

1 A Study on Dealer's Preference towards Water Pumps with 2 Special Reference to Beacon Pump in Chennai City

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6

7 **Abstract**

8 This paper examines the dealer's perception, consumer brand preference, sources of
9 awareness, dealer's expectation and special references to Beacon pump. Statement of the
10 problems is to study on dealer's preference towards water pumps with special reference to
11 Beacon pumps in Chennai city India. The experiments were taken on dealer's preference and
12 find out the factors which is influence the dealers. An objective of the study is to know brand
13 preferences of dealers with reference to Beacon pump and also need to find which factors
14 influence dealers. The study mainly involves finding out the dealers perception, consumer
15 brand preference, source of awareness, dealers expectation and so on. More than 26

16

17 **Index terms**— dealers, water pump, perception, brand preference.

18 **1 Introduction**

19 an has been using pumps of some type for 4000 years, which makes 50 years a very short time in the history
20 of pumping. Indeed, looking back at the most significant developments in technology, the last fifty years seem
21 relatively insignificant. By 1959, all the major pump designs had been introduced and mostly developed into
22 commercial products.

23 Water pumps have been existent since 3000 B.C. Early pumps were made with water wheels and chutes, and
24 used animals to provide the energy to move the wheels. Early pumps were Mesopotamians, 500 B.C, Force Pump
25 and now days various types of modern pumps have been used include a centrifugal pump, axial flow pump, jet
26 pump and electromagnetic pump.

27 An objective of the study is to know brand preferences of dealers with reference to Beacon pump and also
28 need to find which factors influence dealers.

29 The study mainly involves finding out the dealers perception, consumer brand preference, source of awareness,
30 dealers expectation and so on.

31 **2 II.**

32 Literature Review a) Early Days Pumps i. Mesopotamians

33 The Mesopotamians were responsible for the first pump around 3000 B.C. They used a wooden lever next to
34 the water bank, with a counterweight on one end and a bucket on the other. When the pole was pushed down,
35 the counterweight brought the bucket back up and it emptied into a trough. b) Modern Day's Pumps ii.

36 **3 Centrifugal Pump and Savery Pump**

37 The centrifugal pump is motor-driven, with internal workings that create suction to pull the water. It was
38 invented in the late 1600s by Denis Papin. In 1698, Thomas Avery invented a pump that operated on steam to
39 create a vacuum to draw water.

40 iii.

41 **4 Axial-flow and Jet Pumps**

42 Since the 1940s, axial-flow pumps have been used a compressor in jet engines. Jet pumps are used in wells that
43 are deeper than 200 feet.

44 **5 Electromagnetic Pumps**

45 Electromagnetic pumps are used to move conductive liquids and can handle extremely high temperatures. This
46 type of pump is used in nuclear reactors.

47 **6 c) Different types of water pump i. Jet Pumps**

48 A jet pump can be installed at a couple of different depths below the ground. The shallow and deep well jet
49 pumps will pull water out of the ground between 25 feet and 100 feet.

50 ii. Submersible Well Pumps Submersible water pumps perform the opposite job to retrieve water from the
51 well, pushing water up from the well instead of using the machinery to pull the water out of the hole. These
52 types of pumps are lowered i. deeper into the ground, according to the specifications of the local water district
53 for obtaining ground water.

54 iii. Manual Pumps Manual water pumps are a throwback to the past because the consumer has to manually
55 perform an action to pump water out of the ground. For example, you can obtain water by turning a crank or
56 pumping a lever up and down. iv. Sewer Sum pumps Sewer pumps are needed to pump sewage water from the
57 house into the septic system. Inside the septic tank, the water will break down and return to the soil through the
58 soil absorption system. The sewer sum pump is a pump submersed into the ground. Pumping the septic tank
59 every few years will help to improve the life of the sum pump.

60 **7 v. Circulation Pumps**

61 Water circulation pumps are needed to circulate water around the house. Two examples are pumps that pump
62 water from the water purifier tanks outside into the house and the water pumps that send water from the hot
63 water heater into the bathroom, kitchen and laundry room. The water circulation pump may use centrifugal
64 force to pump water from the source to the destination. d) Different Types of Hand Pumps i. Suction and lift
65 hand pumps Suction and lift are important considerations when pumping fluids. Suction is the vertical distance
66 between the fluid to be pumped and the centre of the pump, while lift is the vertical distance between the pump
67 and the delivery point.

68 ii. Siphons Water will always try to find its lowest level. Using this principle, very simple pumps with plastic
69 or rubber bulb with flap valve at each end are used for emptying fuel or water cans into tanks. Once the bulb is
70 full the fluid will flow without further effort from the higher to the lower container.

71 iii. Direct Action Direct action hand pumps have a pumping rod that is moved up and down, directly by
72 the user, discharging water. Direct action hand pumps are easy to install and maintain but are limited to the
73 maximum column of water a person can physically lift of up to 15 m.

74 **8 iv. Deep Wells**

75 Deep well hand pumps are used for high lifts of more than 15 m. The weight of the column of water is too great
76 to be lifted directly and some form of mechanical advantage system such as a lever or flywheel is used. High lift
77 pumps need to be stronger and sturdier to cope with the extra stresses.

78 v. Diaphragm Diaphragm pumps have the advantage that they pump relatively lightly due to the lack of
79 pulling rods and are corrosion resistant. Their disadvantage is that they need a specific length of tubing and
80 high quality rubber diaphragms, which are costly and are relatively inefficient due to the extra work needed to
81 deform the diaphragm.

82 **9 vi. Water Pumps Landmark**

83 The history of pumps is long and illustrious. Among of this account here were present highlights of some of the
84 major historical and technological developments.

85 In 2000 BC Egyptians invent the shado of to raise water. It uses a long suspended rod with a bucket at one
86 end and a weight at the other.

87 **10 BC Greek inventor and mathematician**

88 Ctesibius invents the water organ, an air pump with valves on the bottom, a tank of water in between them and
89 a row of pipes on top. This is the principal design that is now known as the reciprocating pump.

90 1475 According to Reti, the Brazilian soldier and historian of science, the first machine that could be
91 characterized as a centrifugal pump was a mud lifting machine that appeared in a treatise by the Italian
92 Renaissance engineer Francesco di Giorgio Martini.

93 1593 Frenchman Nicolas Grollier de Servière creates an early design for a gear pump.

94 1675 Sir Samuel Moreland-an English academic, diplomat, spy, inventor and mathematicianpatents the packed
95 plunger pump, capable of raising great quantities of water with far less proportion of strength than a chain or

96 other pump. The piston had a leather seal. Moreland's pump may have been the first use of a piston rod and
97 stuffing box (packed in a cylinder) to displace water.

98 1782 James Watt-who invented the steam engine's connecting rod crank mechanism, which made it possible
99 to convert the piston's reciprocating motion into rotary motion-designs an oscillating piston machine in which a
100 wing-shaped rotary blade made a near complete revolution uncovering inlet ports in a chamber separated by a
101 curved radial wall. 1985 Sims manufactures the first structural composite pump, all Simssite Vertical Pit Pump.
102 Sims later won the Innovative Product Award for these products in 1990.

103 1994 Baha Abulnaga invents the slurry and froth pump with a split vane impeller. The split impeller helps
104 to reduce recirculation in slurry pumps by dividing the space between the main vanes without reducing the
105 passageway at the narrowest point, which is the eye of the impeller. In froth pumps, it helps to break up air
106 bubbles that form and tend to block the flow.

107 2001 KSB presents the first "intelligent" submersible motor pump. Ama-Porter ICS is sensorcontrolled and
108 needs no float switches.

109 III.

110 **11 Methodology**

111 This study is based on primary data which were collected by survey method from Chennai, India. 120 data
112 were collected out of 350 samples. Tabular and graphical analyses were done with the collected data in order to
113 complete the objectives of the study.

114 **12 IV.**

115 Finding and Analysis a) Dealer's dealing With Different Brand of Pumps Interpretation: From the above
116 interpretation it is observed that dealers' opinion about the quality of the pump Texmo (50%) is the first to
117 have Good quality followed by sharp (48%) and Suguna (47%). Interpretation: It is herewith concluded that
118 Jet pumps have high sales than other pumps in the market, followed by Monobloc, multistage and submersible
119 respectively.

120 Figure 1

121 f) The Opinion of Dealers Regarding the Price Structure

122 Figure 8

123 Interpretation: From the above interpretation it could be reveals that Suguna has got the first opinion about
124 after sales service among the dealers, where as the opinion for Beacon is totally average among the dealers.

125 i) The Effectiveness of Media in Advertisement for Pumps

126 Good Average Poor Figure 9

127 Interpretation: From the above interpretation it is clear that most of the dealers prefer TV ad as highly
128 effective 68% and 67% of the dealers also agree that point of purchase is also effective. j) Promotional Support is
129 being offered by Brand of Pumps to Dealers Interpretation: From the above interpretation it can be concluded
130 that most of the brand of pumps are being offered discount promotional support to the dealers (48%) and followed
131 by free gifts(27%) and N/A 18% (not applicable) and others(7%) respectively.

132 V.

133 **13 Findings of the Study**

134 From the survey it has been found that 26.6% dealers are dealing with Texmo pump, 21.6% dealing with Best
135 pump and followed by 17.5% sharp 11.6% Suguna and at least 1.6% dealing with Beacon pump.

136 According to dealers ranking factors they want rank first Good Image 28.33% then Timely Supply 20.83% and
137 followed by Price, Good Margin and Credit Facility.

138 According to consumer most influencing ranking factors they want to rank first Quality that is more percentages
139 26% then Brand Name 23% and followed by Low Price 19%, Gift/Contests 18% and at least attractive packing
140 that is 9%.

141 From the survey we have seen that dealers opinion about the quality of pump as good with Texmo first at
142 50% followed by Sharp 48% Suguna 47% Others 40% Best 38% and Beacon is 0%.

143 From the survey we have seen that Jet Pump have more sales in the most 84% followed by Monobloc 46%
144 Multistage 33% and Submersible 14% Among the given brand dealers are given their opinion about price as fair
145 for both equally Best and Beacon 50% and followed by others 44% Texmo 43% thereafter respectively Suguna
146 31% and Sharp 14%.

147 In case of credit facilities 30% get credit only for one week period and followed by 27.5% get time for two
148 weeks 22.50% get for four weeks and only 20% get credit time for above one month only.

149 **14 VI. Conclusions and Recommendations**

150 The study enables us to understand dealer's perception, consumer brand preference, source of awareness, dealer's
151 expectation and so on. The study helps to improve the sales of Beacon pumps with implementation of new
152 strategies. It helps to understand the dealers that can future help to improve the demand of Beacon pumps.

15 YEAR ()

153 The awareness for Beacon brand name is very low, so first the company should undertake an awareness
154 campaign to inform the dealers about their product. Jet pumps have more sales in Chennai market according to
155 survey. So company should try to concentrate more on jet pumps and try to improve the quality and performance.

156 As plumber are the main people who induce the purchase of pumps, efforts should be taken to inspire them
157 to promote company's product by undertaking activities like plumber card, commission etc.

158 The company should provide certain benefits to the dealers so as motivate them to promote their products like
159 bulk discounts, regular plumber meeting with dealers, provide dealers with banners, wall paintings, gift contests
160 etc. As from the survey it was found TV ad is most effective. So the company should try to advertise its product
161 through the same.

162 The company as being new one can try to select a particular area or location and concentrate in that particular
163 area only and slowly start expanding. The company should involve itself in hardcore marketing as it has got
164 not much share in market. The company should try to identify potential dealers and approach them to promote
165 their product and provide all the required support.

166 15 Year ()



Figure 1: 1851

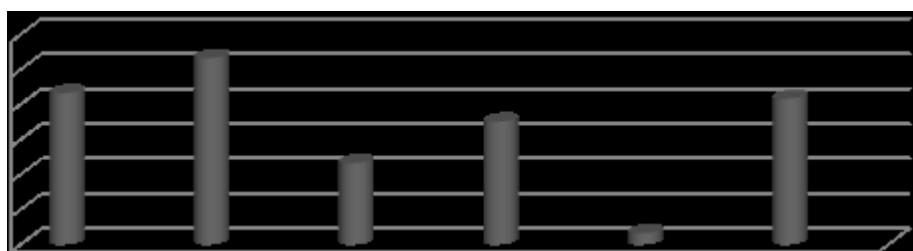


Figure 2:

167 1 2

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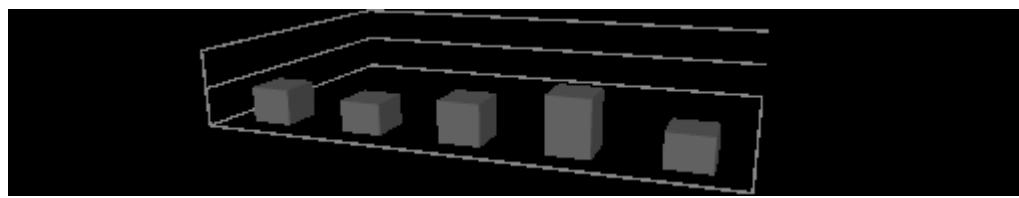


Figure 3: A

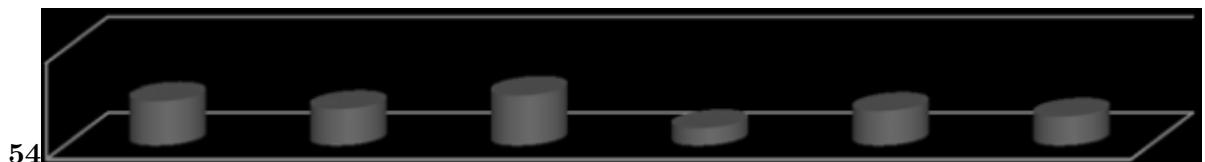


Figure 4: Figure 5 Figure 4

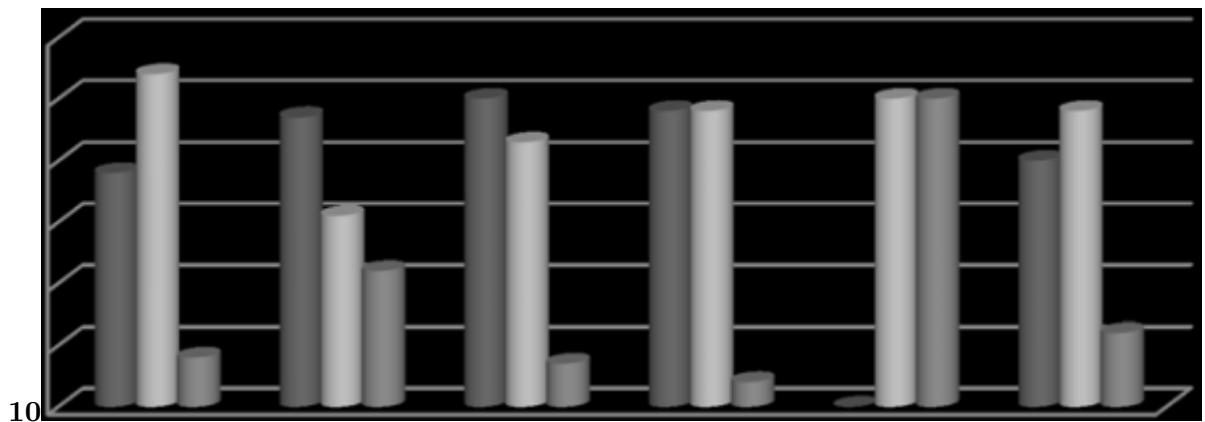


Figure 5: AFigure 10

1

Sl No	Brand	No of Samples	In percent (%)
1	Best	26	21.6
2	Texmo	32	26.6
3	Suguna	14	11.6
4	Sharp	21	17.5
5	Beacon	2	1.6
6	Others	25	20.8

Figure 6: Table 1

2

Sl No	Factors/Rank	No of Samples	In per-cent (%)
1	Price	22	18.33
2	Credit Facility	19	15.83
3	Timely supply	25	20.83
4	Brand image	34	28.33
5	Good margin	20	16.62

Figure
2

40
20
0

Price Credit facility

Timely supply Brand image Good margin

Table 3

Sl No	Factors/Rank	No of Samples	In per-cent (%)
1	Brand name	27	23
2	Low price	23	19
3	Quality	32	26
4	Attractive Packaging	11	9
5	Gifts/Contests	9	18
6	After sales service	18	15

Figure
3

0

[Note: Percentage Factors Interpretation: The above table state that most of the dealers are giving rank factors about brand image 28.33% then followed by timely supply 20.83% and third and fourth place respectively price 18.33%, good margin 16.62 and lastly ranking the brand of pump is credit facility 15.83%. c) Ranking the Factors Which Influence the Consumer Most]

Figure 7: Table 2

5

Type	High Sales	In percent (%)	Normal Sales	In percent (%)	Low Sales	In percent (%)
Jet Pumps	101	84	17	14	2	2
Monobloc	55	46	41	34	24	20
Multistage	40	33	23	19	57	48
Submersible	17	14	33	28	70	58

Figure 8: Table 5

6

	Brand Name	High	In	Fair	In	Low	In
			per-		per-		per-
			cent		cent		cent
			(%)		(%)		(%)
2015	Best	9	35	13	50	4	15
Year	Suguna	15	47	10	31	7	22
	Texmo	5	36	6	43	3	21
	Sharp	10	48	4	19	7	33
	Beacon Others	1	50	1 11	50	0 10	0 40
		4	16		44		
16					Figure		
					6		
Volume	Best Suguna Texmo Sharp Beacon Others						High
XV							Fair
Issue	I						Low
Version							
I							
() E	0			20 40 60 80	100	120	
Global	Interpretation: From the above data It is clear that most of the dealers have fair price structure						
Journal							
of Man-							
agement							
and							
Business							
Re-							
search							
				1week 30%	One week		
					Two weeks		
					Four weeks		
					Above one month		
	4weeks 22.5%			2weeks 27.5%			

[Note: A]

Figure 9: Table 6

9

Best Media	Suguna	Texmo	Sharp	Beacon	Others	In per- cent (%)
	Highly effective	In percent (%)	Effective	In percent (%)	Not effective	
TV Ad	82	68	29	24	9	8
Print media	31	26	64	53	25	21
Hoardings	43	36	46	38	31	26
Point of purchase display	50	67	13	11	27	22

Figure 10: Table 9

10

Sl No	Promotional support	No of samples	%
1	Discount	58	48
2	Free gifts	32	27
3	Others	8	7

Figure 11: Table 10

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