Chapter 1
Introduction

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Since 1991, India has been integrated with global markets, per capita income has risen, urbanization has grown and, therefore, the economy has experienced many shifts. One shift has been in consumer behaviour and food preferences. Awareness of the health effects of alternative foods is growing, too, and demand is rising continually for safer and more nutritious foods and, also, for processed and packaged foods. As consumer demand for non-traditional food products affects the production mix (on-farm activity) and the post-harvest management of farm produce (off-farm activity), the policy and regulatory framework must facilitate the supply-side transition of India’s food system and help it adapt to and align with these evolving demand patterns. To meet the growing demand for processed and packaged foods, investment in processing of agricultural produce must be encouraged, the food value chains organized, and the regulatory environment for food safety strengthened.

The current thrust of agricultural policy in India is to double farmers’ real income by 2022–23. To achieve this target, the government must transform the food system by raising the value of production realized on the farm. Simultaneously, the system has to shift to growing high-value products (fruits, vegetables, livestock and dairy products and fish). The system must also raise the value realized for these products through the downstream processing and service segments of the post-harvest agriculture food value chains.

Equally important for a transforming economy, although less appreciated, is the contribution of a modern food system to growth and employment. Value addition, processing and food services can be powerful sources of growth in the non-farm economy—including manufacturing and services—and a major source of employment for the rural labour force (World Bank 2008). In the USA, agricultural production or value-added constitutes about 1% of the gross domestic product (GDP), whereas the food industry accounts for almost 6%; agricultural employment makes

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up about 1.4% of total employment, but the post-farm food economy almost 8% (USDA 2020). In developed countries, the structure of the food system changes continually as the role of manufacturers, processors and food services in both value-added and employment grows larger relative to that of farmers (Gollin and Probst 2015).

How is India’s food system evolving? Are its current policies and institutions appropriate? The research evidence shows that the role of agribusiness is expanding, and that retail shops and supermarkets are stocking an increasing variety of processed and prepared foods. But we do not fully know the size or structure of the agribusiness sector or the magnitude of the forward linkages of agriculture with other sectors in terms of output and employment generated directly or indirectly. Because estimates are unsubstantiated, or based on weak evidence, debate breaks out often over popularly quoted figures, including for simple indicators such as backward output linkages—the share of the agricultural produce that is processed, or the extent of processing of the agricultural produce—or post-harvest losses. Few studies rigorously assess the magnitude of changes in the entire food value chain (Sarkar 1995; Bhattacharya and Rajeev 2013). Is the investment in agriculture, industry and services adequate? How can we improve the intersectoral interlinkages? Can contract farming between farmers and industry or arrangements with farmer producer companies (FPC) or farmer producer organizations (FPO) that aggregate produce strengthen backward linkages?

The central government considers the food processing sector important to the economy, and it has made the sector a policy priority. To accelerate the return on investment and meet the growing consumer demand for diverse foods, the central government offers several incentives: a five-year tax holiday for new agriculture-processing units and a 35% tax deduction for five years; reduced import duty on processing machinery; no corporate taxes on profits from export sales; and automatic approval for 100% foreign direct investment (FDI) on most items. Capital investment in large projects and processing firms, investment in mega food parks and 100% greenfield investments are exempt from excise duty (Government of India 2017). During the COVID-19 pandemic, the Ministry of Food Processing Industries introduced a scheme for the creation and expansion of food processing and preservation capacities under the Pradhan Mantri Kisan Sampada Yojna. Financial assistance in the form of grants-in-aid of 35–50% of the project cost subject to a maximum of INR 50 million is proposed to be given to cooperatives, FPOs, micro, small and medium enterprises (MSMEs), etc. to encourage investments in various segments in rural areas. These incentives aim to raise agricultural productivity by improving farm prices and making them more stable, and reduce wastage by enabling the processing of produce unsuitable for wet markets into more value-added consumables. Other aims are to increase returns to farmers and food enterprises; diversify into crops needed for processing; and, potentially, transform traditional “food crops” into “cash enterprises”.

The exports from this segment are again an important outlet for agricultural output: exports of processed foods and beverages constitute almost 48% of rapidly expanding agricultural exports, almost doubling in (real) value over the past three years, and its
share in total exports is close to 12% (Goyal et al. 2017). Exports may grow further with growing urbanization, increasing per capita income and integration with world markets. To reap these benefits, the Government of India approved the first Agriculture Export Policy in December 2018. The policy aims to increase agriculture exports to INR 4.5 trillion (USD 60 billion) by 2025 by making the trade regime stable, diversifying exports by products and destinations, and promoting perishables and high-value-added products. A sum of INR 14 billion (USD 187 million) has been allocated to set up specialized, produce-specific clusters in states (Government of India 2018). India’s food processing sector contributes about 14% to the manufacturing GDP; it employs nearly 13 million people directly and 35 million people indirectly. From 2010 to 2014, the food and beverages segment of the organized manufacturing sector accounted for 14% of employment and 8.3% of output, although the inter-state differentials were large.

Several challenges confront India’s food processing sector, however. The foremost is that the unorganized (informal), low-productivity enterprises make up more than 80% of enterprises and employment but contributes only 20% of the gross output. This has serious implications for growth. Both “push” and “pull” factors explain the high labour absorption by the unorganized sector. Workers in small enterprises have low productivity, and they work in poor conditions with hardly any social security or other benefits; also, they face threats from imports and foreign competition (Rao and Dasgupta 2009; Goldar and Aggrawal 2010; Sharma and Bathla 2012).

Another challenge is the steady decline in labour intensity in the organized foods and beverages industry—from 0.68 on average during the 1980s to 0.10 in 2014–15. It is slightly above 0.06, the average estimated for overall manufacturing, implying that the food industry has the potential to absorb labour, albeit at a slower pace (Bathla 2018). Recently, the capital intensity in many industries has been high, and it seems to have lowered employment growth in the organized segment of the economy (Das et al. 2009). This deceleration must be analysed in the context of the increasingly capital-intensive nature of production; increase in the real wage to rental price of capital ratio; stringent labour laws and regulations; subcontracting, which has forged linkages between the organized and unorganized segments; and changing government policies, including on exports and imports (Sen and Das 2014).

The unorganized enterprises are dominated by micro and small family-run units in rural areas that operate at a low scale and without adequate finance, technology, skilled labour or social security benefits. Employment and productivity growth in these enterprises have been adversely affected by foreign competition, import surge and non-tariff measures such as food quality and safety (Banga and Bathla 2012). Could India’s small enterprises grow if provided adequate finance and subcontracting linkages with large firms? Is subcontracting in India’s unorganised food manufacturing sector exploitative or productive? Would protection on processed food products through high import tariffs or non-tariff barriers help the smaller units?

The organized foods and beverages segment has had a constant 8% share in total manufacturing output and capital, raising it as another challenge. Besides, total factor productivity growth (TFPG) was low during the 1980s and early 1990s (Mitra 1999; Mitra et al. 2002; Hashim et al. 2009). It improved in the late 1990s and early 2000s to
1.42%, but decelerated again to 0.95% in 2014–15 (Goldar 2017). The inter-industry and inter-state differentials in investment, employment, productivity and technical efficiency are large (Das et al. 2009; Bathla 2014). The competitiveness of industry is hindered by large inefficiencies in the resource use, high cost of production and packaging, safety and quality issues, irregular access to finance, and inadequate investment in the marketing, transport, and cold chain infrastructure for perishables (Sidhu 2005; EPW 2004, 2005).

India’s exports of agricultural commodities have been growing, but its export basket comprises mainly low-value, semi-processed commodities (rice, wheat, spices and marine products). The tariff structure of agriculture exports is high, though the nominal rate of protection (weighted) fell from 45.7% in the 1980s to 11.2% in the 1990s for agriculture and from 97.4 to 29.9% for the food industry (Nouroz 2001). In estimating trade protection from 2004–05 to 2013–14, Saini and Gulati (2017) show that the domestic prices were below export parity prices for primary products (cereals, oilseeds and fruits) and above import parity prices for processed products (sugar and skimmed milk powder). These processed products lack comparative advantage. Agricultural exports, though globally competitive, have slowed due to non-tariff measures—food quality and sanitary, phytosanitary and health-related issues—in the key markets of the US, European Union (EU), and the Association of South East Asian Nations (ASEAN) (Mehta 2005; Prasad 2017).

How can India address the growing incidence of rejection on account of food safety and quality? Kannan and Birthal (2010) support dismantling the high protection levels in dairy products to raise employment and improve performance in the dairy industry. Kumar et al. (2020) opine that the foremost requirement is to enhance compliance at the farm level. They find that adoption of food safety measures by dairy farmers in the eastern state increased milk yield by about 1% and profitability by 2.3%. There is also a need to devise some institutional mechanism in the Agriculture Export Policy (GOI 2018) to address non-tariff measures imposed on India’s exports.

To address these challenges of agriculture and food industry exports, first, we must examine the composition of India’s agriculture exports and imports and its comparative advantage in processed (value-added) products relative to primary (raw) products. Second, we must understand why processed products lack export competitiveness: is it because the industry is protected, or it is inefficient, or other countries bar India’s agriculture exports? The productivity of the agro-industry has grown; is that because of domestic demand or reduced protection has raised the exports of value-added products? Further, manufacturing is integrated into global value chains to boost export competitiveness. And interest has been growing lately in analysing its ability to reinvigorate growth and employment in the economy and the processes that need to be followed (Banga 2016; Ray and Miglani 2020). However, the challenge is the integration of primary and processed food-beverages exports into global value chains, which is very low at 5.1% and 1.9%, respectively (Bathla and Jha 2020).

These issues were discussed at a national seminar on Intersectoral Linkages, Productivity, and Competitiveness in India’s Agro and Food Processing Industry during 21–22 September 2019 at Jawaharlal Nehru University, New Delhi. The seminar was organized by Jawaharlal Nehru University and supported by the Indian
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Council of Social Science Research, New Delhi. Eminent scholars in the areas of agriculture, industry and labour market issues presented papers at the seminar. Based on the comments received, these papers were revised and compiled into this book. Its 17 chapters explore three inter-related themes: agriculture–industry–services linkages; employment, investment and productivity growth; and external trade, competitiveness and productivity in the organized and unorganized sectors of the manufacturing industry.

1.1 Agriculture–Industry–Services Linkages

The four chapters under this theme examine the linkages between agriculture, industry and services in the economy. They focus on the magnitude of the processing of agriculture produce in the manufacturing sector, backward and forward output and employment linkages and ways to strengthen these through FPCs and FPOs and contractual arrangements with the food industry.

Seema Bathla and Madhur Gautam set the stage by discussing the structure and size of India’s agriculture and food-beverage industry, intersectoral production linkages and by estimating the extent of agriculture produce that is processed. The analysis is based on the data on organized manufacturing from the Annual Survey of Industries (ASI) and the data on unorganized enterprises from the National Sample Survey (NSS) for the period from 2000–01 to 2011–12.

Very little agricultural produce is processed, though the quantum is expected to increase in view of rapidly increasing incomes and the changing consumption patterns in favour of processed food. To align with the evolving demand patterns, India’s food system requires a policy and regulatory framework that facilitates a smooth transition on the supply side. The increasing awareness of the health effects of alternative foods, and the demand for safer and more nutritious foods, requires greater attention to the regulatory environment for food safety and the organization of food value chains. The rising demand for processed and packaged foods requires an enabling environment to attract investment in the processing of agricultural produce and strengthening the linkages between agriculture, industry and services.

Using a computable general equilibrium model, Nitin Arora and Rahul Arora analyse the intersectoral employment and output linkages in the economy. Economic reforms, liberal trade and industrial policies have brought about a perceptible structural shift in the Indian economy and transformed it from an agriculture-based economy to one dominated by the services and manufacturing sectors. India’s services-led growth can pump demand, but the primary and secondary sectors must both grow substantially for the supply side to progress. Since all the sectors cannot be allocated equal amounts of resources, as proposed in the balanced growth thesis, balanced growth may be brought about by unbalancing the economy through high-linkage sectors. Authors follow a nuanced approach to identify the sectors that have the potential to absorb the maximum labour and improve production levels in the economy through backward and forward production linkages.
K. J. Satyasai and Aparajita Singh examine the size and spread of the food processing industry in India and explore the role of FPOs or FPCs in strengthening the agriculture–industry linkages and in benefiting producers and consumers. Food processing units account for 12% of all units. Mostly family-based own account enterprises, they are encumbered by poor margins, problems of scale, limited markets for their products and poor bargaining power in factor and product markets. Aggregation and the leveraging of institutional innovations such as FPOs can reduce the transaction costs of own account enterprises and their acquisition cost of inputs and improve their sale of finished products. Facilitating access to finance would help FPOs grow. A case of the north-eastern states is evaluated to highlight the emerging role of FPOs.

Anjani Kumar and Gaurav Tripathi analyse the benefits of contract farming in okra and the farm-level adoption of food safety practices. The chapter uses farmers’ survey data collected from Pune and Satara districts in Maharashtra, and it shows that participation in contract farming is significantly influenced by variables such as caste, education of household head, number of visits by government extension officials, number of visits by private extension officials and the number of extension visits by farmers. Given the participation, contract farmers earn relatively higher profits, stemming mainly from higher yields and lower production costs, and contract farming is found to significantly and positively impact the adoption of farm-level food safety measures. The benefits of contract farming are context-specific, however, not a one-size-fits-all solution for agricultural production. Therefore, appropriate policy strategies and mechanisms need to be designed to promote this institutional measure in agricultural commodities, especially in high-value crops.

1.2 Employment, Investment and Productivity Growth

The six chapters on this theme deal with trends in employment; investment; total factor productivity (TFP); efficiency; subcontracting; labour market flexibilities/rigidities; and competition in the organized, unorganized and MSME sectors. These papers analyse the progress made due to the capital-intensive mode of production and their effects on employment and TFPG.

The authors analyse in detail the credit constraints being faced by MSMEs, increasing competition, subcontracting of small units, growing labour market rigidities and falling labour intensity. The analyses—at both the all-India and disaggregated state level—aim to comprehend location-specific factors that determine employment and productivity in the agro and food segments within manufacturing. The authors recommend interventions such as bringing about complementarity between the organized and unorganized sectors, making finance available, upgrading the skill and technology used by MSMEs and reforming the stringent state-specific labour laws.

Seema Bathla and Shivjee provide an overview of the temporal and spatial patterns in employment and partial productivity growth in the organized foods and beverages industry in India from 1980–81 to 2014–15. The authors also determine the industry’s
position in relation to organized manufacturing overall. The analysis—conducted for the period from 1980–81 to 2014–15—indicates that the industry has grown steadily since 1980–81 and that the improvement has been perceptible since the 2000s, the second phase of reform.

The authors identify large temporal and spatial differences with respect to the number of factories, persons engaged, investment and gross value-added (GVA), and they point out higher levels of labour productivity and capital intensity in the processed food industry in Bihar, Gujarat, Himachal Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan and Uttar Pradesh. Despite improvement in the rate of productivity growth, the food industry lags the non-food segment in terms of labour productivity and capital intensity.

Capital productivity has almost converged, but significant gaps remain in wage rates and labour productivity in favour of the non-food industry. The increasing substitution of capital for labour within food has deepened capital and reduced labour intensity—from 0.68 during the 1980s on average to 0.10 during 2010–2015. This fall is worrisome, as it may imply that an increase in the output of the food industry has not generated adequate growth in employment and hence led employment elasticity to fall. Another issue is capacity utilization, captured through capital per GVA, which rose to 4.89 on average (2010–14) from 2.07 (1980–89).

Padmavathi N. and Parmod Kumar examine the structure and composition of the unorganized food processing enterprises in India and explore inter-state disparities using data from two recent rounds of the NSS (67th, 2010–11 and 73rd, 2015–16). They show that the unorganized food enterprises are labour-intensive and that the sector is undergoing a structural transformation—it is moving away from establishments to self-owned enterprises, which has helped labour productivity grow rapidly. In turn, labour productivity is positively and significantly associated with the capital–labour ratio, energy intensity and emoluments per worker. However, states having a relatively larger share in enterprises and workers have performed poorly with respect to labour productivity and the capital–labour ratio. The authors reiterate that though food enterprises have the potential to alleviate rural poverty, the insignificant share in the workforce in relatively lower-income states—Assam, Bihar, Odisha and Madhya Pradesh—may erode non-farm employment opportunities. Registered units that hire workers and have access to credit are more productive, and policy intervention and programme incentives are needed to reduce the inter-state disparities in the growth of food enterprises.

Competition promotes the adoption of new production techniques and facilitates improvements in production quality, efficiency and productivity. Employing a mobility analysis, and using firm-level data from the Prowess database of the Centre for Monitoring the Indian Economy from 2004–05 to 2015–16, Nithyashree M. L. examines competition in the food, agriculture machinery, fertilizer and pesticides segments. The stability in firms’ rank in industry, obtained by a new turnover index, indicates that except for the machinery sector, competition increased in other sectors. The transition matrix for firms’ mobility shows little mobility for the food and pesticides industries. The mobility of firms plays a role in achieving dynamic
and effective competition, as is shown by the persistent skewed market concentration in the fertilizer industry and by the scale efficiency in the machinery industry.

Prateek Kukreja analyses the slow pace of growth in industrial employment in view of labour market rigidities. Kukreja delineates the labour regulations and amendments in the organized manufacturing sector undertaken by the central and state governments and uses a state-wise index to evaluate the progress on reforms in labour regulations. The author finds that the organized food and beverage industry employed nearly 1.85 million people in 2016–17 but, as in the non-food industries, mostly on contract. This could be to escape the strict provisions of the Industrial Disputes Act, 1947. The number of contract workers rose from 1.21 million in the early 2000s to 3.40 million in 2015–16. The popular notion is that strict dismissal norms inhibit employment creation, but it is contradicted by the empirical finding based on the generalized method of moments. By increasing the use of contract workers, employers may circumvent the cost of firing regular workers, as stipulated by law, and the cost of compliance, overall, with labour laws. The labour demand is also significantly affected by the increasing wage rate and growing capital intensity. Developing skills commensurate with industry needs can accelerate the pace of job creation.

The National Manufacturing Policy, 2011 treats food processing as the “sunrise” sector of the economy. Shayequa Zeenat Ali contends that this sector has immense potential to absorb the surplus labour from agriculture. A few, large, organized, highly productive units co-exist with a large number of small, unorganized, less productive enterprises in the sector, however, and forging linkages between these two sections are necessary to raise productivity. Subcontracting is a type of linkage that can stimulate growth in unorganized enterprises. Sometimes, unorganized food units subcontract for a large firm, and Ali examines the determinants of such a decision and the gains or losses therein. Based on data from three rounds of the NSS (61st round, 2000–01; 66th round, 2005–06; and 73rd round, 2015–16), the findings indicate that subcontracting in foods and beverages has been increasing. The urban directory manufacturing enterprises (DMEs) have higher growth and labour productivity than own account manufacturing enterprises (OAMEs) and non-directory manufacturing enterprises (NDMEs), and they are most likely to engage in subcontracting. The compensation to labour in urban DMEs turns out to be high; the only exception is dairy units, where compensation is higher in rural DMEs. The results favour subcontracting as it has enabled higher productivity and growth in the unorganized food enterprises.

Santosh Kumar investigates the pattern of investment in agriculture-processing MSMEs by focusing on the sources of finance. Kumar uses unit-level data from the Small Scale Industries (SSI) survey (1972–73 and 1987–88) and the SSI/MSME Census (2001–02 and 2006–07). The analysis is carried out by type of enterprise in rural and urban areas according to the three-digit National Industrial Classification (NIC). The SSI survey considers registered units only, but the Census surveys both registered and unregistered units; therefore, the data are not comparable, though broad trends can be discerned.
In 1972–73, the number of registered small-scale agriculture-processing enterprises was 26,252 and the total workforce 306,000; these numbers rose, respectively, to 195,000 and 983,000 in 1987–88. The subsequent surveys show that the number of agriculture-processing MSMEs rose from 2.276 million in 2001–02 to 6.413 million in 2006–07 and the number of workers from 7.106 million to 17.669 million; however, investment per enterprise declined by about 1% per annum during the first period (1972–73 to 1987–88) and increased by 3.77% per annum in the subsequent period (2001–2007). Real investment per enterprise in registered agricultural processing enterprises, INR 0.66 million in 1972–73, decreased to INR 0.55 million in 1987–88.

The subsequent census surveys of registered and unregistered units show an increase in real investment per enterprise from INR 98,000 in 2001–02 to INR 122,000 by 2006–07 at 2011–12 prices; these also show that intra-enterprise differentials were large. The rate of growth was high in dressing and dyeing of fur and fur articles; tanning and dressing of leather; luggage handbags; saddlery and harness; beverages; spinning, weaving and finishing of textiles; tobacco; other food; meat; fish; fruits and vegetables; oils and fats; and footwear units—but lower in other groups. The two-stage least squares (2SLS) analysis shows that investment is determined by the importance of institutional loans, profit earned, availability of raw material and energy. The authors call for easing credit constraints and modernizing small enterprises to accelerate investment—and, hence, employment and agricultural growth—and root out poverty.

1.3 External Trade, Competitiveness and Determinants

The six chapters under this theme delineate the composition and direction of India’s exports and of its imports of primary and processed agriculture products, and the changes in their protection structure and comparative advantage, export intensity of imports and determinants of exports. A few papers delve into the composition and size of India’s agriculture exports and into the role of the exports of processed agriculture products in firms’ performance. To make its food industry efficient and globally competitive, India has taken policy initiatives to lower protection levels by altering tariff and non-tariff measures on agriculture and processed foods. Keeping these initiatives in view, a disaggregated industry- and firm-level analysis is attempted.

Ankur Jain and Elumalai Kannan categorize 224 agriculture products—into animal products, including fish; cereals, oilseeds and vegetable oils, horticultural products; processed agricultural products; and agricultural raw materials—and find that their export composition changed between 1998 and 2018. There has been a recent increase in the export share of non-traditional products such as lettuce, grapes, cloves, jams and jellies; these products appear to have huge export potential.

India has a revealed comparative advantage in animal products: human hair, whether unworked or not; silk waste, including cocoons; and crustaceans, whether in shell or not. In the case of horticultural products, its revealed comparative advantage
was higher for seeds of anise, badian, fennel and coriander, followed by mate and coconuts, Brazil nuts and cashew nuts. Among cereals, oilseeds and vegetable oils, India has revealed comparative advantage to exports of rice, groundnuts not roasted or otherwise, and other fixed vegetable fats and oils. In the case of processed agricultural products, India has a revealed comparative advantage in oilcake and other solid residues; vegetables, fruits, nuts, and other; and unmanufactured tobacco.

Further, major agricultural exports are more or less in line with their revealed comparative advantage. However, only 34% of products have revealed comparative advantage, and FDI and the exchange rate are found to positively affect revealed comparative advantage. The broad implication is that more focus needs to be given to those products which have comparative advantage to export. In particular, processed agricultural products should receive special attention as they have potential to generate income, employment and value addition. Commodity-specific programmes aiming at export development may be useful towards achieving these ends.

Yashobanta Parida, Avinash K. Ghule and Priyank Kumar Dudharejiya narrow down the analysis to dairy exports to examine their major markets, trade direction and competitiveness. Taking the period from 2001 to 2016, they find that South Asia, the Middle East and Southeast Asia are the major destinations for India’s dairy products. India became a net exporter of dairy products after 2000, but it remains a minor player despite being the largest milk producer in the world. Much of its dairy-related international trade occurs with one country, the UAE, and it depends on France for imports with regard to some products. Given the changing contours of foreign markets, India’s reliance on a few countries for international trade invites certain risks. These may be minimized by keeping a close eye on changing business conditions worldwide and focusing particularly on the relevant countries.

The nominal protection coefficient reveals that the Indian dairy industry is not competitive enough in exporting to the world. The reason could be that the export prices of India’s dairy products exceed the world export price. Nevertheless, India is relatively competitive in terms of exporting cheese and curd. The results based on autoregressive distributed lag (ARDL) estimates show that the world per capita income is one of the key determinants responsible for increasing dairy exports, while the exchange rate also plays a significant role in enhancing dairy exports. The results also show that the higher unit price of dairy products adversely affects dairy exports, while diminishing the tariff rate of products can increase exports to some extent. The study concludes that there is considerable scope for enhancing the international trade performance of the dairy industry by focusing on the production of cost-effective and quality dairy products. Also, international cooperation and policy dialogue should be strengthened to restrict export (including input) subsidies provided by developed countries. Negotiating exceptions to the non-tariff and technical barriers to the dairy trade would also help, as would promoting the production of clean milk and improving traceability with the help of technological interventions.

Taking the analysis further, Abhishek Jha and Seema Bathla probe the quantum of agriculture exports and imports at the four-digit level by bifurcating products into primary (low processing) and value-added (high processing) categories. From 2001
to 2017, the share of primary (raw) agriculture exports in total agricultural exports has increased, due mainly to the export of meat and basmati rice, but the share of highly processed agriculture exports has remained static. In the case of imports, not much change is seen except in the case of processed palm oil and edible oils. This is validated by results obtained from the Galtonian regression, which show little structural transformation in India’s external trade in agriculture (raw and processed) commodities.

Processed food products have a lower comparative advantage than primary exports, but they enjoy greater protection. It may imply that India’s policy of lower support to primary agriculture commodities does not allow farmers to gain from higher prices in the world markets. And high protection accorded to processed commodities (produced by industry) negates the gains to consumers from low world market prices. The food industry must enhance its price competitiveness through requisite technology, policy and skills and also participate in the domestic and global agriculture value chains.

To what extent has protectionism affected productivity growth and efficiency in the organized food industry? Seema Bathla attempts an answer by using the estimates on the level of protection (measured using the average applied tariff rate and nominal rate of protection in Jha and Bathla, this book). Bathla finds that though protectionism in agriculture has fallen, it is more than one for several commodities under the exportable and importable hypotheses. This has helped India become a net exporter of agricultural products, but the pace of increase in exports and imports of processed products tends to be slow. The estimated TFPG in the organized foods and beverages industry improved between 1980–81 and 2014–15. An increase in productivity growth can be attributed to a reduction in the protective regime, but it is more influenced by factors operating within India’s economy. A slow pace of growth in processed food exports can be explained by the increasing incidence of non-tariff measures—the topmost include food quality and sanitary, phytosanitary and health-related issues.

To make a sufficient dent on poverty in the Indian economy, high growth in manufacturing needs to be accompanied by the creation of ample employment opportunities. B. N. Goldar and Yashobanta Parida argue that export-oriented, labour-intensive manufacturing industries need to be focused on to boost manufacturing sector growth and concomitant large-scale job creation. The authors consider the wearing apparel and exports industry and show that fast growth in global exports, which reflect fast growth in global demand, positively affects the export performance of India’s wearing apparel industry. Also, industry- and plant-level analyses find that domestic industry growth positively affects export performance. It may, thus, be inferred that policies that promote the wearing apparel industry’s growth—through, say, infrastructure development—will automatically boost its exports. This may perhaps be true also for other domestic labour-intensive industries.

Devender Pratap and Shibananda Nayak focus on another, yet inter-related, aspect of the exports of manufactured goods. The authors maintain that the global fragmentation of production has led to an increasing trade in intermediate goods in the manufacturing sector. Trade in intermediate goods has necessitated the extent of import
intensity and domestic value addition in output and exports of specific countries, globally participating in the joint production sharing. Clearly, developing countries need to assess the extent of domestic value addition in their exports.

The authors analyse the changes in the import intensity of exports from India at four points in time—1989–90, 2003–04, 2006–07 and 2007–08—based on the flows in the input–output table and on items distinguished by both domestically supplied inputs and that sourced through imports. The import content or intensity of exports for the manufacturing and services sectors rose during these periods. The contribution of manufacturing and services exports to total direct and indirect value-added (TVA) declined steadily from 86.9% in 1989–90 to 78.5% in 2007–08. In contrast, total employment (direct and indirect jobs) increased from 35.57 million in 1988–89 to 78.91 million in 2006–07 and then decreased slightly to 63.66 million in 2007–08. Surprisingly, the foods and beverage sector within the manufacturing industry has a negligible contribution to import content of exports.

All the research-based papers are comprehensive in providing insights into the growing importance of the agriculture and food processing sectors in India to meet the diversified consumer demand, potential to absorb labour, accelerate output and exports and enable higher growth in the agriculture and services sectors through backward and forward linkages. The chapters illustrate distinct facets of the agriculture and processed foods sectors across the organized, unorganized and MSME segments during the past two decades, and bring forth the topical ones: intersectoral linkages, with little benefits to agriculture; falling labour intensity; increasing capital intensity and credit constraints; persisting rigidities in the labour market and growing subcontracting; the unchanging share of value-added exports in total agriculture exports and competitiveness; and continuing food safety and quality issues. Besides, the state- and firm-level analyses suggest new dimensions—each having implications for increasing employment, productivity and efficiency in the processed food sector—for drawing policy inferences. All the chapters call for an integrated approach that relies on a market-oriented economy backed by effective policy interventions. The book will immensely benefit academicians, students and policy-makers interested in agriculture, food manufacturing and international trade.

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