

Decline of Jute Industry in Pakistan: An Analysis Through Historical Perspective and Recommendations for its Revival

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Abstract:

Jute is an environmental friendly fiber. Well established export oriented jute industry of Indo-Pak was adversely affected by the partition in 1947 as east Pakistan was a supplier of raw jute to the manufacturing jute mills of India and West Pakistan. Pakistan's jute industry again affected in 1971 by the separation of east Pakistan as Bangladesh. In the historical context, this paper analysis the decline of jute industry using four cluster meta-theoretical clusters (Lamberg et al., 2018): (i) policy and institutional environment, (ii) market dynamics, (iii) technology, and (iv) capabilities. The research concludes that since many decades has passed, Government of Pakistan has launched out jute industry and establish no institutional structure for the research and development (R&), capabilities building and technological development of jute industry. Finally, research

provides recommendations for the revival of jute industry in the context of opportunity of using an environmental friendly 100% degradable fiber jute for industrial development.

Keyword: Jute Industry, Decline, Pakistan, Industrial Policy, Meta-theoretical Cluster, Environmentally degradable

1. Introduction

Jute, also known as the ‘Golden Fibre’, is a natural fibre extracted from the bark of the white jute plant. Raw jute, which is the industry’s raw material, can be processed and manufactured into a variety of products. These include yam, twines, hessian cloth and sacking bags. Hessian cloth is commonly used in the manufacturing of carpets. Jute industry is one of such industries in Pakistan which is losing its significance in agriculture as well as in the market. Soon after the partition, only 12 mills were shifted to the west wing of Pakistan. In 1971, at the time of partition of East Pakistan, 12 jute mills in (West) Pakistan completely relied on jute from Bangladesh. According to Pakistan Jute Mills Association, majority of jute industries in Pakistan is completely dependent on the imported jute. Currently, jute industry consists of five active jute mills and an association, while seven are declining or completely declined. Unfortunately, with the passage of time, both public and private industrial institutions overlooked the potential of jute and resulted in a declined productivity of this industry.

Jute is very environment friendly, especially in comparison to other materials used in packaging, due to being 100% biodegradable and recyclable in nature as it mixes with soil completely in 2 to 3 months. Globally, jute in all the aspects is enjoying a very reputable position as far as its farming is concerned or may it be the production and quality. In response to sustainable development goals -13 (SDGs) to achieve sustainable natural resource management, global packaging industry is giving preference to environmental friendly input material. The world is going green today, almost all the production and packaging industries are switching their choices to the sustainable option of making the environment less pollutant, and choosing jute in the packaging their products. Jute

plant grows very fast. It takes four to five months to become mature in comparison to wood, which takes ten to fourteen years to mature. Jute is decomposed in ecofriendly way. In this scenario, revival of jute industry would be an opportunity to capture its share from global market. In the context sustainable development, this research establishes a proposition that for the developing country, like Pakistan, it is a high time to revive its jute industry by learning lessons from the decline of this industry. For the agro based countries the crop plays a very pivotal role in providing job opportunities for the communities, carbon footprints is almost removed.

The main aim of the paper is to provide a critical analysis of the decline of the jute industry of Pakistan for policy recommendation for its revival. This research is concerned with the decline of a national jute industry and in terms of its relative market position. Moreover, it also needs to clarify that decline of an industry is not the same as deindustrialization, which typically characterizes the decline of one or many industries in region(s) or a nation and particularly on economic geography. In order to analyze the decline, this research collects the data from secondary data sources i.e. literature review, reports. Research uses the four meta-theoretical clusters: (i) policy and institutional environment, (ii) market dynamics, (iii) technology, and (iv) capabilities. These meta-theoretical clusters are proposed by Lamberg et. al. (2018) in his research on the decline of diverse set of industries.

2: Jute Industry in South Asia: Origin, History and Growth

Jute fiber was known in India since ancient times and jute clothe was being manufactured in the country even in the 16th century. Abul Fazal (1590) in his *Ain-e-Akbari*¹ written during the era of Mughal Emperor Akbari (1542-1605) stated that villagers of India in those days used to wear clothes made of jute fiber. The weavers who used to spin cotton yarns also used simple handlooms and hand spinning wheels for making clothes out of jute fiber (Bhattacharya, 2013, Goyal, 1990). Jute is mainly grown in the South Asian region. The South Asian region, comprising eight countries, is one of the most densely populated

and poorest regions in the world. It has 23 per cent of the world's population and 40 per cent of the poorest people in the world. Jute production market, at global level, is highly concentrated in terms of suppliers and end-customers. In the world, India is with highest volume, approximately 55%, of raw jute production, while Bangladesh produces a volume of approximately 42% and both India and Bangladesh jointly produce 97% of the global jute crop (Kalita and Bhuyan, 2014, p. 2). India, Bangladesh and Pakistan are the countries with the highest volume of jute consumption, with a combined share of approximately 90% in global jute consumption (see table 1). Jute is very cheap and produced from the skin of the stem. Jute is ranked as second in terms of the most important vegetable fiber just after the cotton considering usage, availability, production and consumption (Olaoye et al., 2013, p. 92). Islam and Ahmed (2012) raised the point that the growth of the total world area and production of jute is decreasing with fluctuating trend. The total production of jute in Bangladesh is increasing with fluctuating trend and the production of India and Nepal is in steady state. The growth yield of Bangladesh is more than the India, Myanmar, Nepal, and Thailand, but lowers than the China as stated by the researchers.

Table 1: World import of raw jute and share of India and Pakistan (Average of ten years from 2003-04 to 2012-13)

| | Production (000 tons) | Percentage |
|--------------------------------------|-----------------------|------------|
| World | 2961.5 | 100 |
| India | 1649.7 | 55.7 |
| Bangladesh | 1106.63 | 37.4 |
| Nepal | 16.46 | .55 |
| Total of India ,Bangladesh and Nepal | 2772.79 | 93.65 |

Sources: Compiled from International Jute Study Group (IJSG) data (2003-04 to 2012-13)

Major portion of the raw jute produced in South Asia is consumed within the South Asia. Bangladesh is the world's largest exporter of raw jute in the world (Akhtar, 2015). From 2003 to 2013, during the last ten years Bangladesh alone contributes more than 90 per cent of total exports of raw Jute in the world. Although the export trend shows a decline, yet the

country is able to maintain its position as the largest exporter of raw jute in the world. On an average Bangladesh export 35 per cent of its production as raw jute regularly.

3: Jute Industry of Pakistan since 1947

Historically, jute played an important role in the culture and economy of West Bengal and South West part of Bangladesh (the then India) for long centuries. The trading history of jute was also old in Indian continent. The continent was under British colonization² and British East India Company³ traded jute for the first time. The company sent their first consignment in 1793 and the trading went until 20th century. There was trading of raw jute with the Scottish jute industry in Dundee⁴. With the success of trading raw jute, the necessity of trading jute products by adding value on raw jute was understood. With this urge, jute processing mills and factories were established. In Kolkata, India, the first jute mill was established in 1855 followed by the establishment of more jute mills in the West Bengal during 1900s. After the partition in 1947, jute stocks with finest qualities remained in south west part of Bangladesh (then East Pakistan), while the jute mills that processes raw jute were in the West Bengal, India. Then, the emergence to set up new mills in Bangladesh (then Pakistan) came (Rahman et al., 2017, p.4). The trading history of jute is very old in Pakistan.

Then, with another partition of East Pakistan in 1971, 12 jute mills in (West) Pakistan relied on jute from Bangladesh. Even as per records of 2018, most of the jute industries in present day Pakistan production depend mostly on the imported jute. Today, Pakistan has 5 active out of 12 mills and an association. Presently, activities are being reestablished to grow jute in the nation to encourage the nearby business. Among the main cultivators worldwide Pakistan also started cultivating the product .but soon the area for the jute cultivation happen to shrink gradually. For the period of 1980-81 the entire area for jute production of the country was 1,323 hectares which reduced to only 22 hectares in 1990-2000. The foremost reasons behind this severe decline might be the easy availability of synthetic fiber in the sell on prices comparatively below jute fiber also the

non-conductive climatic condition are very much affecting the cost-effective production for country.

Table 2: World import of raw Jute and share of India and Pakistan (average of ten years from 2003-04 to 2012-2013)

| | Production (000 tonnes) | Percentage |
|------------------------------------|-------------------------|------------|
| World | 418 | 100 |
| Pakistan | 113.18 | 27.07 |
| India | 109.42 | 26.18 |
| Total of Pakistan and India | 222.6 | 53.25 |

Sources: Compiled from International Jute Study Group (IJSG) data (2003-04 to 2012-13)

Pakistan's jute industry is relatively small with 5 operational jute mills in the country. Among these operational mills, two mills, Sargodha Jute Mills Limited and Thal Limited, are dominating the market and occupy a combined market share of approximately 80%. The demand for processed jute products in the country is largely derived from the agricultural sector. Sacking bags, which make up the largest product segment, are most commonly used for packaging of wheat, rice and potatoes as well as many other food and agricultural products. Meanwhile, hessian cloth is used as a raw material in the carpet making industry.

The industry depends entirely on imported raw jute procured from Bangladesh as its exclusive source for raw material. Jute is a Kharif⁵ crop and it has a cultivation period of 120-150 days. It is sown from March to May and harvested from June to September. During financial year 2020, Pakistan's raw jute imports stood at PKR~4,852 million as compared to PKR~4,730 million in financial year 2019, an increase of about 3%. However, in quantitative terms imports declined from approximately 68,866 million tons in 2019 to about 49,638 million tons in year 2020. The majority of raw jute imports occur during the second and third quarters of each fiscal year (PACRA, 2020)

4: Theoretical Framework: An Explanation of Decline

4.1. Decline of Industry

A declining industry is defined as an industry where growth is either negative or is not growing at the broader rate of economic growth or an industry is said to be in decline when it does not keep pace with the rest of the country's economic growth. There are many reasons, at a general level, for a declining industry: consumer demand may be steadily evaporating (Baker, 2005), the depletion of a natural resource may be occurring or there may be the emergent substitutes because of technological innovation (Baptista and Karaoez, 2011).

This study uses the theoretical frame of Lamberg et al. (2018) to analysis the decline of jute industry in Pakistan. Lamberg et. al. (2018) proposes four meta-theoretical clusters: (i) policy and institutional environment, (ii) market dynamics, (iii) technology, and (iv) capabilities. These four clusters were collected from a qualitative interpretative analysis of the previous literature deals with the explanatory and empirical 328 case studies of the decline of industries e.g. cotton manufacturing, cotton spinning, automobile, steel, jute, fisheries, toy, film, coal industries and many more that are selected across the globe.

Research did an extensive searching and analyzing the 327 publications (articles, books and reports) on the decline of industries in different regions of world. The following list captures the most typical candidates (dependent variables) for which industry decline is researched and measured:

- Decreasing profits (price-cost margin) and decreasing output
- Declining sales
- Inability to renew/declining profits

- Decline relative to competitors
- Declining international market share
- Industrial organization structure (management's ability to create an architecture capable of renewal)
- Competitive decline, no innovations, organizational inefficiency
- Declining market share, declining profits
- Declining market share, inferior technology
- Decline as a cognitive measure
- Organizational decline, unwillingness to adapt modern practices, industrial inefficiency
- Declining exports
- Lower productivity of innovative activities (patenting) and weaker stock market performance
- Employment growth rate
- Decreasing growth of research and development (R&D) investment, decreasing share of basic research as opposed to applied research and development, decreasing share of domestic inventors compared with foreign inventors filing patents
- Decreasing capital investments (new plant and equipment), declining R&D expenditure, declining share of domestic patents

4.2: An Analysis: Decline of Jute Industry of Pakistan

The current position of jute industry in Pakistan is that, it is fading away from its industrial existence. The analysis of the decline of jute industry using four meta-theoretical analysis i.e. policy and institutional environment, market dynamics, technology and capabilities are given below.

4.2.1: Policy and Institutional Environment

Many previous studies acknowledge that firms and industry associations attempt to affect and modify public policies⁶, and that in many cases government is an active player in the decline process, most authors seem to treat decline processes according to their regulatory and institutional environments⁷. In 1971, on the separation of east Pakistan, 12 jute mills were shifted to west Pakistan. These jute mills of Pakistan was completely dependent on the raw jute from Bangladesh. At that time, being a newly established country, Bangladesh was unable to develop new state of art jute mills with its novice science and technology infrastructure. Therefore, having the finest quality of jute in the world, started exporting the jute and Pakistan was one of the major importer of jute to its jute mills.

In this scenario, Ministry of Industries, Govt of Pakistan could not make concrete policies and strategies to lessen the heavy reliance of jute material from Bangladesh. Contrary to the weak public institutional response of Pakistan, Bangladesh has excelled in the fields of technology and diversification and revitalized Bangladesh Jute Research Institute (BJRI). Based on their technological advancement, Bangladesh have reduced their export of jute to countries and instead it planned to export their finished products. As a result of this, Pakistan has to buy the raw jute even on high price to feed its demand. The import substitution policy of govt of Pakistan created adverse effects like increased taxes on imported material, damage material or quality once bought can't be returned. Despite the fact that government itself remains a major buyer of jute industry products e.g. packaging bags of rice, fruits and vegetables, the industrial policies never entertained the issue of import

substitution of jute material from Bangladesh. It is regrettable to say that, government and its concerned departments have overlooked the mills that were shut down with no suitable policies to raise them back. Along with the disregard by government, certain in house problems e.g. electricity, no R&D, lack of skilled labor are also worth solving as far as existence and survival of firm is concerned.

4.2.2: Market Dynamics

Among industrial economists, even the decline itself is typically defined as a loss of (international) market share (Chandler, 1990). Exogenous shocks in the markets might precipitate industry decline. All the jute manufacturing, up to 1971, was getting the input material from the East Pakistan, now Bangladesh. The separation of East Pakistan can be termed as a physical breakdown in the supply chain of jute industry. Due to negligence of government, jute sector has low level of competition with few players. Similarly, jute sector has few buyers. The largest buyer of jute products are the provincial and federal governments who issue various tenders, mostly for purchase of sacking bags, that are used for packaging of food items such as wheat, onions, potatoes etc. The industry is highly dependent on these government orders as they make up ~40% of the total demand for jute products.

Government of Pakistan is the sole customer of jute industry of Pakistan and according to PJMA (Pakistan Jute Mills Association, 2018) *“The entrepreneurs work continuously to meet domestic demand coming from the government departments, so in such circumstances government should provide effective R&D support for productivity improvement in the jute sector”*. Pakistan is striving to survive in the global jute competition. The world today has chosen the green options to trade, likewise the rice importers of Pakistan prefer to buy products in jute bags. In order to fulfill the requirements of our potential clients, one of the jute mills of Pakistan; Thal jute limited in Muzaffargarh⁸ stepped in and contributed in to carry out in the overall export of the finished goods, because of this, the mill became the first jute factory in the world to attain ISO

14001:1996 certification in the year 2004. For the same year the mill achieved ISO 14001:1996 certification for environment management system and which was the first ISO 14001 certificate jute mill in the world. Likewise, Sargodha jute mills ltd, was awarded with initial entity rating, in 2018 by Pakistan Credit Rating Agency (PACRA). PACRA in 2018 stated that, the Sargodha jute mills Ltd holds the strongest business profile in coordination with jute industry. Increased use of cheaper synthetic fibers in packaging and carpet weaving had reduced the global consumption of jute – mainly in developed countries.

4.2.3: Technology

The technological explanation for industry decline relates to the catch-up processes whereby less developed economies first obtain and then surpass the technological prowess of leading countries or regions. Jute industry is a low technology manufacturing sector. In this sector, products tend to have stable, well-diffused technologies with low R&D expenditures and skill requirements, and low economies of scale. During 80s, synthetic fiber entered the market and it was widely adopted by packaging industry as it was less costly as compare to Jute. Unfortunately due to unavailability of research and development and state of art technology, jute industry could not reduce the cost of its conventional products. While in the same period, with the adoption of new technological intensive machines and processes, Bangladesh has developed a competitive edge over India and Pakistan.

Most recently, two jute industries, in Pakistan, has started the production of finer jute yarn out of 100% jute or jute blended with cotton, wool, flax, acrylic and rayon. Further the production of ideal absorbent cotton substitute from jute/jute waste is in pipeline. Development the absorbent cotton will serve the demand of medical and textile industry at domestic as well as international market.

India and Bangladesh and Bangladesh() have established several public research institutes (i.e. National Centre for Jute Diversification established in 1994, Jute Manufactures

Development Council, National Jute Manufactures Corporation Ltd, Bangladesh Jute Research Institute) to do R&D in order to diversify jute industry. In 1972-73, Pakistan Agriculture Research Council, Islamabad launched a project entitled “cultivation of jute in Punjab”. The objectives were (i) to see the feasibility of jute cultivation in Punjab Province, (ii) to work out the economics of jute cultivation as compared to its competing crops, (iii) to standardize the various cultural practices, (iv) to find out the nutrient and irrigation requirements, retting techniques, and (v) introduction and evolution of high yielding varieties etc. A jute section was established in Agriculture University Faisalabad for the execution of project. Later on, another project “Jute Seed Multiplication at Dhakkar Farm” was started to meet the seed requirements of jute growers. In nineties, the jute section transformed into fiber crop section and consequently attention was focused to other fiber crops including cotton etc. However, during the year 2009 research work on jute crop was also revived to meet the raw fiber availability of the local jute industry.

4.2.4: Capabilities

According to management theorists, business firms – and thus industries – should and do continuously develop new processes and routines to meet competition and technological challenges (Teece, 2007). Therefore, capabilities are by definition a necessary condition for renewal: the continuous exploration and exploitation of resources embedded in market dynamics (Napolitano et. al., 2015). Jute industry require both capabilities to grow raw material and process the jute. Being to be a traditional and well established industry of India, the partition of 1947 and then further in 1971 has adverse effects on the overall capabilities of jute industry. Low productivity was a major cause of the domestic industry’s poor performance (NEDO, 1980, p. 3).

A heavy reliance on imported jute and further lack of state of art technologies in jute spinning and weaving mills results in low capabilities of the industry. Since many decades, industry is facing significant risks due to its dependency on imports from

only one country, Bangladesh. Any damage to the jute crop in Bangladesh as a result of flooding or other natural factors is felt by Pakistani importers through increase in prices. In addition, there is also risk due to exchange rate volatility. An attempt to grow jute in some part of Punjab was done by few jute industries i.e. Amin fabrics Ltd Kotri, but the quality of the crop was not accepted. Jute is essentially a tropical plant that requires high temperature of 30-35°C and high precipitation and a special type of soil preparation is needed. At present, activities are being restored to grow jute in the nation, with the aim to encourage the neighboring businesses. Among the main cultivators worldwide, Pakistan also started harvesting the jute. But soon the area for the jute cultivation happen to shrink gradually. For the period of 1980-81 the entire area for jute production of the country was 1,323 hectares which reduced to only 22 hectares in 1990-2000. The foremost reasons behind this severe decline might be the easy availability of synthetic fiber in the sell on prices comparatively below jute fiber also the non-conducive climatic condition is very much affecting the cost-effective production for country. There are five operational jute mills are working in Pakistan (see table 3).

Table 3: Jute Mills in Pakistan and their production capacity in 2020

| Name of Players | Financial Year 2020- Capacity (Metric Tons) |
|------------------------|--|
| Thal Limited | 33,000 |
| Sargodha Jute Mills | 30,500 |
| Indus Jute Mills | 20,000 |
| White Pearl Jute Mills | 15,000 |
| Madina Jute Mills | 15,000 |
| Total | 113,500 |

Source: Global Trade (2019)

Even despite a presence of a wide array of engineering universities, higher education institute are unable to develop required technical/engineering indigenous capabilities to

develop machines and machine using capabilities. Even the universities where the jute industries are within a geographical proximity to them (e.g. MUET, Jamshoro and the KOTRI site area, NED university, Karachi and Dhabeji site area Thatta). Industrial sector, itself was remain unable to institutionalize the knowledge in this sector and remained reliant on tacit knowledge that transferred from generations to generations.

5: Discussion and Conclusion

Jute industry in Pakistan, having a remarkable historical positioning in South Asia, faced a decline since 1971. Currently, few jute industries are working in market to serve majorly the domestic and international market. An industry having a competitive advantage of using a 100% biodegradable input material and products that fulfills the promise of a sustainable industrial development of developing countries. Historical assessment of decline concludes that absence of public policies that can develop the institutional mechanism for technology, capabilities and market adversely affect the jute industry. Since many decades, industry is running with a risk of single input supplier (Bangladesh) and a major one buyer (Government) and results in the stagnant growth in the absence of the market dynamism.

Ministry of industry paid no attention to protect the packaging industry from the use synthetic plastic which is not only hazardous for the natural environmental as well as it misbalance the market share of jute industry. Along with the government, industrial sector was also have its internal issues, e.g. lack of collective efforts by All Pakistan Jute Mills Association (APJMA) to resolve issues of industry. Jute farming undoubtedly will increase the economic activities of the country. Pakistan Cotton Research Institute should allocate budget and start a research on the cultivation of the jute. Similarly agriculture universities, in the closer proximity of jute mills are given research university-industry-market collaborative projects specifically to jute industry.

In the textile departments of engineering universities, the specialization subject on “Jute Manufacturing” is need to be started as well as engineering universities needs to collaborate with industry for incentives for faculty and students in the form of master-thesis award to conduct research in jute. Current, limited capacity of jute industries should be given incentives to conduct R&D. Industrial policy is need to create evidence based on the issues of jute industry and the issues are need to trace through historical perspective.

References

1. Ahmed, Toufique, and Shahidul Kader. "Seamless Jute Bag: a novelty in eco-friendly Packaging." *World* 2979 (2014): 4695-5.
2. Bakker, Gerben. "The decline and fall of the European film industry: sunk costs, market size, and market structure, 1890–1927 1." *The Economic History Review* 58, no. 2 (2005): 310-351.
3. Baptista, Rui, and Murat Karaöz. "Turbulence in growing and declining industries." *Small Business Economics* 36, no. 3 (2011): 249-270.
4. Bhattacharya, B. "Marketing of raw jute." *Advances in jute agronomy, processing, and marketing of raw jute*. PHI Learning Limited, New Delhi (2013): 144-154.
5. Chandler, Alfred Dupont, and Takashi Hikino. *Scale and scope: the dynamics of industrial capitalism*. No. 338.644 CHAs. 1990.
6. Lamberg, Juha-Antti, Jari Ojala, and Mirva Peltoniemi. "Thinking about industry decline: A qualitative meta-analysis and future research directions." *Business History* 60, no. 2 (2018): 127-156
7. Box, Index. "Global Jute Market 2019-Bangladesh Continues to Dominate Exports, Despite decline in the Past Few Years." *Global trade mag*, Dec 9, 2019. <https://www.globaltrademag.com/global-jute-market-2019-bangladesh-continues-to-dominate-exports-despite-decline-in-the-past-few-years/>
8. Goyal, Hari Dev. *Indian Jute Industry: Problems and Prospects*. South Asia Books, 1990.
9. Ali, Md Rostom, Osamu Kozan, Anisur Rahman, Khandakar Tawfiq Islam, and Md Iqbal Hossain. "Jute retting process: present practice and problems in Bangladesh." *Agricultural Engineering International: CIGR Journal* 17, no. 2 (2015).
10. Islam, Mohammad Shahidul, and Sheikh Kamal Ahmed. "The impacts of jute on environment: An analytical review of Bangladesh." *Journal of environment and earth science* 2, no. 5 (2012): 24-31.
11. Kalita, Bidyut Jyoti, and Anjan Bhuyan. "Present Scenario of Jute Cultivation in South Asia; a Study."
12. Napolitano, Maria Rosaria, Vittoria Marino, and Jari Ojala. "In search of an integrated framework of business longevity." *Business History* 57, no. 7 (2015): 955-969.
13. Olaoye, R. A., J. R. Oluremi, and S. O. Ajamu. "The use of fiber waste as complement in concrete for a sustainable environment." *Innovative Systems Design and Engineering* 4, no. 9 (2013): 91-98.
14. Pakistan Credit Rating Agency, "Jute Sector- An Overview," Dec 2020. http://pacra.pk/sector_research/Jute%20-%20PACRA%20Research%20-%20Dec%2720_1608207449.pdf
15. Rahman, Sanzidur, Mohammad Mizanul Haque Kazal, Ismat Ara Begum, and Mohammad Jahangir Alam. "Exploring the future potential of jute in Bangladesh." *Agriculture* 7, no. 12 (2017): 96.
16. Teece, David J. "Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance." *Strategic management journal* 28, no. 13 (2007): 1319-1350.

End Notes

- ¹ The **Ain-i-Akbari** (Persian: آئین اکبری) or the "Administration of Akbar", is a 16th-century detailed document recording the administration of the Mughal Empire under Emperor Akbar, written by his court historian, Abu'lFazl in the Persian language.
- ² **British colonization**, period of direct British rule over the Indian subcontinent from 1858 until the independence of India and Pakistan in 1947.
- ³ The **East India Company** was an English **company** formed for the exploitation of trade with **East** and Southeast Asia and **India**.
- ⁴ Dundee is a coastal city on the Firth of Tay estuary in eastern Scotland.
- ⁵ The Kharif cropping season starts with the onset of the Indian subcontinent's monsoon.
- ⁶ For example, Cassing and Hillman, 'Shifting Comparative Advantage'; Dintenfass, Managing Industrial Decline.
- ⁷ DiFilippo, Military Spending; Dunnett, Decline of British. See also Pardi, 'Industrial Policy' and Fetzer, 'Reversing Gear'.
- ⁸ The city of Muzaffargarh is located in southern Punjab province at almost the exact center of Pakistan.