

OPERATIONAL BENEFITS OF RFID DERIVED BY THE APPAREL RETAILERS

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Introduction:

Supply chain management is getting preminent importance in the recent years. (ehristopher, 2000). When supply chain management meets demand and time it excel. The excel is due to connection the supply chain management with information technology and transparency. (kempainen and Ari 2003). By enhancing the technology drivers to the level maximum, supply chain management attains the competitive advantage. The competitive advantage could be realized by enhancing the inter co – ordination between the time, demand and full filling the expectation at a retain time (Hou and Haung 2006). The textile industry retailers use RFID technology to gain competitive advantage in their supply chain process.

Need for the study:

The apparel manufacturers after the production hand over the large scale production to the retailers for the purpose of sale. The retailers are more in members and spread across the whole of Tamil Nadu, whom carry the activity of sales not only in India but also in the global level. The retailers use the RFID for study the operational benefits realized by the apparel retailers on implementing the RFID.

Objective of the study:

To analyze the operational benefits realized by the apparel retailers.

Research methodology:

As apparel retailing is massively carried in the districts of Coimbatore, Erode and Tiruppur forming a total sample of 153. These districts were included in the sample area. The apparel retailers who have registered in the chamber of commerce of the three districts were selected at convenience to collect the opinion on the benefits realized by RFID. In order to consolidate the opinion weighted average method was employed and influence were drawn.

WEIGHTED TOTAL AND RANKING

In most cases, you know the idea of finding the average or arithmetic average for a set of elements. All element values are collected and divided by the total number of elements to calculate

the average value. However, this only works if all positions are measured together. Weighted total is an average in which each quantity to be averaged is assigned a weight.

This weight determines the relative importance of each average size by multiplying each unit by a number (weight) based on the relative importance of the element. The result is summed up and the amount is divided by a weighted number. Weights are often used for descriptive statistical analysis.

There are two main cases where we typically use a weighted average compared with the traditional average. The first is when you want to calculate the average value based on different ratios for different categories. An example is the calculation of the class mentioned above.

In the second case, each element has a group of elements with a given frequency. In this situation, using weighted averaging is much faster and easier than using traditional methods of adding one value and sharing the whole. It may contain hundreds or thousands of items, but is very useful when working with large data sets, which can contain many options.

A rank is a relationship between a set of items, the first is either 'ranked higher than', 'ranked lower than' or 'ranked equal to' the second. If you proceed to the detailed steps in the order of the serial number, you can rank the complex information according to specific criteria.

The weighted total for the respondent operational benefits of RFID was calculated and tabulated below and hence the variables were ranked in descending order to the weights calculated. Rank one was assigned to the highest rating/weight and so on.

The weight of respondent operational benefits of RFID is calculated and presented below. Therefore, variables are ranked in order of the calculated weights. A score of 1 is rated as the highest score / weight.

Table 1: Weighted Total and Ranking of Operational benefits of RFID

S. No	Weights	5	4	3	2	1	Weighted total	Weighted average score	Rank
	Operational benefits of RFID	SA	A	N	DA	SDA			
1	Increased visibility within the supply chain	51 (33.3)	41 (26.8)	26 (16.9)	20 (13.2)	15 (9.8)	552	3.61	1
2	Lower operating costs	48 (31.4)	39 (25.5)	27 (17.7)	22 (14.4)	17 (11.1)	539	3.52	4
3	Reduce stock outage	54 (35.3)	33 (21.6)	29 (18.9)	20 (13.1)	17 (11.1)	546	3.57	2
4	Reduce human intervention	49 (32.0)	38 (24.8)	26 (16.9)	21 (13.8)	19 (12.5)	536	3.50	6
5	Real time information processing	53 (34.6)	33 (21.6)	27 (17.6)	20 (13.1)	20 (13.1)	538	3.52	5
6	Increased competitive	50 (32.7)	37 (24.2)	28 (18.3)	20 (13.1)	18 (11.7)	540	3.53	3
7	Decreased working capital	48 (31.4)	36 (23.5)	28 (18.3)	25 (16.3)	16 (10.5)	534	3.49	7

Analysis shows that the weighted total of the factor i.e — Increased visibility within the supply chain is the highest 552. This concludes that most of the agreed with this. Hence rank 1 can be assigned to the factor as a total of 33.3 per cent of the respondents strongly agreed followed by 26.8 per cent respondents agreed, 16.9 per cent neutral, 13.2 per cent disagreed and 9.8 per cent strongly disagreed.

The second weighted total of the factor i.e - Reduce stock outage of is the next highest 546. This concludes that most of the agreed with this. Hence rank 2 can be assigned to the factor as a total of 35.3 per cent of the respondents strongly agreed followed by 21.8 per cent respondents agreed, 18.9 per cent neutral, 13.1 per cent disagreed and 11.1 per cent strongly disagreed.

The third weighted total of the factor i.e - Increased competitive is the next highest 540. This concludes that most of the agreed with this. Hence rank 3 can be assigned to the factor as a total of 32.7 per cent of the respondents strongly agreed followed by 24.2 per cent respondents agreed, 18.3 per cent neutral, 13.1 per cent disagreed and 11.7 per cent strongly disagreed.

The fourth weighted total of the factor i.e - Lower operating costs is the next highest 539. This concludes that most of the agreed with this. Hence rank 4 can be assigned to the factor as a total of 31.4 per cent of the respondents strongly agreed followed by 25.5 per cent respondents agreed, 17.7 per cent neutral, 14.4 per cent disagreed and 11.1 per cent strongly disagreed.

The fifth weighted total of the factor i.e - Real time information processing is the next highest 538. This concludes that most of the agreed with this. Hence rank 5 can be assigned to the factor as a total of 34.6 per cent of the respondents strongly agreed followed by 21.6 per cent respondents agreed, 17.6 per cent neutral, 13.1 per cent disagreed and 13.1 per cent strongly disagreed.

The sixth weighted total of the factor i.e - Reduce human intervention is the next value 536. This concludes that most of the agreed with this. Hence rank 6 can be assigned to the factor as a total of 32 per cent of the respondents strongly agreed followed by 24.8 per cent respondents agreed, 16.9 per cent neutral, 13.8 per cent disagreed and 12.5 per cent strongly disagreed.

The seventh weighted total of the factor i.e - Decreased working capital is the next highest 534. This concludes that most of the agreed with this. Hence rank 6 can be assigned to the factor as a total of 31.4 per cent of the respondents strongly agreed followed by 23.5 per cent respondents agreed, 18.3 per cent neutral, 16.3 per cent disagreed and 10.5 per cent strongly disagreed.

All the respondents opinion were collected using five point scale, where strongly agree accounts for five points, agree with four points, neutral three points, disagree with two points and highly disagree with one point.

Conclusion:

- ❖ Christopher, M (2000). The agile supply chain. Competing in volatile markets industrial marketing management 29 (1), 37 – 44.
- ❖ Kempainen and K.Ari (2003). Trends in industrial supply chains and networks. International journal of physical distributors and logistics management 33 (8), 701.
- ❖ Haung C.H (2006). Quantitative performance evaluation of RFID application in the supply chain of the printing industry. Industrial management data systems. 106 (1), 96.