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STATE CIVIL SUPPLIES: VALUE PEOPLE, VALUE THEIR MONEY

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On November 9, 2014, Ponam Shah, a senior Indian Administrative Service officer at Madhya Pradesh State Civil Supplies Corporation Limited (MPSCSCL), was engrossed in solving a problem pertaining to food security in Madhya Pradesh, a state in central India. She was flipping through the files on her desk and scanning the limited records available to understand the status quo. The state had numerous procurement centres and “fair price shops.” The demand for food grain, however, varied across different locations. Shipment costs also varied depending on proximity to markets and the constraints imposed by geography. She was at a loss to understand the amount of food grain to be transported. Deeply pondering this issue, she tried to figure out the right allocation of food grain to different routes and how she could cost-effectively meet the demands of the fair price shops.

Shah wondered, “How should I allocate the food grain to different routes? Moreover, I have to act fast as there should be neither any shortage nor much wastage.” Though Shah was a senior officer, she had to seek the approval of the board before venturing upon any plan of action. Seeking approval at one go was difficult, as the risks of her action involved severe consequences ranging from shortages to operational pitfalls.

Shah drew a block diagram of the distribution system being used in the state and considered a pilot initiative. She decided to change the system of food grain distribution in two phases. Shah exclaimed, “Let me first minimize the cost of shipping wheat among the procurement centres and the issue centres. I will focus on the second stage [issue centres to fair price shops] if all goes well with the system.” She sat down, perplexed (see Exhibits 1 and 2).

PUBLIC DISTRIBUTION SYSTEM IN INDIA

Shortly before the 2014 general election, Narendra Modi had expressed his desire for a radical reform of the Food Corporation of India (FCI). The FCI, headquartered in New Delhi and established in 1965 in accordance with the Food Corporations Act of 1964, was the sole body committed to ensuring nationwide food security. The public distribution system (PDS) was involved in price support and regulatory mechanisms to procure food grain from farmers and make it available at affordable prices to the citizens of India. The organization also oversaw the storage and distribution of food grain throughout India.

The PDS was under the joint jurisdiction of the federal and state governments. Established as a part of the national food security initiative, it accounted for the distribution of food and other basic household items to the citizens of the country at subsidized rates. These included food items, such as rice, wheat, pulses, and sugar, and non-food items, such as kerosene. The FCI coordinated transfer of these commodities to the residents of individual states by the corresponding state supplier through a network of fair price shops, colloquially referred to as “ration shops.”

The FCI, under the auspices of the Indian Ministry of Consumer Affairs, Food and Public Distribution, was responsible for the procurement, storage, transportation, and allocation of food grain in bulk, whereas the state governments shouldered the responsibility of distributing it to the target beneficiaries. The state governments also attended to operational issues in food distribution and were concerned with all of the processes directly or indirectly involved in the distribution of subsidized commodities to the target beneficiaries. The state governments engaged in a plethora of activities, ranging from the distribution of ration cards (identifying beneficiaries) to operating fair price shops. For instance, in the state of Bihar, the FCI allocated a specific quota of commodities and transported these to the state. However, it was the role of the Bihar State Food & Civil Supplies Corporation Limited to distribute the commodities through the state PDS. Although the federal government was a major stakeholder in the PDS, operational issues and state-level decisions were handled by state civil suppliers.

Madhya Pradesh was no exception to this rule. The MPSCSCL looked after the operational issues encountered in supplying food items to different parts of the state through the PDS and the network of fair price shops.

MADHYA PRADESH STATE CIVIL SUPPLIES CORPORATION LIMITED

According to the website of the MPSCSCL, the “Madhya Pradesh Public Distribution System aims at making available essential commodities to vulnerable sections at affordable prices. Rice, Wheat, Sugar and Kerosene are being successfully distributed to the poorest of the poor even in the remotest villages of the state.”[[1]](#footnote-1)

The MPSCSCL was the official body responsible for procuring food grain and distributing it to the public. Around 1.5 million tonnes of different items, including coarse grain, wheat, rice, sugar, and salt were procured from farmers, merchants, and millers. These items were then distributed to every corner of the state. The corporation had a very transparent and amicable relationship with various farmers and their cooperatives, trading associations, more than 2,400 fair price shops, and *mandies[[2]](#footnote-2)* throughout the state.

Madhya Pradesh’s economy was largely based on agriculture. The main crops grown there included wheat, rice, soybean, and a few pulses, such as lentils, gram (chickpea), linseed, and ramtil (Niger seed). Madhya Pradesh accounted for approximately 88 per cent of India’s total production of soybeans, while 22 per cent of total arable land was dedicated to the cultivation of rice.[[3]](#footnote-3) Wheat was cultivated in the western part of the state, whereas paddy (rice) was largely grown in the east. A recent survey indicated that wheat formed the staple diet in most districts across Madhya Pradesh.

Supplies under the PDS

There were five main items supplied under the PDS and procured in accordance with the Price Support Scheme.

* Rice: This was generally procured from farmers or cooperatives and then sent for milling. After milling, rice was shipped to FCI warehouses for transport to issue centres.
* Wheat: Owing to decentralization, wheat was collected from societies in 35 different districts. These societies served as agents of the FCI.
* Pulses: These were also procured from farmer cooperatives and then distributed through the PDS.
* Sugar: This was obtained from factories in Maharashtra and Uttar Pradesh by rail or by road.

These items were transported to issue centres—there were 25 such issue centres in the state—and then sent to fair price shops, from which they were sold to societies. In some tribal areas, they were transported using private vehicles. The MPSCSCL bore the entire cost of collection, transportation, and storage while the farming cooperatives/corporations paid for the gunny bags used for shipment.

Other Domestic Trading

The MPSCSCL was also involved in procuring pulses and soybeans. The organization purchased kerosene commercially and sold it under the Parallel Marketing Scheme.

The MPSCSCL was involved in the bulk handling of goods through the issue of contracts to private parties. It also owned 58 trucks, which were mainly used for supplying goods to tribal areas.

The corporation faced few political issues. It was headed by a person known as the *Adyaskh*,[[4]](#footnote-4) whose role was to coordinate and oversee the activities of the corporation. The government was supportive in that it neither interfered with nor disrupted the functioning of the corporation.

CONCERNS FOR THE CORPORATION

Working Capital

The organization had hardly any working capital of its own. Its budget was limited to ₹20 million.[[5]](#footnote-5) As a result, the MPSCSCL depended on bank loans. Further, the government did not provide any loans to the corporation; instead, it provided only reimbursements. Because the corporation borrowed money from banks, it had to pay interest on the loans. It borrowed around ₹200 billion annually at an interest rate of around 10 per cent, which meant that the interest component was around ₹20 billion. The company had to apply to the government for reimbursement, and even a slight delay could result in exorbitantly high interest rates. For instance, if the government delayed payment to the organization by three months, then, at an average of ₹50 million in interest per day, 90 days’ interest would amount to ₹4.5 billion. Thus, the corporation usually worked at a loss. There was no one that listened to its grievances, not even the government.

Human Resources

The workforce of the MPSCSCL was another major concern. At the time of its inception, the total number of employees in the corporation was around 1,300. There were now only 900 employees. However, the workload had increased five-fold, and technology adoption in the corporation was quite low. The officers and staff were not motivated to work extra hours to achieve the goals of the corporation. They were also unhappy with the incentives provided. The corporation could not hire part-time staff due to strict government regulations, and it lacked the assurance of support staff belonging to the state government. Therefore, in addition to low working capital, another major area of concern for the organization was reduced workforce.

Quality Control

There were absolutely no mechanisms in place at the MPSCSCL for quality control. Most of the commodities were perishable, which called for quality inspection at several points, i.e., procurement, transportation, and storage. Shah was deeply worried because quality was a major concern in the case of food grain.

Transportation

The corporation wasted a great deal of money on transportation because of the lack of both benchmarks and proper systems of transportation management. There were multiple routes from procurement centres to issue centres and each route had a different cost associated with it (see Exhibit 3 and 7B17D014).

CURRENT OPERATIONS AT THE CORPORATION

The corporation had procurement societies that collected rice, wheat, and other cereals. Rice was sent to mills, and then to issue centres. Wheat and coarse grains were sent directly to issue centres. Private suppliers sent sugar and salt to issue centres, which, in turn, sent these commodities to fair price shops. There were 51 procurement societies located at a mean distance of 110 kilometres from each other. Once the items were procured, they needed to be shipped within three to five days because of their perishable nature, a lack of storage facilities, and other environmental constraints. There were 25 issue centres in Madhya Pradesh with 31 sub-issue centres. Disparity existed between supply and demand across the state. For instance, Balaghat, Mandla, and Seoni districts had surplus rice, whereas Hoshangabad, Harda, Sehore, Raisen, and Vidisha districts had surplus wheat. There were 22,422 fair price shops spread across 228 sectors.

Due to the disparity between supply and demand, 10 *zilas*[[6]](#footnote-6) had a surplus of grain, whereas eight suffered from a severe deficit. Surplus stocks were available in storage facilities in many districts, but transportation rates and distances from these facilities varied greatly. Indisposed quantities could be sold by open tender. The procurement of paddy in the Kharif Marketing Season was through farmers (contractors) and was realized only post-milling. Each month there were two deliveries, and the items were packed in standard-size (100-kilogram) gunny bags and shipped by truck.

There were almost 1,000 procurement centres for paddy (rice). The gross rice requirement was 1.2 million tonnes. Rice milling required six months and was done in only some districts. The gross requirement for wheat was 7 million mega tonnes, and this was procured through farmers (contractors) in the Rabi Marketing season. Contracted transporters were involved in shipping these commodities. It was evident that nearly ₹12 million was spent on wheat distribution, which entailed transportation from procurement centres to issue centres. The rates for different routes varied according to distance and the associated risks. It was sometimes economical to move goods long distances at lower rates, and short distances at higher rates. Toll taxes had to be taken into consideration while calculating the costs for a particular route. Multiple tenders were available for transportation from one destination to another. Thus, Shah needed to determine which routes were the fastest and least expensive. Long-range transportation also took place between issue centres (see Exhibit 3).

THE DILEMMA

Shah scanned the corporation’s records, trying her best to find the right solution. Issues pertaining to logistics, cost, and waste were lurking in her mind. The MPSCSCL was incurring massive transportation costs, leading to a huge loss of public money that could have been better spent. Further, there was a supply and demand mismatch between the procurement centres and the issue centres. As a result, there was waste at some locations, while people were starving at others. Shah fidgeted with her pen and exclaimed, “Oh God! Where do I allocate and how much do I allocate?” She sighed and gazed at the array of management textbooks in the bookcase next to her desk.

The authors sincerely thank the entire team of officers and staff who assisted us in preparing this case. They apprised us of the problem and were instrumental in sharing documents and data that helped us perform an analysis and furnish a plausible solution.

Exhibit 1: Process flow Schematic Representation

Procurement Societies

Issue Centres

Fair Price Shops

Wheat

Rice

Coarse Grains

Sugar and Salt

Transportation

Paddy

Private Suppliers

Rice Millers

Source: Company documents.

Exhibit 2: Transportation Network Schematic Diagram

Procurement

centre 51

Issue centre 25

Issue centre 2

Issue centre 1

Fair price shop 25

Fair price shop 2

Fair price shop 1

Procurement

centre1

Procurement

centre 2

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Source: Company documents.

Exhibit 3: Supply Centres

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Supply Centre No.** | **Supply Centre (District)** | **Supply (Gunny Bags)** |  | **Supply Centre No.** | **Supply Centre (District)** | **Supply (Gunny Bags)** |
| 1 | **Alirajpur** | 9,905 |  | 26 | **Khandwa** | 20,071 |
| 2 | **Agar** | 5,464 |  | 27 | **Khargone** | 42,685 |
| 3 | **Anuppur** | 25,211 |  | 28 | **Mandla** | 10,945 |
| 4 | **Ashoknagar** | 6,992 |  | 29 | **Mandsaur** | 13,254 |
| 5 | **Balaghat** | 57,156 |  | 30 | **Morena** | 10,130 |
| 6 | **Barwani** | 18,021 |  | 31 | **Narsinghpur** | 6,645 |
| 7 | **Betul** | 28,498 |  | 32 | **Neemuch** | 10,660 |
| 8 | **Bhind** | 9,380 |  | 33 | **Panna** | 11,579 |
| 9 | **Bhopal** | 19,287 |  | 34 | **Raisen** | 15,961 |
| 10 | **Burhanpur** | 7,954 |  | 35 | **Rajgarh** | 12,832 |
| 11 | **Chhatarpur** | 19,937 |  | 36 | **Ratlam** | 26,174 |
| 12 | **Chhindwara** | 14,333 |  | 37 | **Rewa** | 24,822 |
| 13 | **Damoh** | 5,979 |  | 38 | **Sagar** | 25,961 |
| 14 | **Datia** | 13,438 |  | 39 | **Satna** | 11,218 |
| 15 | **Dewas** | 21,435 |  | 40 | **Sehore** | 29,769 |
| 16 | **Dhar** | 27,228 |  | 41 | **Seoni** | 24,580 |
| 17 | **Dindori** | 11,373 |  | 42 | **Shahdol** | 7,480 |
| 18 | **Guna** | 14,232 |  | 43 | **Shajapur** | 15,987 |
| 19 | **Gwalior** | 4,467 |  | 44 | **Sheopurkala** | 6,628 |
| 20 | **Harda** | 9,400 |  | 45 | **Shivpuri** | 13,798 |
| 21 | **Hoshangabad** | 21,796 |  | 46 | **Sidhi** | 23,605 |
| 22 | **Indore** | 23,038 |  | 47 | **Singroli** | 26,556 |
| 23 | **Jabalpur** | 14,711 |  | 48 | **Tikamgarh** | 14,985 |
| 24 | **Jhabua** | 22,541 |  | 49 | **Ujjain** | 15,735 |
| 25 | **Katni** | 25,094 |  | 50 | **Umaria** | 15,947 |
|  |  |  |  | 51 | **Vidisha** | 12,917 |

Source: Company documents.

Exhibit 5: Demand centres

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (Gunny Bags) | 32,520 | 2,530 | 9,215 | 25,835 | 11,167 | 17,069 | 5,860 | 151,254 | 47,907 | 32,521 | 109,569 | 63,387 |
| Demand Centre (District) | Gwalior | Bhind | Shivpuri | Hoshangabad | Betul | Damoh | Panna | Jabalpur | Katni | Narsinghpur | Seoni | Mandla |
| Demand Centre No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Demand (Gunny Bags) | 14,808 | 186,185 | 47,659 | 33,390 | 14,083 | 8,081 | 8,113 | 3,824 | 9,222 | 420 | 5,982 | 842 | 4,609 |
| Demand Centre (District) | Dindori | Balaghat | Rewa | Satna | Shahdol | Singrouli | Sidhi | Anuppur | Umaria | Chinwara | Datia | Raisen | Sehore |
| Demand Centre No. | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |

Source: Company documents.

1. National Informatics Centre, Madhya Pradesh, “Madhya Pradesh State Civil Supplies Corporation Ltd.: Government of MP Undertaking” 2016, June 26, 2017, www.mpscsc.mp.gov.in. [↑](#footnote-ref-1)
2. Mandies in colloquial Hindi meant wholesale vegetable and fruit markets. [↑](#footnote-ref-2)
3. “Products,” Madhya Pradesh State Civil Supplies Corporation Ltd., accessed June 26, 2017. [↑](#footnote-ref-3)
4. Adyakshwas a Hindi term signifying the officer in charge. [↑](#footnote-ref-4)
5. ₹ = INR = Indian Rupee; All currency amounts are in INR unless otherwise specified; ₹1 = US$0.02 on May 11, 2016. [↑](#footnote-ref-5)
6. In state-level administration, each state was divided into territories called zilas, or districts, each of which was headed by a district magistrate. [↑](#footnote-ref-6)