Effect of Overstaffing in Benjce Sachets Water Company Onitsha (BSWCO)

IFEYINWA FAITH OGBODO¹, OGBODO EMMANUEL UTOCHUKWU², CHUWUNEDUM OGOCHUKWU CHINEDUM³, ONYENANU CHUKWUNONSO NNANYELUM⁴

^{1,3} Department of Industrial & Production Engineering, Nnamdi Azikiwe University, Awka.

² Department of Electronics & Computer Engineering, Nnamdi Azikiwe University, Awka. ⁴ Department of Chemical Engineering, Nnamdi Azikiwe University, Awka.

Abstract- When a company employs more people on the job than needed, it is said to be overstaffed. It could have accrued from when the company experienced its major market boom, followed by a decline. When you pay your employees for doing nothing, it drains your profit and could lead to severe financial crisis. Overstaffing happens when there is lack of sufficient strategic long term goals. The methodology used in this paper is both qualitative and quantitative. On the 1st December, 2020, Benjce Sachets Water Company Onitsha (BSWCO), automated her company instilling twenty sachets water machines with three hundred unskilled regular staff manning them, most of the time the machine does most of the work; while the staff stay idle. By the end of December 2021, profit data from the company, showed how negative energy of overstaffing sprung up with increased overhead costs, with heavy strain on BSWCO finances with no profit rather accumulated losses. The outcome of the research in BSWCO shows that overstaffing leads to decreased productivity as there were often too many people working on the same project, leading to inefficient use of resources and lost of profit. Bankruptcy occurs when a company continues to retain idle staff; it is recommended that branches should be established more to accommodate those idle staff otherwise the company will fold up in no distance time due to lack of profit.

Indexed Terms- Overstaffing, Productivity Improvement, Finances, Idle Staff, Profit, Loss.

I. INTRODUCTION

Staffing has different effects on performance of a company. However, the literature has not reached an agreement on the relationship between staff levels and company performance. Researchers have approached the issue in both qualitative and quantitative methods and come up with different results. Some scholars conclude that moderate understaffing has positive effects on outcomes, while others prove that slight overstaffing performs better. They all agree that, however, both great overstaffing and extreme understaffing conditions have negative effects on organisation performance. Overstaff was a prevailing phenomenon in some countries in prereform period. They were ignorant of production efficiency, all they did was to fulfil the planning target. Reform process was set up to find out the reasons for overstaffing, which can serve as a background of our analysis. For example in Soviet Union and East European countries privatization approach was adopted, the Chinese government focused on productivity improvements and efficiency and economic growth in there formation process. They started with introduction of contract responsibility mechanism in rural areas, the preface of incentive system and management autonomy in urban areas and the introduction market machinery economy-wide. In the pass. the inducement system was represented by profit retaining, companies could claim part or all of abovequota profits if they realized the planed quotas of output and/or profits. There tained profits was an economic reserve for companies to increase welfare expenditure and employees' bonus or to update production equipment.

II. LITERATURE REVIEW

Experimental investigation examined the impact of labor on trade store performance has been gaining relevance in recent years. Numerous researchers have examined the force of labor on store financial performance. Using data from a furnishing retailer and small-appliances, Fisher et al. (2007) found that, staffing level and customer satisfaction are key variables in explaining month-to-month sales variations. Netessine et al. (2010) found that, a strong relationship existed between basket values for a supermarket retailer and labor practices at diverse stores, and demonstrate a negative association between basket value and labor mismatches at the stores. Horsky (1996) investigates how staffing level affects store profits and service quality for a large specialty retailer. Using monthly data on payroll, sales, and profit margins, Heskett (1994) finds evidence that increased employee leads to profits primarily through higher quality. While numerous papers have utilized traffic data on employee issues in the call center journalism, the lack of traffic data has stymied research in staff issues faced by brickand-mortar retailers. Lam et al. (1998) and Perdikaki et al. (2012) are notable exceptions. Lam et al. (1998) study sales-force scheduling decisions based on traffic forecast, they have data from only one store. Lam et al. (1998) use video-based 5 technology to compute the queue length in front of a deli counter at a supermarket and show that consumers' purchase behavior is driven by queue length and not waiting time. In contrast, we use panel data from 41 stores to identify the extent of understaffing in each of these stores and study its impact on lost sales and profitability. We augment the result from the reduced-form regression with structural estimation, where we allow the cost of labor to vary across stores. Using results from the structural estimation, we show that the imputed cost of labor used by store managers is different from the accounting cost used in previous literature, that this cost can vary significantly across stores, and that it is driven by local market characteristics like competition, median household income, and availability of labor. Perdikaki et al. (2012) who typify the associations between sales, employee and traffic for retail stores. They use daily data to show that store sales have a dished relationship with traffic; exchange rate

decreases non-linearly with increasing traffic; and employee moderates the effect of traffic on sales. Our paper differs from Perdikaki et al. (2012) in its research question. Our paper varies from the above in its research question, methodology and data. We investigate the effect of overstaffing in Benjce sachets water company Onitsha (BSWCO).We examine whether overstaffing has any impact on productivity and profitability in Benjce company; through micro-analysis of the company's production data.

III. METHODOLOGY

This section shows the different processes used in obtaining and analyzing the necessary information used for the study. Data was collected primarily through interviews and observations, while secondary data was from literature in the area of study. Oral interviews were conducted directly with the workers in order to gather information of their various job roles. The use of journals, magazines and seminar paper was adopted in the research.

All the employees of BSWCO were interviewed, while the manager gave us data of their production rate, employees salaries and profits.

Table 1: BSWCO with Twenty Machines and Three Hundred Employees

Decembe	Productio	Sales	Salaries	Losses
r 2020	n Rates	N	N	
	Bag			
1	400	30000	150,000	-
				120,00
				0
2	400	40000	150,000	-
				110000
3	400	40000	150,000	-
				110000
4	350	34000	150,000	-
				116000
5	350	34500	150,000	-
				115500
6	450	45000	150,000	-
				115000
7	350	35000	150,000	-
				115000
8	350	35000	150,000	-
				115000
9	400	38000	150,000	-

1045044000150,000 -106000 1145044000150,000 -106000 1240040000150,000 -110000 1335035000150,000 -1110000 1440040000150,000 -1110000 1540040000150,000 -1110000 1645045000150,000 -110000 1745044000150,000 -105000 1840038000150,000 -105000 1945045000150,000 -105000 2035034000150,000 -116000 2140040000150,000 -1150000 2340040000150,000 -1150000 2440038000150,000 -1110000 2538038000150,000 -1112000 2640038000150,000 -1112000 2738036000150,000 -1112000 2845044000150,000 -1112000 2940038000150,000 -112000 3048046000150,000 -112000 3048046000150,000 -112000					112000
11 450 44000 150,000 - 12 400 40000 150,000 - 13 350 35000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 45000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 10 - - 106000 - 19 450 45000 150,000 - 19 450 34000 150,000 - 110000 22 350 34000 150,000 - 110000 24 400 40000 150,000 - 23 400 40000 150,000 - 110000 24 400 38000	10	450	14000	150,000	112000
11 450 44000 150,000 - 12 400 40000 150,000 - 13 350 35000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 100000 1 - 102000 - 20 350 34000 150,000 - 116000 21 400 40000 150,000 - 21 400 40000 150,000 - 110000 23 400 40000 150,000 - 110000 24 400 40000 150,000 - 112000 25 380 </td <td>10</td> <td>450</td> <td>44000</td> <td>150,000</td> <td>-</td>	10	450	44000	150,000	-
12 400 40000 150,000 - 12 400 40000 150,000 - 13 350 35000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 116000 150,000 - 105000 20 350 34000 150,000 - 116000 2 350 35000 150,000 - 21 400 40000 150,000 - 110000 23 400 40000 150,000 - 110000 24 400 38000 150,000 - 112000 25 380 <t< td=""><td>11</td><td>450</td><td>14000</td><td>150.000</td><td>106000</td></t<>	11	450	14000	150.000	106000
12 400 40000 150,000 - 13 350 35000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 16 450 45000 150,000 - 10 - 106000 - 105000 18 400 38000 150,000 - 20 350 34000 150,000 - 110000 2 - 110000 - 21 400 40000 150,000 - 110000 23 400 40000 150,000 - 110000 25 380 38000 150,000 <td>11</td> <td>450</td> <td>44000</td> <td>150,000</td> <td>-</td>	11	450	44000	150,000	-
13 350 35000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 19 450 45000 150,000 - 20 350 34000 150,000 - 1100000 21 400 40000 150,000 - 21 400 40000 150,000 - 110000 23 400 40000 150,000 - 110000 24 400 38000 150,000 - 112000 25 380 38000 150,000 - 112000 <					106000
13 350 35000 150,000 - 115000 14 400 40000 150,000 - 110000 15 400 40000 150,000 - 110000 15 400 45000 150,000 - 110000 16 450 45000 150,000 - 105000 17 450 44000 150,000 - 106000 18 400 38000 150,000 - 105000 20 350 34000 150,000 - 116000 21 400 40000 150,000 - 110000 23 400 40000 150,000 - 110000 24 400 40000 150,000 - 110000 25 380 38000 150,000 - 112000 26 400 38000 150,000 - 112000 27 380 36000	12	400	40000	150,000	-
14 400 40000 150,000 - 14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 10 350 34000 150,000 - 116000 150,000 - 1102000 20 350 34000 150,000 - 21 400 400000 150,000 - 1100000 22 350 35000 150,000 - 23 400 40000 150,000 - 110000 24 400 38000 150,000 - 112000 25 380 38000 150,000 - 112000 27 380					110000
14 400 40000 150,000 - 15 400 40000 150,000 - 16 450 45000 150,000 - 16 450 45000 150,000 - 17 450 44000 150,000 - 18 400 38000 150,000 - 19 450 45000 150,000 - 20 350 34000 150,000 - 21 400 40000 150,000 - 22 350 35000 150,000 - 23 400 40000 150,000 - 24 400 40000 150,000 - 25 380 38000 150,000 - 26 400 38000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 -	13	350	35000	150,000	-
15 400 40000 $150,000$ -1 110000 16 450 45000 $150,000$ -1 105000 17 450 44000 $150,000$ -1 106000 18 400 38000 $150,000$ -1 102000 19 450 45000 $150,000$ -1 105000 20 350 34000 $150,000$ -1 116000 21 400 40000 $150,000$ -1 110000 22 350 35000 $150,000$ -1 110000 23 400 40000 $150,000$ -1 110000 24 400 38000 $150,000$ -1 112000 26 400 38000 $150,000$ -1 112000 27 380 36000 $150,000$ -1 114000 28 450 44000 $150,000$ -1 112000 29 400 38000 $150,000$ -1 112000 30 480 46000 $150,000$ -1 112000					115000
1540040000150,000 $-$ 1100001645045000150,000 $-$ 1050001745044000150,000 $-$ 1060001840038000150,000 $-$ 1020001945045000150,000 $-$ 1050002035034000150,000 $-$ 1160002140040000150,000 $-$ 1100002235035000150,000 $-$ 1100002340040000150,000 $-$ 1100002440040000150,000 $-$ 1120002538038000150,000 $-$ 1120002640038000150,000 $-$ 1120002738036000150,000 $-$ 1120002940038000150,000 $-$ 1120003048046000150,000 $-$ 112000	14	400	40000	150,000	-
1540040000150,000 $-$ 1100001645045000150,000 $-$ 1050001745044000150,000 $-$ 1060001840038000150,000 $-$ 1020001945045000150,000 $-$ 1050002035034000150,000 $-$ 1160002140040000150,000 $-$ 1100002235035000150,000 $-$ 1100002340040000150,000 $-$ 1100002440040000150,000 $-$ 1120002538038000150,000 $-$ 1120002640038000150,000 $-$ 1120002738036000150,000 $-$ 1120002940038000150,000 $-$ 1120003048046000150,000 $-$ 112000					110000
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	15	400	40000	150.000	-
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-			,	110000
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	16	450	45000	150,000	_
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	150	15000	150,000	105000
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	17	450	44000	150,000	105000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	17	450	44000	130,000	-
$\begin{array}{ c c c c c c c } \hline & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 &$	10	400	29000	150,000	100000
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	18	400	38000	150,000	-
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	10	4.50	45000	1 50 000	102000
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	19	450	45000	150,000	-
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					105000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	20	350	34000	150,000	-
$\begin{array}{ c c c c c c c } \hline & & & & & & & & & & & & & & & & & & $					116000
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	21	400	40000	150,000	-
$\begin{array}{c c c c c c c c c c c c c c c c c c c $					110000
23 400 40000 150,000 - 24 400 40000 150,000 - 25 380 38000 150,000 - 26 400 38000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	22	350	35000	150,000	-
23 400 40000 150,000 - 24 400 40000 150,000 - 25 380 38000 150,000 - 26 400 38000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -					115000
Image: constraint of the symbol sym	23	400	40000	150.000	-
24 400 40000 150,000 - 25 380 38000 150,000 - 26 400 38000 150,000 - 26 400 38000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -					110000
Image: symbol with	24	400	40000	150,000	-
25 380 38000 150,000 - 26 400 38000 150,000 - 27 380 36000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	2.	100	10000	120,000	110000
Image: constraint of the symbol Image: consthe symbol Image: constrainton and	25	380	38000	150,000	110000
26 400 38000 150,000 - 27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	23	500	38000	150,000	-
Image: constraint of the state of	26	400	29000	150,000	112000
27 380 36000 150,000 - 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	20	400	38000	130,000	-
Image: 28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	27	200	2 (000	150.000	112000
28 450 44000 150,000 - 29 400 38000 150,000 - 30 480 46000 150,000 -	21	380	36000	150,000	-
Image: 29 400 38000 150,000 - 30 480 46000 150,000 -		1.70		4 # 0	114000
29 400 38000 150,000 - 30 480 46000 150,000 -	28	450	44000	150,000	-
30 480 46000 150,000 -					106000
30 480 46000 150,000 -	29	400	38000	150,000	-
					112000
104000	30	480	46000	150,000	-
					104000

IV. RESULT AND CONCLUSION

From table 1, the research shows evidence of losses in Benjce due to payment of salaries of excess workers. The cost per head per day swallows up the profit per day and leaves the company socked in depth. Automation should lead to reduced staff level in a company otherwise, bankruptcy will be eminent. From the analysis of the result you will find the volume of staff did not increase the rate of machine production, rather consumes the resources of the company. There will be continuous downward slope into depth by BSWCO till it completely shuts down and continues to pay debts even after total shut down of the company. BSWCO, will hardly survive the end of 2021 without shutting down.

In conclusion, BSWCO will have to choice automation over sentiment of overstaffing. The company will have to open other branches that will accommodate those excess staff. It has to do strategic workers adjustment to fit its automation evolution.

REFERENCES

- Fisher, M.L., J. Krishnan, S. Netessine. 2007. Retail store execution: An empirical study. Working paper, University of Pennsylvania, Philadelphia, PA.
- [2] Fisher, M.L., A. Raman. 2010. The New Science of Retailing, Harvard Business Press.
- [3] J.B.G. Frenk, A.R. Thurik, C.A. Boot. 1991. Labor costs and queueing theory in retailing. European Journal of Operational Research. 55 (2) 260–267.
- [4] Heskett, J.L., T.O. Jones, G.W. Loveman, W.E. Jr Sasser, L.A. Schlesinger. 1994. Putting the service profit chain to work. Harvard Business Review. 72(2), 164-174.
- [5] Horsky, D. and P. Nelson. 1996. Evaluation of Salesforce Size and Productivity Through Efficient Frontier Benchmarking. Marketing Science. 15(4), 301-320.
- [6] Lam et al. (1991). World data based of Happiness.
- [7] Netessine, S., M. L. Fisher, J.Krishnan. 2010. Labor Planning, Execution, and Retail Store Performance: an Exploratory Investigation, Working Paper, The Wharton School, University of Pennsylvania.
- [8] Perdikakiet al.(2012). Effect of Traffic on Sales and Conversion Rates Of Retails Stores, Researchgate.