially implies that the elasticity of employment with respect to exports will stand for a coefficient that indicates the proportionate change in employment as result of unit change in exports. This

question is of tremendous relevance for a country like India where ‘trade liberalisation’ is at a nascent stage and greater liberalisation of trade is considered crucial for generating productive employment. With this presumption, we tried to establish a link between exports and employment, i.e. we essentially tried to enquire into how labour demand is related to export expansion. This section provides empirical evidences on the role of exports in promoting employment.

We first experimented with a simplistic relationship with exports and employment, i.e. calculating employment elasticity of exports (or elasticity of employment with respect to exports) using the same formula as for national or sectoral income in section 4.1. The foregoing discussions suggest that the ratio of employment growth to export growth provides the employment elasticity with respect to exports. The employment elasticity so calculated for the three specific sectors separately is presented in Table 4.15.

Table 4.15 : Average Annual Growth (%) of Employment and Exports and Employment Elasticity with Respect to Exports

SECTORS	AVERAGE ANNUAL EMPLOYMENT GROWTH	AVERAGE ANNUAL EXPORT GROWTH	EMPLOYMENT ELASTICITY WITH RESPECT TO EXPORTS
Spinning, weaving & finishing of textiles	5.65	7.64	0.74
Wearing apparel	5.87	12.09	0.49
Total textiles	5.74	10.49	0.55
Diamond	5.81	2.71	2.15
Handicrafts	4.14	2.01	2.06

Note: Average annual growth rates are a simple average of annual growth rates of five years, viz. 2004–5 to 2008–09.

Source: Growth rates have been calculated on the basis of data presented in Table 4.4; employment elasticity is calculated on the basis of equation (4).

Table 4.15 shows that the employment elasticity with respect to exports is the highest for diamond and the lowest for wearing apparel (i.e. RMG). The elasticity is as high as 2.15 for diamond and 2.06 for handicrafts. This essentially implies that 1% increase in exports of diamond and handicrafts will lead to 2.15% and 2.06% increase respectively in employment in those sectors. Similarly, the relationship indicates that 1% increase in exports of spinning & weaving textile and wearing apparel will lead to 0.74% and 0.49% increase in employment in those sectors.

However, as mentioned earlier in this section, this type of relationship is too simplistic. For a more comprehensive picture and precise relationship between employment and exports, the relationship has to take into account many other factors. A recent study

by UNCTAD (2009) in this regard considers a multivariate relationship between employment and exports, and calculates the said coefficient on the basis of ‘income elasticity’ of the export demand. The postulated relationship in the UNCTAD study considers world trade, India’s GDP and effective exchange rates as the affecting factors. However, this hypothesis does not consider the internal technical relationship of industries as the causal factors of the relationship between employment and exports. A more comprehensive theoretical framework in this regard is again provided by the ‘production function’ approach which considers, in addition to the external sector factors, the internal technical relationship within the industries. The ‘production function’ approach clearly identifies that under competitive conditions, the elasticity of demand for labour of a firm depends on: (a) the elasticity of substitution between labour and other inputs; (b) the price elasticity of demand for the products produced by the firm; and (c) the share of labour cost in total cost of production. As Goldar (2009) notes, ‘Trade liberalization is expected to raise the elasticity of substitution between labour and other inputs since more and better intermediate inputs become available. Opening up the domestic markets to imports is expected to raise the price elasticity of demand for products of domestic firms since there is greater availability of substitutes for any product. Accordingly, one would expect the labour demand elasticity to increase with trade liberalization.’

On the basis of these theoretical discourses, we estimated a regression with employment being a function of the extent of exports, extent of ratio of export to total sales (or production), total wage bill of industry (as a proxy for input cost), wage rates (as a proxy for demand elasticity), and size–class of employment of the industry (as a proxy for technology) and whether the industry contracts in or contracts out part or full of its production process. The only important variable we did not consider in this relationship is the effective exchange rate. The model finally takes the following form:

$$\text{Log } E_t = \alpha \text{ Log Exp} + \beta_0 \text{ Log } K_t + \beta_1 \text{ Exp_sale}_t + \beta_2 \text{ Log wagebill}_t + \beta_3 \text{ Log realwage}_t + \text{dsize0-9}_t + \beta_4 \text{ dcontractin}_t + \beta_5 \text{ dcontractout}_t + \upsilon$$

Where,

E	is employment
Exp	is total export
K	is fixed capital
Exp_sale	is export to sales ratio
wagebill	is total wage bill of industry
realwage	is the real annual wage rate in industry
dsize0-9	is dummy for employment size of 0 to 9 workers
dcontractout	is dummy for industry contracting out
α and β s	are parameter estimates
υ	is stochastic error term

Some researchers also consider lagged employment (of one previous year) as one of the independent variables in the model. In order to neutralise the time variant in the model, we considered the panel data at the firm level for five years. Further, instead of calculating ‘random’ and ‘fixed’ effects separately from the panel data, we preferred the model to absorb the two effects by adding up the two error terms.⁷ The results of the model with sectoral dummies for textiles, diamond and handicrafts are presented in Table 4.16.

Table 4.16 : Employment Elasticity with Respect to Exports: Results of Equation (9)

DEPENDENT VARIABLE: LN_EMPL	COEF.	STD. ERR.
ln_expo	0.95	0.003
exp_sale	-1.91	0.011
ln_fixcap	0.01	0.002
ln_wage_sale	0.96	0.004
ln_wage_rate	-0.97	0.006
dcont_in	-0.02	0.006
dcont_out	0.01	0.006
dempo_9	-0.07	0.007
dtextile	0.04	0.011
ddiamond	0.07	0.012
dhandicraft	0.00	0.009
_cons	2.01	0.052
No. of observations	5323	
Category*	5	
Adjusted R_sq	0.92	
Model-fit	F(11, 5307) = 18226.5 Prob > F = 0	

Source: Calculations based on the primary data collected.

The results reported in Table 4.16 essentially reflect that the employment elasticity with respect to export in the three sectors taken together is slightly less than unity (+0.95). It implies that 1% increase in export of these three sectors will lead to the generation of 0.95% increase in employment. One interesting finding in the regression result is that an increase in the ratio of exports to sales dampens the employment prospects,

7 Such an exercise can be done by following the command of ‘areg’ in STATA.

implying that increase in the total production of firms, rather than just increasing the exports, is more important for generating employment. In fact, the export–production relationship is itself a complex phenomenon as the extent of domestic demand for a product is an important determinant of exports.

The role of capital is insignificant as most of the firms in the sample are of small sizes using a very low size of capital in general. Increase in real wage reduces the employment expansion because of the increase in the input costs of the firms. However, increase in the total wage bill of the firms is directly related to the expansion of employment as the wage bill may increase even without an increase in real wages. The employment elasticity is lower in smaller size firms as reflected by the negative coefficient of the dummy for smaller size firms. Further, the same regression was also attempted for the three sectors separately. The results are presented in Table 4.17. Since all the units in the diamond sector in our sample are approximately 100% export oriented, we have dropped one variable, viz. export to sale ratio, from the regression for this sector.

**Table 4.17 : Employment Elasticity with Respect to Exports for the Three Sectors under Reference:
Results of Equation (9)**

DEPENDENT VARIABLE: LN_EMPL	TEXTILES		DIAMOND		HANDICRAFTS	
	COEF.	STD. ERR.	COEF.	STD. ERR.	COEF.	STD. ERR.
ln_expo	0.97	0.004	0.76	0.011	0.85	0.009
exp_sale	-1.93	0.015	#	#	-1.73	0.024
ln_fixcap	0.01	0.003	0.04	0.009	0.02	0.004
ln_wage_sale	1.00	0.005	0.74	0.013	0.84	0.010
ln_wage_rate	-0.96	0.008	-0.86	0.024	-0.90	0.012
dcont_in	-0.03	0.008	0.02*	0.022	-0.02*	0.020
dcont_out	0.01*	0.007	0.11	0.038	0.04	0.011
dempo_9	-0.12	0.014	-0.19	0.026	-0.14	0.013
_cons	1.84	0.081	1.15	0.293	2.21	0.085
No. of observation	2399		1556		1368	
Category	5		5		5	
Adjusted R_sq	0.971		0.830		0.957	
Model-fit	F(8, 2386) = 10180.63; Prob > F = 0		F(7, 1544) 1086.32; Prob > F = 0		F(8, 1355) = 4097.58; Prob > F = 0	

Note: All the coefficients are significant at 95% except * is not significant at 95% confidence interval.

Source: Calculations based on primary data.

A comparison of the three sectors reflects that textiles has the highest employment elasticity with respect to export (0.97) followed by handicrafts (0.85) and diamond (0.76). All the signs in all the three sectors are on expected lines as reflected by the aggregate regression results (Table 4.17) except that dummies for contracting out for textile sector and dummies for contracting in for diamond and handicrafts sector become insignificant.

The employment elasticity so calculated provides a unique value of the employment coefficient. However, based on the extent of standard errors reported in Table 4.17, a range of employment coefficients can be worked out which may be more plausible as compared to the unique values. The ranges of the employment coefficient for the three sectors are provided in Table 4.18.

Table 4.18 : Range of Employment Coefficients across the Three Sectors

SECTOR	EMPLOYMENT COEFFICIENT WITH RESPECT TO EXPORTS	
	LOWER RANGE	UPPER RANGE
Textiles	0.96	0.98
Diamond	0.73	0.78
Handicrafts	0.83	0.87

Source: Calculated on the basis of export coefficient and standard errors.

The ranges of the employment coefficient with respect to exports essentially implies that with 1% increase in the export value the potential employment increase in textiles and diamond ranges between 0.96 to 0.98%. Similarly, 1% increase in the export value of handicrafts leads to an increase in employment in the range of 0.83 to 0.87% in this sector.

The above results, however, need to be interpreted carefully as there is no one-to-one correspondence between export growth and employment generations. The actual magnitude of employment generation as a result of increase in export will crucially depend on a host of factors such as the extent of use of capital and technology by the industry, contracting practices and the employment size of firms. For example, smaller size firms will have lower elasticity compared to bigger firms and firms using high levels of capital and technology will have higher employment elasticity than the average figures presented in Table 4.18.

5

Policy Initiatives to Counter the Downturn *Efficiency and Efficacy*

Different economies announced various economic and fiscal packages to counter the unprecedented economic slowdown in recent years. These stimulus packages ranged from providing direct monetary benefits to multinationals to trade protectionist policies by different countries. In consonance with the global response to the slowdown, the GoI also announced a number of initiatives to tackle the situation. The present chapter, apart from highlighting the broad contours of those initiatives, also aims to assess the efficiency and efficacy of the stimulus packages announced by the government.

Since the manufacturing sector has been one of the worst hit by the current economic slowdown, particularly in India, these stimulus packages are geared towards arresting the fall in industrial production and maintaining domestic demand in general. The chapter is focused on assessing the efficiency of the stimulus packages by estimating their role in controlling the impacts of the slowdown while the efficacy of the packages will be measured by the nature of response from industries. The chapter is structured as follows. Section 5.1 presents the broad contours of the policy response to the economic slowdown. In section 5.2 a discussion of these policy initiatives has been presented with a focus on assessing the efficiency of these packages. Section 5.3 presents responses from firms to these stimulus packages.

5.1 BROAD POLICY INITIATIVES

To counter the negative fallout of the global slowdown on the Indian economy, the GoI announced various macroeconomic adjustments and other policies. It is often contended that the GoI's response to the slowdown was too late to offset the negative effects of the slowdown. However, the Indian situation needs to be understood in a broad perspective, especially in terms of certain major challenges that the country was facing at that time. India was struggling with a record commodity price rise just before the economic slowdown and all policy measures were geared towards containing inflationary impacts. As the Economic Survey (2008–09) notes, 'there was barely any

time to deal with this problem before the third challenge, the global financial meltdown and collapse of international trade, hit the world with severity'. Although many fiscal expansionary policies were activated as early as January 2008, they were not targeted at containing the impact of economic slowdown but were more driven by internal democratic compulsions. In fact, the fiscal expansionary policies were then severely criticised as contributing to the inflationary pressures that India was already facing at the time. The first policy initiative of the Indian government to counter the negative fallout of the global slowdown was announced only in December 2008, followed by two more announcements of different sets of measures during the two subsequent months. All together there were three stimulus packages.

The First Stimulus Package worth US \$ 4 billion (₹ 20,000 crores) was announced on 7 December 2008. This included the following measures:

1. Interest subvention of 2% on export credit for labour intensive sectors
2. Across the board 4% excise duty cut
3. Additional allocations for export incentive schemes
4. Full refund of service tax paid by exporters to foreign agents
5. Incentives for loans on housing for up to ₹ 500,000, and up to ₹ 2 million
6. Limits under the Credit Guarantee Scheme (CGS) for small enterprises doubled
7. Lock-in period for loans to small firms under CGS reduced
8. India Infrastructure Finance Company Limited (IIFCL) allowed to raise ₹ 100 billion through tax-free bonds
9. Norms for government departments to replace vehicles relaxed
10. Import duty on naphtha for use by the power sector reduced to zero
11. Export duty on iron ore fines eliminated
12. Export duty on lumps for steel industry reduced to 5%

The Second Stimulus Package worth US \$ 4.1 billion (₹ 20,500 crores), which was announced on 1 January 2009, included the following measures:

1. State governments allowed to borrow another ₹ 30,000 crores
2. Interest ceiling on external borrowing (ECB) removed
3. Foreign Institutional Investment (FII) cap for domestic corporate debt hiked to US \$15 billion from US \$6 billion
4. Special purpose vehicle (SPV) created to lend ₹ 25,000 crore to Non Banking Financial Companies (NBFCs)
5. Refinance facilities of ₹ 4,000 crores for National Housing Bank (NHB)
6. IIFCL allowed to raise another ₹ 30,000 crore via tax-free bonds.

The Third Stimulus Package was announced on 24 February 2009, and included the following measures:

1. General rate of Central Excise duty cut to 8% from 10%
2. 4% excise duty cut to be extended to next fiscal
3. 5% export incentive for raw cotton through the Videsh Krishi aur Gram Udyog Yojana (VKGUY)
4. Service tax decreased to 10% from 12%
5. Customs exemption on naphtha import extended
6. Ceiling for 2009–10 fiscal deficit for states raised

(The list of policy measures mentioned above have been taken from Kannan, 2009; and MoLE, 2009a.)

In addition to these, the MoC, GoI, took some trade specific measures for certain steel products. In the Union Budget 2009–10 of the GoI, some other relief and expansion measures were also announced. Further, the support price for raw cotton was increased from ₹ 2,055 per quintal in 2007–08 to ₹ 2,850 per quintal in 2008–09.

In order to understand them in a general macroeconomic framework, the policy measures of the GoI can be classified under the following categories:

1. **Macroeconomic fiscal policy:** Aimed at domestic demand stabilisation, through price policy; increase in government expenditure; public works programmes; direct interventions
2. **Monetary & Credit Policy:** Aimed at easing liquidity crunch, through reduction in repo and reverse repo rates; Statutory Liquidity Ratio (SLR), Cash Reserve Ratio (CRR), Prime Lending Rate (PLR), liberalising ECB; etc
3. **Trade Policy:** Aimed at export promotion, through interest subvention; duty drawback; protection of a few ailing sectors; VKGUY; refund of duty; Export Promotion Control Guarantee (EPCG); Duty Entitlement Pass Book (DEPB); focus product; focus market schemes; etc

An overview of the policy measures announced by the government clearly reveals that, unlike in developed countries, the GoI did not resort to a direct bail-out package for any particular industry or groups of industries. Instead, the GoI attempted a macro-management of the economy by adjusting crucial rates and broad based fiscal and trade policy measures. This arrested the declining rates of aggregate savings and investments in general and GDP in particular. However, two pertinent questions need to be addressed: Were the stimulus packages announced by the GoI adequate to sustain the long-term (or at least medium-term) recovery and high growth rates as achieved by the Indian

economy before the slowdown? Have the benefits of the stimulus packages reached those firms which bore the brunt of the crisis?

We explore these issues in detail in the next two sections.

5.2 EFFICIENCY OF THE STIMULUS PACKAGES

In general, the stimulus packages announced by the GoI in three phases helped India to counter the negative impact of the slowdown. The credit crunch in the Indian economy was to a great extent relieved from January 2009, domestic demand was stabilised, and industrial production and exports started rising from May–June 2009. The turnaround of the economy was also reflected by the gradual but steady inflow of foreign capital and rising stock prices.

5.2.1 Adequacy of the Stimulus Packages

Although the stimulus packages were instrumental in reverting the downturn of the economy, their efficiency has been widely contested, particularly in industrial and trading circles. First of all, it is widely believed that the announcements of the stimulus packages came too late to adequately address the declining trends. The first reflection of the economic downturn in India was noticed during the first quarter of 2008–09, with the IIP showing a significant decline from the previous quarters. The first reflection of export contraction was, however, noticed during the third quarter of 2008–09 when the export growth first went negative (Table 5.1).

Table 5.1: Quarter to Quarter Growth (YoY) in Manufacturing Domestic Products and Total Exports during 2007–08 and 2008–09

	DOMESTIC PRODUCTS MANUFACTURING*		EXPORTS*	
	2007–08	2008–09	2007–08	2008–09
Apr–Jun	10.0	5.5	21	37
Jul–Sep	8.2	5.1	19	26
Oct–Dec	8.6	0.9	33	–13
Jan–Mar	6.3	–1.4	42	4

Note: *Domestic product growth rates are based on constant prices (₹) 1999–2000 and export growth rates are based on USD values.

Source: Calculated on the basis of data collected from the MoC website for exports and CSO for domestic products.

Table 5.1 clearly indicates it was in the third quarter of 2008–09 that the manufacturing domestic product as well as total exports declined considerably and the impact

of the global slowdown on the Indian economy became quite visible. This probably prompted the government to announce the first stimulus package in December 2008. The announcement of the second package in January 2009 took industrialists aback as the package did not include any concrete measure to ease the credit crunch in the market. In fact, suitable policy measures aimed at improving the credit situation had been expected at the time of announcement of the Credit Policy at the beginning of the third quarter of 2008–09. As Rao (2009) notes, ‘The RBI has been far too hesitant and missed an opportunity in the third quarter monetary policy announcement. Merely stating that it will act at the appropriate time will not improve market sentiments. Besides monetary policy has a longer time lag before it impacts the economic system, particularly when the sentiment is far from comfortable.’ Similarly, export and import incentives were announced only after export growth came down to approximately zero by the end of 2008. The withdrawal of foreign capital from the Indian stock markets was very much evident from the first quarter and the collapse of the real sector surfaced vividly during the second quarter of 2008–09. However, these two reflections did not attract any significant government interventions, either on the regulating of foreign exchange front or the credit policy front. ILO (2009) notes that delayed measures ‘may prove insufficient or ill-adapted to the evolving circumstances. Success in overcoming earlier financial crises in Korea and Sweden is associated with the prompt adoption of a stimulus package.’

There were concerns that the overall package was not adequate to boost economic growth. Quoting from Kannan (2009), a leading industry lobbyist said, ‘The second stimulus package unveiled Friday is in the right direction but falls short of expectations that it would be around ₹ 1 trillion (US \$ 20 billion), as against ₹ 200 billion (US \$ 4 billion). This would amount to approximately 2 percentage as a proportion to the GDP, which is what is required to be a real booster.’ Similarly, representatives of industries and exporters stated that all three stimulus packages announced by the Central Government were inadequate and negligible for the Indian industry when compared to the relief packages offered to textile manufacturers in competing countries like China and Pakistan to manage the global recession. The second stimulus package evoked disappointment in the textiles sector as it did not contain anything to stimulate the sluggish exports in the sector. In this regard, it is important to note that the economic package in competing countries like China has been to the size of approximately US \$ 600 billion. Most of this expenditure in China is targeted towards public works programmes and relief in central taxes, particularly for exporters.

The analysis about the adequacy of the fiscal package shows that the policy measures did not have an explicit employment target; they primarily focused on measures to augment liquidity in the system in addition to providing some fiscal incentives especially to the export oriented sectors. There were certainly increased allocations for public works

programmes like the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). However, there was practically no concern regarding how employment could be protected at the firm level or how the retrenched labourers could be rehabilitated. Our analysis in Chapter 4 had indicated there was an employment loss of at least 7 to 8 million in the single year of 2008–09. The additional provisions of ₹ 20 thousand crores in the 2008–09 Budget, for employment generation under MGNREGS and other social employment programmes, was in no way adequate to take care of the extent of job loss that the Indian economy suffered during the slowdown.

5.2.2 Outreach of the Stimulus Packages

The access to many of these benefits was not uniform. Many smaller firms, which faced much higher levels of problems during the slowdown, did not have access to the benefits announced by the government under the three stimulus packages. Most of the smaller firms were not even aware of the two most popular incentive measures, viz. lowering of interest rates and cut in excise duty. During our field survey, for instance, an overwhelming proportion of firms, more so in the case of informal enterprises, responded that they were not even aware of such benefits. At least most of them said that they did not know the exact details of the facilities in this regard. It can be seen from Table 5.2 that only approximately 35% of the informal enterprises, as against approximately 60% of the formal enterprises, responded ‘Yes’ to this question, i.e. they were aware of this announcement (Table 5.2). The percentage of firms aware of these two incentives is abysmally low, just 22% in the informal diamond sector.

Table 5.2: Percentage of Firms Responding ‘Yes’ to the Question ‘whether they were aware of the interest cut and lowering of excise duty’ across Informal and Formal Enterprises

SECTOR	INFORMAL	FORMAL	TOTAL
Diamond	22.2	37.54	36.8
Handicrafts	30.4	72.73	44.3
Textiles	84.0	72.07	72.6
TOTAL	34.8	59.92	54.5

Source: Primary data.

Interestingly, textile enterprises have far better awareness of the two benefits. More than 72% of the surveyed textile firms responded that they were aware of the benefits announced by the government. Moreover, awareness was also quite high among the informal textile enterprises. This is because of the fact that the stimulus packages contained a few provisions exclusively for the textiles sector and hence the cross-cutting provisions, such as interest rate cut and lowering of excise duty, were also seen as complementary to the benefits announced for the textiles sector as whole.

Further, almost all the informal sector enterprises in diamond and handicrafts sectors responded that they could manage to reduce the cost of production due to the interest rate cuts. A comparatively higher percentage of enterprises from the textiles sector responded that the interest cut and lowering of excise duty helped them in reducing the cost of production during the slowdown period. However, the difference across the formal and informal sectors in textiles is again stark. Approximately 31% of the textile firms in the informal sector said that the interest cut and lower excise duty helped them in reducing the cost of production, while the same proportion is approximately 49% in the formal sector (Table 5.3).

Table 5.3: Percentage of Firms Responding that Their Cost of Production Reduced Because of Interest Cut and Lowering of Excise Duty

SECTOR	YES, TO A GREAT EXTENT	YES, BUT ONLY TO SOME EXTENT	YES ALL
INFORMAL			
Diamond	5.6	16.7	22.2
Handicrafts	17.4	13.4	30.8
Textiles	4.0	36.0	40.0
TOTAL	15.4	15.7	31.1
FORMAL			
Diamond	7.9	23.5	31.4
Handicrafts	9.1	41.8	50.9
Textiles	17.8	42.2	60.0
TOTAL	13.3	35.5	48.8

Source: Primary data.

A few more specific questions on the stimulus packages were canvassed with the firms. For each of these questions, such as withdrawal of service tax, CGS, export incentive through VKGUY, etc, a larger proportion of firms responded in the negative regarding availing of these facilities. Finally, the firms were asked to rank the different policy provisions announced across the three stimulus packages on a 10-point scale. The responses of firms for the first five ranks are presented in Table 5.4.

The most well-received policy measures were full refund of claims under Central State Tax (CST)/terminal excise duty/duty drawback on deemed exports; interest subvention of 2%; and increase in the limit of CGS. Approximately 28% of all surveyed firms ranked the first mentioned measure as number 1, with an additional approximately 10 to 11% of the firms ranking this as numbers 2 and 3 respectively on a 10-point scale. Altogether, around 70% ranked this measure within 1 to 5. This signifies that duty drawback and

refund of CST claims etc has been one of the most popular of all the policy measures announced by the government to help industries counter the impact of the slowdown. Besides this, interest subvention was another measure which has been ranked very favourably by firms. Approximately 27% firms ranked this measure as number 1 with an additional 29% ranking it as number 2; altogether, more than 75% firms ranked this measure between 1 and 5 (Table 5.4)

Table 5.4 : Ranking (from 1 to 5) of Firms for Different Stimulus Measures

POLICY MEASURES	RANKS				
	1	2	3	4	5
a. Interest subvention of 2%	26.6	28.9	15.4	10.2	6.0
b. Handicraft items included in VKGUY	9.9	10.0	10.0	20.0	11.5
c. Full refund of claims CST/terminal excise duty/duty drawback on deemed exports	28.1	14.3	10.9	9.9	9.3
d. Reduction in excise duty by 4%	12.9	19.2	14.0	10.0	11.5
e. Increase in the limit of CGS from existing ₹ 50 lakhs to 1 crore	18.8	16.0	15.5	11.8	7.2
f. Extension of income tax exemption for 100% export oriented units	2.8	7.2	12.4	13.3	18.3
g. Extension of export obligation period under EPCG scheme	2.1	3.4	9.2	15.6	12.9
h. Extension of DEPB scheme	0.8	2.9	12.0	6.9	10.5
i. Reduction in customs duty under EPCG scheme	1.8	7.7	3.3	7.5	7.2
j. Introduction of 'focus product' and 'focus market' incentive schemes	0.4	4.1	5.3	6.3	6.9

Source: Primary data.

It is interesting to note that the responses of firms vary widely not only across the three sectors but also across the informal and formal enterprises within each sector. For example, increase in the limit of CGS was ranked as number 1 by more than 37% firms in the informal sector. Most of the informal firms (approximately 49%) in handicrafts ranked this measure as number 1. Informal sector firms also ranked interest subvention very high on the scale. In contrast, most of the formal sector enterprises ranked full refund of claims under CST/terminal excise duty/duty drawback on deemed exports as very high. Similarly, extension of income tax exemption and extension of the export obligation period under EPCG scheme were also ranked within 5 in the ranking scale by the formal enterprises. The responses of the firms across informal and formal sectors are presented in Table 5.5.

Table 5.5: Ranking (from 1 to 5) from Informal and Formal Firms for Different Stimulus Measures

POLICY MEASURES	RANKS				
	1	2	3	4	5
FORMAL SECTOR					
a. Interest subvention of 2%	30.2	27.0	14.8	7.4	4.8
b. Handicraft items included in VKGUY	6.6	17.8	16.2	24.9	12.2
c. Full refund of claims under CST/terminal excise Duty/ duty drawback on deemed exports	9.1	9.7	14.0	17.7	16.7
d. Reduction in excise duty by 4%	3.9	16.1	14.4	18.9	11.7
e. Increase in the limit of CGS from existing ₹ 50 lakhs to 1 crore	37.0	17.1	12.7	9.4	5.0
f. Extension of income tax exemption for 100% export oriented units	3.9	11.7	14.0	11.2	12.3
g. Extension of export obligation period under EPCG scheme	2.8	3.4	11.3	11.3	16.9
h. Extension of DEPB scheme	0.0	4.5	6.2	8.5	11.3
i. Reduction in custom duty under EPCG scheme	1.1	2.8	6.8	8.5	6.2
j. Introduction of 'focus product' and 'focus market' incentive schemes	0.6	4.5	4.5	5.6	7.9
INFORMAL SECTOR					
a. Interest subvention of 2%	25.9	29.3	15.5	10.8	6.2
b. Handicraft items included in VKGUY	10.8	8.0	8.4	18.7	11.3
c. Full refund of claims under CST/terminal excise duty/ duty drawback on deemed exports	31.9	15.2	10.3	8.4	7.8
d. Reduction in excise duty by 4%	14.7	19.8	13.9	8.2	11.5
e. Increase in the limit of CGS from existing ₹ 50 lakhs to 1 crore	15.0	15.8	16.0	12.3	7.6
f. Extension of income tax exemption for 100% export oriented units	2.6	6.3	12.1	13.7	19.5
g. Extension of export obligation period under EPCG scheme	1.9	3.4	8.8	16.5	12.1
h. Extension of DEPB scheme	0.9	2.6	13.2	6.6	10.4
i. Reduction in custom duty under EPCG scheme	1.9	8.7	2.6	7.3	7.4
j. Introduction of 'focus product' and 'focus market' incentive schemes	0.3	4.0	5.5	6.4	6.7

Source: Primary data.

The foregoing analysis clearly indicates that although the benefits of the stimulus packages have helped industries in countering the negative impacts of the economic slowdown, the benefits have been more or less limited to formal sector enterprises. While

interest subvention and credit guarantee schemes have certainly benefited informal sector enterprises as well, a large proportion of these enterprises either did not have much awareness of the benefit packages available or, if they were aware of them, did not access the benefits. Many of these benefits were not very useful for smaller enterprises as their problems were of an entirely different nature. Informal sector enterprises reported that during the slowdown period they encountered problems related to accessing raw material, retaining trained workers and accessing export markets. Based on the large number of interviews conducted with entrepreneurs across the three sectors, Table 5.6 depicts some of the problems faced by smaller enterprises.

Table 5.6: Some Problems Identified by Small Enterprises across the Three Sectors

SECTORS	PROBLEMS IDENTIFIED BY ENTREPRENEURS
Textiles	Availability of raw material, particularly silk and cotton; increased cost of raw materials; unavailability of trained workers; increased competition with Chinese products (mainly silk); high import duty on silk; availability of power; lack of computer designing for embroidery works
Diamond	Workers moving to another sector (textile); large stock of finished products; less availability of rough diamond; old technology; no new export markets explored
Handicrafts	Less trained workers; demand falling in export markets; lack of modern technology; frequent power cuts; high interest rates on bank loans

Although most of the problems identified by these enterprises are of a perennial nature, many of them were compounded during the slowdown period. For example, small enterprises often use their own generators for uninterrupted power supply. However, declining profit margins during the slowdown period compelled the enterprises to stop investing in uninterrupted power back-ups. In addition, most of the smaller firms complained that it was not easy to take bank loans especially during the downturn. To quote one firm manager from Varanasi, ‘We sometimes receive large orders to fulfill within a short period of a few months. When we approach banks for working capital, they invariably ask for margin money and security. We are small entrepreneurs, we do not have large reserves and security. Sometimes we fail in meeting our targets just because of the lack of revolving funds.’ Likewise, a small diamond firm owner from Surat revealed, ‘We have heard that the government has announced interest cuts, but banks do not reduce the interest rates. How can we cope with such a high interest (quoted to be 10 to 12% per annum) during the phase of our falling profit margins?’

Similarly, lack of trained workers and raw materials, identified as a problem for long, became acute during the slowdown period. During the slowdown period, small enterprises were not in a position to offer either annual increments in wages nor did they provide any non-wage benefits such as overtime. In such a situation it became difficult to retain trained workers. Wood and brass ware industries (handicrafts) have

been facing a decline in demand for the last five years or so. Increased imports of many handicrafts have been a serious threat to Indian handicraft industries. The owner of an enterprise which manufactures wooden trays and window panels in Mysore reported, ‘The demand of products in the markets has declined considerably. Our cost of production is high and we cannot compete with the plastic products. Our design is old and there is a need to improve the technology. Many such industries in Mysore have closed down because of this.’

On the whole, the stimulus package announced by the government in three phases was too insubstantial to tackle the impact of the slowdown and was inadequately targeted at small enterprises. The direction of the stimulus package was more towards managing the macroeconomic situation and less towards extending relief to small enterprises. It primarily focused on measures to augment liquidity in the system for macro management, in addition to providing some fiscal incentives especially to the export oriented sectors. The package did not have an explicit employment target, particularly to save employment in sectors which were adversely affected. There was also no provision in the stimulus package to rehabilitate or re-deploy already retrenched workers. In this regard it is important to recognise that the ‘greater the employment orientation of measures, the stronger the stimulus for the real economy’ (ILO, 2009).

6

Road to Recovery *The Challenges and Policy Implications*

After a deep recession in developed countries and a resultant slowdown in many developing countries including India, the global economy has begun to reflect positive trends. Although the strength of recovery varies widely across different economies, statistics reflect that Asian economies are leading the recovery. There is no doubt that timely and adequate public intervention in the advanced economies and matching policy measures adopted in developing economies have stabilised economic activities around the world. IMF (2009) notes, 'After a deep global recession, economic growth has turned positive, as wide ranging public intervention has supported demand and lowered uncertainty and systematic risks in financial markets.'

1. Is the present phase of recovery a sustained medium- or long-term economic growth or just a temporary upswing of the business cycle?
2. Will the recovery have sufficient strength to pull up the sluggish employment the world over or it will be a jobless growth?

Using the macroeconomic data of the period immediately after the downturn, the present chapter aims to address these two questions with respect to India.

6.1 WEAK RECOVERY

6.1.1 Fluctuation of GDP and Manufacturing Products in a Narrow Range

In general, the negative impact of global recession is believed to have been very modest in India with GDP growth hovering around 7% even during the downturn period. The perceptible resilience of the Indian economy in the face of the global downturn has been linked to its large domestic market and a regulated financial sector. However, it is important to recognise that despite the Indian economy being less open to the world market, the economic slowdown in the country knocked off approximately 2.5% growth

within just one year. The GDP growth in India, which reached more than 9% during the third quarter of 2007–08, slumped to 5.8% during the same quarter of 2008–09.

Obviously the impact was sharp and deep. As mentioned in Chapter 3, the worst hit sectors of the economy were manufacturing and trade. In fact, manufacturing registered a negative growth, i.e. net decline in domestic product, during the fourth quarter of 2008–09 compared to the same quarter of 2007–08. If the first impact of the economic downturn can be traced to the fourth quarter of 2007–08, when the GDP growth on YoY basis continuously declined, the first reflection of recovery can be traced to the last quarter of 2008–09, when for the first time the quarterly growth of GDP stabilised at around 5.8%. The following quarter, i.e. the first quarter of 2009–10, indicated the first uptrend (on YoY) (Fig. 6.1).

Fig. 6.1: GDP Growth (%) on YoY basis

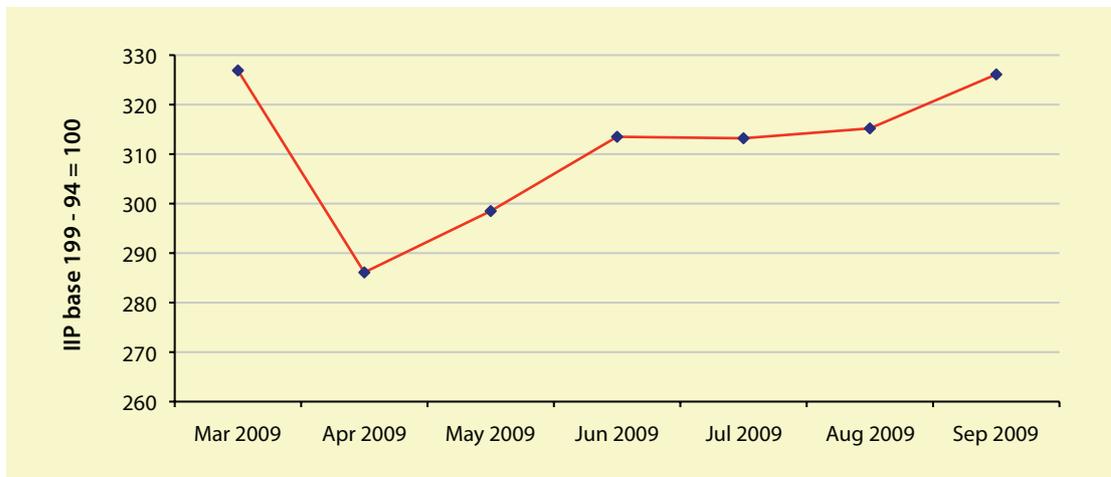


Source: *Gol*, 2009.

The impressive positive growth of manufacturing is primarily responsible for the uptrend in GDP during the first quarter of 2009–10. The manufacturing growth was 3.4% in the first quarter of 2009–10, as against a negative growth of –1.4% during the previous quarter and almost zero growth during the third quarter of 2008–09. In addition to manufacturing, mining & quarrying, construction and trade contributed to this uptrend in the GDP. Although the financial sector recorded slightly lower growth in the first quarter of 2009–10 as compared to that in the third and fourth quarters of 2008–09, it registered higher growth as compared to the first and second quarters of 2008–09.

Based on recent sectoral performances, some estimates project the GDP growth during 2009–10 to be approximately 7%. The Economic Advisory Council (EAC, 2009) projects a 6.5% growth in GDP for the year 2009–10, which seems possible. However, the secondary sector growth of approximately 8%, with manufacturing growth of 7.7% during 2009–10, seems too optimistic. IIP indicates that for the first half of 2009–10, the percentage change in IIP for the period April–September 2009 has been approximately 6.5%. After recording a high growth in March 2009 (IIP being 327), which in fact led the annual manufacturing growth in 2008–09 to 2.4%, the IIP dipped to a low level of 286 in April 2009. Because of steady increase since April 2009, the IIP reached a level of 326 in September 2009, which is almost equal to the level of March 2009. Further, between June and August 2009 the trend in IIP was almost flat, maintaining a level of 313 to 315. It was only during September 2009 that the IIP showed a sudden jump (Fig. 6.2). Altogether the IIP of total manufacturing during 2009–10 (up to September 2009–10) was barely higher than the levels of 2008–09.

Fig. 6.2: Monthly Movement of Index of Industrial Production (IIP) during 2009–10



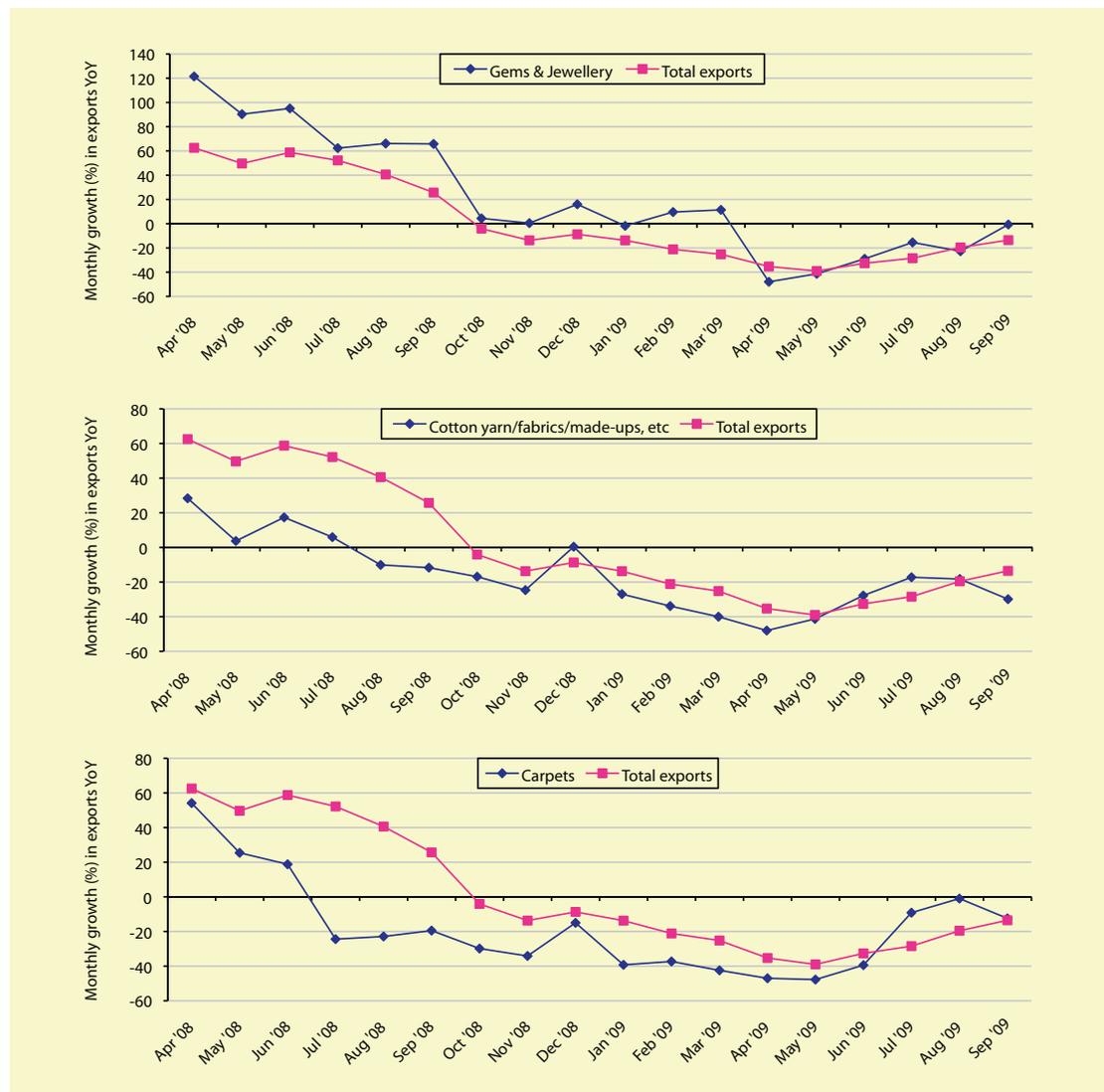
Source: CSO, IIP.

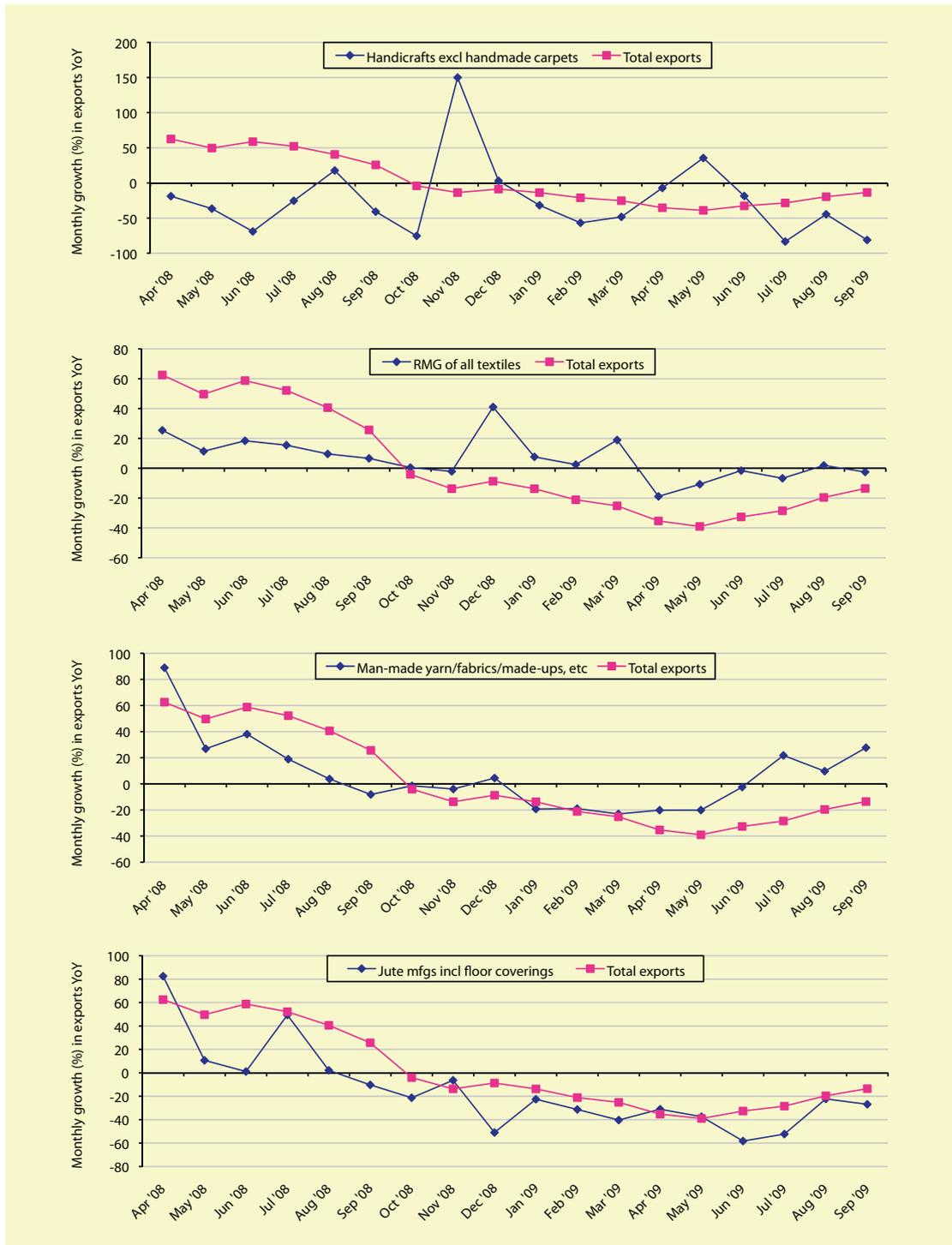
Within manufacturing, industries such as rubber and plastic (NIC87 31), electrical & non-electrical machinery & tools (NIC87 35 & 36), textile products (NIC87 24 & 26), transport equipment (NIC87 37), etc registered impressive growth during April–September 2009–10. However, within the textiles group, cotton textiles (NIC87 23) and jute textiles (NIC87 25) either registered further decline or remained stagnant during April–September 2009–10. Wood & wood products, which underwent a significant decline during 2008–09, registered an increase of 6.8% during the first half of 2009–10.

6.1.2 Uptrend in Exports but Still in a Negative Zone

It has been discussed in Chapter 3 that although the recent export data shows an uptrend, it is yet to reach a positive zone. The monthly export data shows that up to September 2009 the total export of India was in a negative zone on YoY basis. It is interesting to note that among the export commodities, gems & jewellery, RMG, man-made yarn/fabrics/made-ups, etc have led the uptrend of total Indian exports. However, jute manufacturing and handicrafts have seriously lagged behind the trend (Fig. 6.3).

Fig. 6.3: Monthly Export Growth (%), YoY, of Selected Principal Commodities and All Commodities during 2008–10





Almost all seven commodities presented in Fig. 6.3 show signs of recovery in exports since May–June 2009. However, the trends across different commodities are clearly

very different. First of all, the export of gems & jewellery (including diamond) shows a consistently higher growth as compared to the total exports of India, almost reaching a positive zone by September 2009 for the first time since March 2009. It is also interesting to analyse the export trends of RMG. The monthly export growth of RMG was consistently lower than the total export growth of India during the early periods of the slowdown. However, since October–November 2008, RMG exports mark a distinct departure from their earlier sluggish growth by posting a much higher growth than that of total exports. What is important to note here is that the RMG export growth is stabilising at around 0% growth, i.e. RMG has been maintaining almost the same levels of exports since the early part of 2010. This requires immediate policy attention. Since the underlying trend of RMG exports has been positive, effective policy support may help in achieving higher growth. The case of man-made yarn, fabrics & made-ups is very similar. The export of this segment has been lower than the total exports growth during the significant part of the slowdown period, while during the recovery period the export growth of man-made made-ups has taken over the total export growth.

The situation with cotton yarn/fabrics/made-ups etc, jute manufactures & floor coverings, and carpets within the textiles sector does not seem to be undergoing any major changes. For all these commodities the export growth has not only been lower than the total Indian export growth but has also been languishing in a negative growth zone for a fairly long period during 2008–09. Cotton yarn and carpets have shown some reversal of this trend since the early part of 2010 but the underlying pattern is negative. Similarly, jute manufactures had some minor reversal of trend during August 2009 but the subsector is still very weak and lagging behind the total export growth of the country. The handicrafts sector reflects a wide fluctuation in the trend of export growth with high positive growth during November–December 2008 and May–June 2009 to high negative growth during October 2008–April 2009 and more recently during August–September 2009. This wide fluctuation in the export growth of handicrafts is understandable as the sector encompasses a large range of products from different commodity groups.

Overall, the trend in exports demonstrates that the recent uptrend in the total Indian exports is essentially led by a few sectors like gems & jewellery, RMG and man-made made-ups. In contrast, many traditional sectors such as cotton textiles, jute manufactures, carpets and handicrafts have lagged behind. They were also among the worst hit sectors during the slowdown period. Government policy required different focus points with respect to these two different types of commodities, i.e. commodities reflecting strong export growth and commodities lagging behind the recovery trends. While commodities such as gems & jewellery, RMG and man-made made-ups need the current stimulus package to continue for some time, the ailing sectors such as textiles (excluding RMG and man-made made-ups) and handicrafts may need further

assistance from the government to compete in a period of economic recovery. Since cotton textiles, jute manufactures and most of the handicrafts commodities also reflect stagnating or declining production (as indicated by IIP data), far-reaching policy options of a structural nature need to be considered for these sectors. Such options include investing in new technology, improving the skill base, better market linkages and providing better infrastructure.

6.1.3 Employment Perspective: A Jobless Recovery Ahead

As discussed at length in Chapter 4 of this report, estimated employment for the year 2008–09 could be approximately 512 million as against a potential employment (presuming the slowdown had not hit the economy) of 519 million, reflecting approximately 7 million loss in potential employment. IMF (2009) further argues that the employment growth during the recovery years will be higher in those countries where the employment loss was higher as compared to those where the job cuts were less during the recent recession. The countries which resorted to fewer job cuts, despite a fall in output and labour productivity, will have lower rates of employment growth. This phenomenon has been discussed in literature as ‘labour hoarding’ as presented in Chapters 5 and 6 of this report. Arguably, when recovery starts, firms usually try to achieve the historically maintained labour productivity instead of creating new employment. All these adjustment processes are essentially reflected in comparatively lower employment elasticity during the phase of recovery of the economy.

The extent of employment growth during the recovery period also depends on the share of the informal sector in the economy and hence the ‘employment protection legislations’ (EPL). Informal sector enterprises having a small employment size resort to job cuts easily during a slowdown and show better employment growth during recovery as compared to formal sector enterprises. Formal sector enterprises, in contrast, have been observed to resort to wage cuts and reduction of working hours of existing employees during a slowdown. However, even within the informal sector, the employment growth may be delayed because many small firms are shut down during a slowdown and they resume production only after some confirmed and assured trends of recovery.

By any standards, the prospects of employment growth during recovery seem to be shaky. The employment elasticity historically realised in the Indian economy, i.e. total employment elasticity of 0.29 and manufacturing employment elasticity of 0.34 during the pre-slowdown period, may not hold true in the immediate recovery period. In addition to declining GDP growth, there is all likelihood that the employment elasticity will be much lower, leading to acute pressure on employment generation. In effect, the employment growth during the recovery in India will be much less than the 2 to 3% annual employment growth realised during the pre-slowdown period. Further, the employment growth during the next few years will crucially depend on the extent

and nature of policy initiatives taken by the government. With respect to the set of policies announced by the GoI during the slowdown period, the issues that will affect employment growth in India in the coming years can be identified as follows:

1. Extent of stimulus support to industries during the recovery
2. Direction of stimulus package and other policy initiatives, i.e. how far the policy is targeted at:
 - a. protecting employment in loss-making industries
 - b. generating new employment
 - c. protecting workers' welfare
 - d. achievement of high long-term employment growth
3. Extent of investment in infrastructure and social employment programmes
4. Skill development of labour force and support to technological improvements in labour intensive industries

6.2 THE CHALLENGES AHEAD

In addition to strengthening the pace of recovery and accelerating employment growth in the post-slowdown period, the Indian economy is now faced with many other competing challenges. Some of these challenges are of a long-term nature and others are necessarily products of the economic slowdown. Some of these challenges may be schematised as follows:

- * Rising food prices
- * Increase in unemployment rates
- * Revenue loss of government because of tax, duty and interest rate cuts
- * Increased pressure on fiscal deficit because of increased expenditure
- * Volatility in the external sector

6.3 POLICY RECOMMENDATIONS

The foregoing analysis clearly indicates that after the economic slowdown of about a year and a half, the recovery of the Indian economy is evident from May–June 2009. However, the statistics indicate that the recovery has been not very impressive. Based on the findings of the study about the extent of adverse implications regarding the Indian economy during the last two years or so and the prospect of slow recovery, the study recommends that most of the measures of the stimulus packages, more specifically interest subvention, cut in excise duty, relaxation in other taxes, interest cuts, etc, may be continued until the economy achieves a growth rate of at least 8% and is pushed back to a higher growth trajectory. In addition, there is a need to revisit and address policy issues emerging from the findings of the present study at two broad levels:

1. Cross-cutting structural issues of a medium- to long-term nature (which has also been highlighted by previous studies and reports)
2. Sector-specific issues of immediate concern flowing primarily from the present study

Since the present study has adopted an integrated macroeconomic framework, the policy contours suggested by it highlight the need for the integration of macro and micro policies relating to export, production and employment. The integrated policy should focus on issues such as promoting and diversifying exports, protecting job loss, generating new employment and protecting already retrenched low skilled workers. The main policy recommendations in this regard have been classified under two parts below.

6.3.1 Cross-cutting Issues

(i) Diversification of exports. This is one of the most important aspects in which India can look for faster recovery in the coming years. The export data clearly indicates that most of India's export has been directed to the economies of the USA, European Union and a few Middle East countries. India needs to diversify its exports to many emerging markets such as South American countries like Brazil, Peru and Argentina, and Australia. Presently, India's exports are highly concentrated in Europe (36%), the US (18%) and Japan (16%) and these are the economics worst hit in the current global financial crisis. It has been highlighted in Chapter 3 that the impressive growth of RMG even during the slowdown period was realised mainly because of the diversification of RMG exports to countries such as the UAE and Brazil.

Further, diversification of exports is also required in terms of the basket of exports. During the last decade or so, Indian exports has been fairly diversified as the contribution of traditional commodities such as gems & jewellery, traditional textiles, agricultural products, etc has declined and the contribution of new commodities such as engineering goods, chemicals, etc has increased. However, under the 'focus product' scheme India needs to diversify further by promoting exports of other high demand commodities. Our analysis of the focus products presents a list of items, within the three sectors under the present study, which have shown a high export growth and a high share in total exports. Some of these items are:

- * articles of jewellery unset and set with diamond and pearls (HS 7113)
- * women's/girls' suits, ensembles, jackets, dresses, skirts, trousers, bibs, blouses, shirts & short blouses, etc (HS 6204 and 6106)
- * t-shirts, singlets & other vests, knitted/crocheted (HS 6109)
- * men's or boy's shirts (HS 6205)
- * bed linen, table linen, toilet linen & kitchen linen (HS 6302)

(ii) Skill development of workers. This factor is highly important from the perspective of export diversification. Our analysis indicates that most of the job loss has taken

place in informal sector enterprises. Further, an overwhelming majority of retrenched workers belong to the lower end of the skill spectrum. Although the GoI has worked out a long-term strategy of skill development in the recently announced National Policy on Skill Development (MoLE, 2009b), as an immediate measure there is a need to link the stimulus package with skill development.

Entrepreneurs at the firm level may be provided with incentives in the form of further tax cuts or exemptions or any other financial measures for promoting skill development. There is also scope for linking export firms to the local level skill development institutions within the framework of Public Private Partnership (PPP).

The need for providing social security to unskilled and casual/contract workers has been emphasised in different studies. The National Commission on Unorganised Enterprises (NCUES, 2009), in its report, has recommended a whole range of social security schemes necessary for vulnerable workers. This is particularly important when the economy has passed through an economic slowdown and is striving for recovery. Most of the unskilled and casual workers who bore the real brunt of the slowdown and lost their jobs do not have anything significant to fall back on. This might lead to addition to the poverty levels of the country and lower levels of demand for commodities in turn. If India aims to hasten the recovery, it is essential that social security for vulnerable workers be implemented as a top priority. As an immediate measure there is a need to extend the minimum level of social security to those who have already lost their jobs during the slowdown. These measures may include unemployment allowance and rehabilitation through skill upgradation and redeployment. Equally important is to keep a track record of those retrenched workers and link them to new jobs created in export sectors during the phase of recovery. The MoT already has in place the Textiles Workers Rehabilitation Fund Scheme (TWRFS) which 'provides interim relief to textile workers rendered unemployed as a consequence of permanent closure of any particular portion or entire textile unit' (MoT, 2009). However, the data shows that only 5,092 workers applied for this benefit during 2008–09 and almost all of them were sanctioned the benefits under TWRFS. It clearly shows that the outreach of this scheme has in no way taken care of the large numbers of workers adversely affected due to the slowdown and closures.

(iii) Simplification of the duty drawback and incentives claim procedure. This is another important factor to consider. Presently, benefits arising from duty drawback and other incentives to exporting firms have limited outreach to the formal sector or bigger firms. Responses of the firms clearly indicate that smaller firms in the informal sector do not have much awareness of these schemes, leave aside obtaining the benefits. There is a need to simplify the procedure of claiming the benefits by firms in time, and access by smaller firms to these benefits need to be promoted. The government may set

up a monitoring cell to monitor the magnitude of these benefits being passed out to exporting firms and guide the direction of the flow of benefits more to smaller firms.

(iv) Regulation of foreign exchange. This is one of the crucial mechanisms to save Indian exports from any undue disadvantages emerging from high fluctuations of exchange rates, particularly the Dollar–Rupee exchange. Considering the high export share targeted at the USA, the unprecedented fluctuation of Rupee–Dollar rates has adversely affected export earnings. There is a vital need for the government to devise an emergency plan to regulate foreign exchange fluctuations at least during the time of major slowdowns.

(v) Investment in infrastructure. This is one of the key solutions not only to the problems emerging from a slowdown but also to generate employment of a long-term nature. Since the manufacturing and trade sectors of the economy may not be in a position to generate significant employment during the next couple of years or so, enhanced investment in power generation capacity, water harvesting, and roads & communication systems will not only generate employment with immediate effect but also pave the way for medium- to long-term economic growth and productive employment generation in the long run. Lack of power has been often cited by entrepreneurs as one of the most critical issues impeding smooth production. The firm level responses show that production loss due to power shortage could range from 15% to 30% depending on the regularity of power supply in different regions of the country.

6.3.2 Sector Specific Issues

(i) Textiles

1. Promote technical textiles by making synthetic fibre duty-free
2. Refund state level taxes and excise duty
3. Increase interest subvention rate for cotton, yarn, fabrics, made-ups, carpets, natural silk, etc at par with RMG
4. Issue dues pending from the Textile Upgradation Fund Scheme (TUFS) and refund service tax on export-related services and accumulated Central Value Added Tax (Cenvat) credit on capital goods
5. Reduce tariff from 25% to 0% on import of raw silk and increase tariff from 10% to 20% for import of silk fabrics
6. Selectively increase MFN rates, bringing them closer to 'bound rates' for non RMG for a short period of, say, one year

(ii) Diamond

1. Continue export credit limits scheme for another year and promote smaller firms to avail the facility
2. Allow part diversions to local markets from SEZ with the same facilities

3. Refund full or part of the tax on profits for the next two years as the sector has lower intensity of job loss but increased wage bill during a slowdown
4. Promote and smoothen financing of procurement of rough diamond from mines

(iii) Handicrafts

1. Grant a special package for traditional handicraft hubs in the foreign trade policy
2. Open common facility centres at potential craft pockets across the country to provide a complete facelift to the handicrafts industry
3. Set up special protections for wood based handicrafts like tax holiday, increase MFN rates, etc
4. Exempt all handicraft items under section 10 BA of Income Tax 1961. Currently, the exemption applies only to wooden handicraft items
5. Increase MFN rates to bring them closer to 'bound rates' for most commodities covered under handicrafts except gems & jewellery, particularly wood and scrap metal based products
6. Import tools, equipments and machineries required in the manufacture of handicrafts at zero customs duty

Appendix Tables

Appendix Table 1: Values of Indian Exports in Rupee and Dollar Terms at Current and Constant Prices and Annual Growth through 2000–2009

YEAR	EXPORTS AT CURRENT PRICES		EXPORTS AT CONSTANT* 1999–2000 PRICES		ANNUAL GROWTH (%) IN TERMS OF	
	₹ CRORES	\$ MILLION	₹ CRORES	\$ MILLION	₹	\$
1999–2000	159,095	36,715	159,095	36,715		
2000–2001	201,356	44,076	195,005	42,685	22.57	16.26
2001–2002	209,018	43,827	196,551	41,213	0.79	-3.45
2002–2003	255,137	52,719	231,092	47,751	17.57	15.86
2003–2004	293,367	63,843	256,911	55,909	11.17	17.08
2004–2005	375,340	83,536	311,568	69,343	21.27	24.03
2005–2006	456,418	103,091	363,771	82,164	16.75	18.49
2006–2007	571,779	126,263	434,368	95,919	19.41	16.74
2007–2008	655,864	162,984	475,056	118,053	9.37	23.08
2008–2009(P)	839,978	182,631	564,213	122,673	18.77	3.91

Note: GDP deflators have been used to convert at constant prices.

Source: For data on exports at current prices <http://commerce.nic.in/ftpa/comgrp.asp> accessed on 26 October 2009; other data are authors' calculations.

Appendix Table 2 : Top 15 Commodities within Textiles, Diamond and Handicrafts with the Highest Share in Total Indian Exports and High Annual Growth

HS CODE	COMMODITY	2004-05	2005-06	2006-07	2007-08
7102	Diamonds whether or not worked but not mounted/set	10,373	11,612	10,585	14,211
7113	Articles of jewellery & parts thereof; of precious metals/ of metal clad with precious metals	3,009	3,421	4,694	4,888
6204	Women's/girls' suits, ensembles, jackets, dresses, skirts, trousers, bibs & brace overalls, breeches & shorts, etc (excl swimwear)	1,039	1,835	1,776	1,793
6109	T-shirts, singlets & vests, knitted/crocheted	851	1,177	1,475	1,665
5205	Cotton yarn (other than sewing thread) containing 85% or more by weight of cotton not put up for retail sale	739	1,019	1,339	1,668
6206	Women's/girls' blouses, shirts & shirt blouses	945	1,306	1,182	1,116
6304	Other furnishing articles excl of those of HS 9404	927	1,172	1,122	1,138
5201	Cotton, not carded or combed	80	637	1,333	2,172
6205	Men's or boy's shirts	762	786	760	803
5407	Woven fabrics of synthetic filament yarn incl woven fabrics obtained from material of HS 5404	687	568	569	769
6203	Men's or boys' suits, ensembles, jackets blazers, trousers, bibs & brace overalls breeches & shorts (excl swimwear)	411	583	709	752
5208	Woven fabrics of cotton containing 85% or more by weight of cotton weighing not more than 200 gm	421	461	535	600
6307	Other made-up articles incl dress patterns	575	588	444	392
6105	Men's/boys' shirts, knitted/crocheted	437	429	387	504
5007	Woven fabrics of silk or silk waste	355	373	372	332
6302	Bed linen, table linen, toilet linen & kitchen linen	215	302	393	497
5207	Cotton yarn (other than sewing thread) put up for retail sale	476	431	304	195
6214	Shawls, scarves, mufflers, mantillas, veils, etc	255	347	330	409
6106	Women's/girls' blouses, shirts & shirt blouses, knitted/crocheted	234	346	347	374
7117	Imitation jewellery	674	329	108	133

Source: MoCI.

Appendix Table 3 : Clothing Exports of Selected Economies, 1990–2008 (Million \$)

	2,000	2,006	2,007	2,008
World	197,722	309,142	345,830	361,888
China	36,071	95,379	115,233	119,978
European Union (27)	56,240	91,437	105,104	112,375
Hong Kong, China	24,214	28,391	28,765	27,908
Turkey	6,533	12,052	13,886	13,591
Bangladesh	5,067	8,318	8,855	10,920
India	5,960	9,499	9,786	10,854
Vietnam	1,821	5,579	7,400	8,971
Indonesia	4,734	5,760	5,870	6,285
Mexico	8,631	6,323	5,150	4,911
USA	8,629	4,885	4,320	4,449
Thailand	3,759	4,247	4,073	4,241
Pakistan	2,144	3,907	3,806	3,906
Tunisia	2,227	3,018	3,571	3,766
Cambodia	970	2,513	3,491	3,645
Malaysia	2,257	2,842	3,159	3,624
Sri Lanka	2,812	3,046	3,283	3,460
Morocco	2,401	3,238	3,517	3,334
Honduras	2,275	2,613	2,842	2,940
UAE	971	2,400	2,705	2,631
Philippines	2,536	2,624	2,294	1,979
El Salvador	1,673	1,814	1,830	1,956
Switzerland	607	1,620	1,771	1,922
Korea, Republic of	5,027	2,183	1,914	1,741
Peru	504	1,204	1,406	1,635
Singapore	1,825	1,985	1,779	1,557
Egypt	710	1,138	1,330	1,551
Canada	2,077	1,798	1,585	1,308
Guatemala	49	1,557	1,390	1,230

	2,000	2,006	2,007	2,008
Colombia	520	962	1,351	1,222
Taipei, Chinese	3,015	1,410	1,274	1,190
Dominican Republic	2,555	1,734	1,367	1,080
Macao, China	1,849	1,610	1,491	1,053
Jordan	115	1,257	1,218	1,041
Syrian Arab Republic	129	864	975	962
Mauritius	948	772	887	845
FYR Macedonia	318	509	635	823
Ukraine	417	682	718	719
Croatia	469	538	585	604
Japan	534	485	523	591
Madagascar	309	252	394	571
Serbia	NA	319	445	552
Belarus	262	350	400	449
Haiti	245	432	459	421
Myanmar	800	386	412	371
Albania	97	225	289	351
Moldova	76	200	238	267
Costa Rica	660	235	212	266
Botswana	30	141	340	260
Kenya	9	230	241	256
Bosnia and Herzegovina	...	152	177	208
Swaziland	124	152	47	44

Source: WTO, 2009.

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