

BUTCHERS SCHEDULING MODEL EXAMINATION BY TIME STUDY OBSERVATIONS

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Abstract: The study examines the workforce management and the scheduling model in the meat department of the grocery retail company to evaluate an opportunity to increase efficiency. The work structure of the butchers has been observed and according to the time study guideline based on work structures, twelve-time studies conducted in different stores to evaluate the current working methodologies. New scheduling approach created according to sales correlation, seniority of the employee and empirical data obtained from the time studies. Before and after analysis have been conducted based on the scheduling approaches. Thus, new approach leveraged the company sales by 7 % increase.

Key words: Time Study, Scheduling, Grocery, Retailer, Butchers.

JEL: J20, J21, J22, J23.

Introduction

The technological changes in last decades effected many sectors business models. The world population and migration rate from rural to urban areas has increased over time (Knomea, 2019). New technologies and higher population density in the cities forced people to be more aware of time value. Consumers started to spend less time on cooking, which gave the opportunity to Processed Meat Companies to have higher revenue ratio from the market (USDA, 2019). In Turkey, as time flies the number of local butchers facing bankruptcy has been constantly growing. In the grocery retailers, even though fresh departments (meat, delicatessen and fruit vegetable) are the most valuable departments for the companies and the customers, due to insufficient profitably rate, many retailers started to shut down or consider shutting down the meat departments and focus on selling more processed meat products in the stores. Employee cost has mostly the biggest share in the expenses (Dun and Bradstreet, 2016) in the grocery retailers. Thus, there is a business imperative to measure, understand, manage and plan for it properly (Kuruüzüm O., 1992). Therefore, an opportunity to find efficiency increase in the workforce management can support the idea of not shutting down the meat departments in the grocery retailers (Ernst A.T., 2004).

The purpose of the article is to evaluate the meat department scheduling models and butchers' daily job routines of one of the biggest grocery retail companies (Company X) through the time study observations (Richard, 1989)

and correlation between sales data to seniority of the employee to output a better model to improve efficiency.

To accomplish this, the following tasks are formulated:

First, the daily routine of the butchers will be examined, and work structures will be identified. Having all the work structures listed and tested in one store, twelve-time studies will be conducted to comprehend the work structures distribution in a day.

Second, correlation between sales data and the clock in-out data of the butchers will be examined and compared to the senior employees shifts.

Third, a combination of sales data with the empirical data obtained from the time studies will help to propose a new approach in scheduling models. The sales results of the new approach will be compared to other store's outputs, where the old approach will be used, and according to sales ratio increase the benefit of the new approach will be established and proved.

The object of the study is to find an opportunity to increase the efficiency in the company X butchers' scheduling model and the subject of the research is to observe work structures distribution in the shifts by time studies and sales data correlation to the senior butchers service time and effects on the sales.

1. Butchers Job Descriptions and Responsibilities

In all stores of the Turkish retail company X, there are 4 different jobs in the meat department, which are "meat department salesperson", "butcher", "senior butcher" and "chief butcher". They have mainly same job responsibilities, however senior and chief butchers are responsible of shift scheduling, ordering products, guiding butchers on their trainings, responsible to store management about product loss management and inventory. Among their responsibilities are the following:

- Receives incoming shipments of goods and accepts products based on quality and condition;
- Determines minimum stock requirements; monitors inventory; reorders necessary products to maintain stock at the minimum levels;
- Recognizes products that require special handling or storage (Loss Management);
- Stores goods in designated areas and shelves; rotates stock according to shelf life, expiration dates, lot numbers, out of stock situation;
- Gathers goods from inventory locations/storage as specified by pick list or requisition;
- Prints, checks or controls price tags of the product, takes necessary action upon request;

- Serves customers upon their requirement and responds to their needs;
- Keeps track of daily company news about campaign, having knowledge about specially priced products and prioritized applications;
- Informs the customer about current/seasonal campaign makes sure customer gets the benefits;
- Informs management about customer' feedback;
- Is responsible of the cleanness of working area and the tools.

Analysing job responsibilities and getting feedback from store management and butchers themselves, time study guideline and work structure breakdowns have been developed. To analyse the current situation, time study method has been applied. The time study is, a structured process of directly observing and measuring human work using a timing device to establish the time required for completion of the work by a qualified worker when working at a defined level of performance (Institute of Management Services, 2019).

Time study is a necessity to comprehend butchers' job responsibilities and explore if something might have been missed from the data driven perspective. Therefore, time study measurements have been conducted in 12 different shops on different days, shifts and jobs. The distribution of the time studies has been done equally to be able to capture the mainly different stores, shifts and workdays. There are 4 times studies in each morning, noon and afternoon shifts. Due to different applications in the intraday, 4 times studies conducted in each week, weekend and promotions days differentiating with the shifts. The six of the time studies are conducted in the big size store having more than 2.500 m² and more than 50 employees per store, rest of the time studies are conducted in medium size stores, which have sales area between 800 – 1.500 m² and less than 30 employees per store.

2. Butchers' Work Structure Breakdown for Time Study Guideline

A trial time study has been conducted in one store, afterwards with feedbacks and observations the final guideline was created, suitable for all the stores, with 19 different sub-work structures (see Table 1):

- (O) Order New Goods: Ordering new goods according to inventory and forecast;
- (GA) Goods Acceptance: Checking and accepting goods from the truck or delivery person;
- (CU) Clean-Up: Cleaning-up the working area, machines and knives;
- (EDC) Expiration Date Control: Checking goods in terms of expiration date;

- (B) Break: The amount of time, a worker spends time on a tea break, lunch break or any other break type;
- (TC) Tag Price Control: Checking price tags to be updated;
- (TP) Tag Printing: Printing new price tags due to new price or discount;
- (TA) Tag Arrangement: Changing price tags due to movement of goods or promotion, discount;
- (AS) Arrangement of Storage: Arranging the storage for new coming/owned products;
- (BT) Business Talk: Time spent on work talking with management or colleagues;
- (TG) Taking Goods from Storage/Shelves: Taking goods from the storage to bring the instore area;
- (C) Carrying: Moving goods from one place to another;
- (W) Walk: Time spent on walk;
- (MP) Meat Processing: Processing the goods brought form the storage and getting them ready for sale;
- (PG) Putting Goods to Shelves: Fulfilling the shelves with goods;
- (SA) Shelves Arrangement: Rearranging the shelves according to the left products, pulling the goods from the back of the shelves;
- (AO) Accepting Orders: Accepting orders from the customers;
- (PO) Preparing Orders: Preparing the customers' order;
- (CC) Communication with Customer: Talking with the customer about their needs.

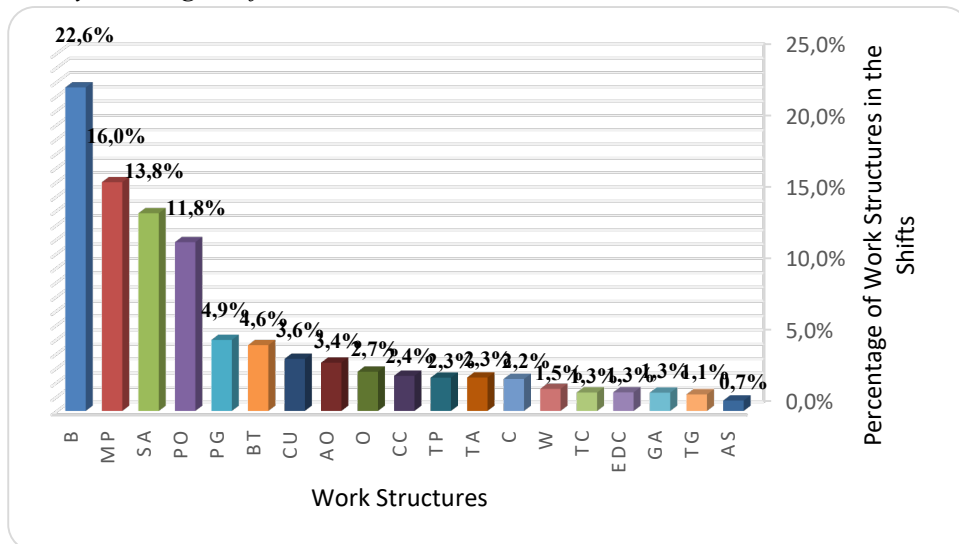
Table 1
An example of Time Study Guideline

Time Study Guideline for Butchers																						
Date												18.07.2019										
Store Name												Akaretler Supermarket										
NO	Sub Work Structure																			Time	Starting	
0	O	GA	CU	EDC	B	TC	TP	TA	AS	BT	TG	C	W	MP	PG	SA	AO	PO	CC	seconds	07:56:00	
1											X										181	07:59:01
2												X									55	07:59:56
3													X								50	08:00:46
4											X										153	08:03:19
5												X									52	08:04:11
6														X							684	08:15:35
7													X								64	08:16:39
8		X																			964	08:32:43
9													X								58	08:33:41
10														X							33	08:34:14
11												X									56	08:35:10
12															X						745	08:47:35
13																X					126	08:49:41

3. Results

The time studies with 12 observations helped to understand the current working environment and the percentage of the task's distribution through a day. In Table 2, all time studies are evaluated, and the percentage of each task over total workload has been calculated.

Table 2
Percentage of Work Structures from Time Studies
in July and August of 2019



Note: See the notation of the abbreviated names introduced in the preceding paragraph.

In the company policy an employee should have an hour lunch time break and two times fifteen minutes tea break when working 8:30 hours in a day. In the time study result the “Break” work structures is 22,6% of the working time while it should be 17,6% (1:30/8:30). There is inefficiency 5% of a daily working time.

Meat processing is the second highest work structure of the time studies, where employees process the meat, which came from the warehouse, to be ready for the shelves. This progress is done mostly in the morning by senior butchers, when the sales are low and there are fewer customers.

Shelves arrangement work structure has 13,8% of the working time, where after each customer's order completion, the employee arranges the meat to be representable for the new customer. This is the reason SA is the second highest work structure.

AO (Accepting Orders), PO (Preparing Orders) and CC (Communication with Customer) are the work structures directly related with

the customer and it is 17,6% of a daily working time. This ratio is higher in the afternoon shifts. The 59,8% (without break, AO, PO, CC) of the daily working time consists of preparing work structures to serve the customers.

There are mainly three shifts models. Morning shift is 08:00 to 16:30, noon shift is 10:00 to 18:30 and afternoon shift is 13:30 to 22:00. In the observation of time studies, senior butchers work mostly in the morning and sometimes noon shifts. However, in the grocery retail sector most of the customers visit stores after work at around 17:00 and later. The conflict between serving customers with less experienced employees (meat salesperson and butcher) in the rush hours guided us to examine the sales distribution and senior butchers (chief butcher and senior butcher) working time ratios.

Working Hours and Sales Distribution Correlation

Time study observation took place on July and August in 2019. The sales data and the clock in-out time of the butchers for August have been examined to understand the current shifts distribution (Nolde, 2013) and correlation to sales data. (see Table 3, Table 4 and Table 5).

Table 3
An example of weekly shift in August 2019

Example week of a August Shifts for Store 6	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Chief Butcher	08:00 - 16:30	08:00 - 16:30	08:00 - 16:30	08:00 - 16:30	08:00 - 16:30	08:00 - 16:30	OFF
Senior Butcher 1	08:00 - 16:30	10:00 - 18:30	08:00 - 16:30	OFF	08:00 - 16:30	10:00 - 18:30	08:00 - 16:30
Senior Butcher 2	10:00 - 18:30	08:00 - 16:30	OFF	08:00 - 16:30	10:00 - 18:30	08:00 - 16:30	08:00 - 16:30
Butcher	OFF	13:30 - 22:00	10:00 - 18:30	13:30 - 22:00	13:30 - 22:00	13:30 - 22:00	10:00 - 18:30
Meat Sales Person	13:30 - 22:00	OFF	13:30 - 22:00	10:00 - 18:30	13:30 - 22:00	13:30 - 22:00	13:30 - 22:00

Table 4
Working time distribution in August

		August 1 - 31 of 2019															
Job Percentage Distribution in a Day		Morning (08:00 - 16:30)														Afternoon (13:30 - 22:00)	
		Noon (10:00 - 18:30)															
August Sales Distribution Percentage		0%	2%	4%	5%	6%	8%	9%	10%	11%	12%	13%	13%	5%	2%	100%	
Working hours Distribution	Percentage of number of Employee	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00		
Butchers	20 (38%)	0%	0%	5%	5%	5%	9%	9%	11%	11%	11%	12%	11%	7%	4%	100%	
Senior Butchers	32 (62%)	6%	6%	8%	8%	8%	9%	12%	12%	12%	7%	6%	2%	2%	2%	100%	

Note: Working time distribution tables (Table 4, Table 7) represent the service ratio percentage of all the employees working time through the day and maximum service level percentage correlation to sales percentage in a day. As example, butchers do not work between 08:00 to 10:00 A.M. time zone and only 2% of senior butcher's working time is calculated between 21:00 to 22:00 in the operation hours.

Table 5
Availability of positions for each hour in August

		August 1 - 31 of 2019													
Job Percentage Distribution in Hours		Afternoon (13:30 - 22:00)													
		Noon (10:00 - 18:30)													
		Morning (08:00 - 16:30)													
August Sales Distribution Percentage		0%	2%	4%	5%	6%	8%	9%	10%	11%	12%	13%	13%	5%	2%
Working hours Distributon	Percentage of number of Employee	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Butchers	20 (38%)	0%	0%	17%	17%	17%	39%	39%	39%	43%	56%	74%	87%	91%	91%
Senior Butchers	32 (62%)	100%	100%	83%	83%	83%	61%	61%	61%	57%	44%	26%	13%	9%	9%
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Note: Availability of positions for each hour (Table 5, Table 8) represent service ratio of butchers and senior butcher in the hours. As example, stores give service with the butchers 87% of the time between 19:00 to 20:00 P.M. in the operation hours.

The current scheduling system, which is done by store managers or chief/senior butchers, is in favour of senior butchers. In the current shift butchers do not work on the morning shifts. The sales revenue share of 38% accomplish in the rush hours, which is from 17:00 to 20:00, (21% of the store working hours). However, giving service with senior butcher ratio (average 28% - Table 5 red highlighted percentages) is low due to noon shifts program. Hence, the company is forced by the current system to serve the customers with junior butchers, who have less experience compared to seniors.

In the fresh departments, the employee is the key factor to higher success in terms of sales revenue. Seniority is important to satisfy customers' desires and have a better success rate to offer side products to have extra sales revenue for the company (Chapodos N., 2013).

The result of time studies has been shared and discussed with the management of Sales Department and Human Resource Department of the Company X. Suggesting to the management to work more with senior butchers in the rush hours, resulted in moving the noon shifts from 10:00 to 11:30 and giving the opportunity to the butchers to work in the morning shifts with the assistance of at least one senior butcher. In September, the new methodology was tested for a month in 12 stores.

In the new shifts model as in Table 6, the company got the leverage to serve the customer with at least 2 senior butchers in the rush hours compared to the old model (see Table 3 and Table 6).

Table 6
An example of weekly shift in September 2019

Example week of a September Shifts for Store 6	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Chief Butcher	08:00 - 16:30	11:30 - 20:00	08:00 - 16:30	08:00 - 16:30	11:30 - 20:00	08:00 - 16:30	OFF
Senior Butcher 1	13:30 - 22:00	08:00 - 16:30	11:30 - 20:00	OFF	11:30 - 20:00	08:00 - 16:30	13:30 - 22:00
Senior Butcher 2	11:30 - 20:00	13:30 - 22:00	OFF	13:30 - 22:00	08:00 - 16:30	11:30 - 20:00	08:00 - 16:30
Butcher	OFF	08:00 - 16:30	13:30 - 22:00	11:30 - 20:00	08:00 - 16:30	13:30 - 22:00	11:30 - 20:00
Meat Sales Person	08:00 - 16:30	OFF	08:00 - 16:30	08:00 - 16:30	13:30 - 22:00	11:30 - 20:00	11:30 - 20:00

The total working time between 17:00 – 20:00 for Senior Butcher has been raised from 15% to 30%, which allowed the stores to have better customer satisfaction. (see Table 4 and Table 7)

*Table 7
Working time distribution in September*

September 1 - 30 of 2019																
Job Percentage Distribution in a Day		Afternoon (13:30 - 22:00)														
		Morning (08:00 - 16:30)						Noon (11:30 - 20:00)								
September Sales Distribution Percentage		0%	2%	3%	5%	6%	7%	8%	10%	10%	12%	14%	14%	6%	3%	100%
Working hours Distribution	Percentage of number of Employee	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	
Butchers	22 (40%)	3%	3%	3%	6%	6%	8%	10%	10%	10%	10%	11%	9%	7%	4%	100%
Senior Butchers	33 (60%)	4%	4%	4%	5%	6%	7%	10%	11%	11%	10%	10%	10%	4%	4%	100%

The results for September show that, senior butchers spend 78% more time in the rush hours compared to August shifts. (Average availability between 17:00 – 20:00 for senior butcher on August is 28%, whereas in September is 49% - Table 6 red highlighted percentages). Hence, butcher can also work in the morning shifts, senior butchers can work at the rush hours to maximize the revenue (see Table 5 and Table 8).

*Table 8
Availability of positions for each hour in September*

September 1 - 30 of 2019															
Job Percentage Distribution in Hours		Afternoon (13:30 - 22:00)													
		Morning (08:00 - 16:30)						Noon (11:30 - 20:00)							
September Sales Distribution Percentage		0%	2%	3%	5%	6%	7%	8%	10%	10%	12%	14%	14%	6%	3%
Working hours Distribution	Percentage of number of Employee	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00
Butchers	22 (40%)	39%	39%	39%	43%	43%	43%	43%	43%	43%	51%	51%	51%	83%	83%
Senior Butchers	33 (60%)	61%	61%	61%	57%	57%	57%	57%	57%	57%	49%	49%	49%	17%	17%
		100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

In terms of sales comparison, the average daily meat sales in August for 12 stores were 66.281 TL. In September it has risen to 70.954 TL, which is 7% more compared to August. Preventing different month effect on sales, September daily meat sales decreased by ratio of 0,89% (real sales was 71.592 TL) because total sales of all stores' meat department rose by 0,89% compared to August.

4. Discussion

In the project, the scheduling approach of meat department in the Company X has been examined. Current workforce management methodology is evaluated in terms of efficiency with the help of twelve-time studies and

seniority workforce distribution during the day. The new approach of having more senior butchers working in the rush hours applied in September for twelve stores. August and September sales data and working hours data has been compared. In the results, senior butchers worked 78% more on rush hours which leveraged the sales by 7%.

The project gave management insights to keep on holding meat departments in stores rather than shifting the operation to only selling process meat products, due to enough customer satisfaction and meat departments can be profitable. The retail sector has so many dependent and independent variables to evaluate the sales results and efficiency. Therefore, although 7% increase cannot only be depending on changing shifts hours and working more with senior butchers in the rush hours, in the end the results still prove that this change has a positive effect on sales results compare to others store, which did not apply the new approach.

The work presented in the article is part of an initial study on the overall workforce management evaluation in the grocery retail company. In the process of a future in-depth research and development of various algorithms for forecasting workforce needs and optimizing the composition and structure of the staff scheduling, benchmarks and analysis will be made, as well as specific proposals for the models for better staff management will be suggested.

For further studies, the new approach could be applied to couple of different grocery retail companies to have a general idea and application for the retail sector. Flexible shifts models (rather than working only 8:30 shifts every day) according to time workforce requirements can be applied in the future studies to maximize the efficiency of workforce management.

References

- Chapodos, N. (2013). Retail Store Scheduling for Profit. *European Journal of Operational Research*, 239(3), 609-624.
- Dun and Bradstreet. (2016). *Grocery Stores and Supermarkets*. Retrieved from: http://www.iclf.ca/DL/PLA_GSM_FR_nov16.pdf. Accessed on 14 December 2019.
- Ernst, A.T. (2004). Staff scheduling and rostering: A review of applications, methods and models. *European Journal of Operational Research*, 153, 3-27.
- Institute of Management Services. (2019). *Time-Study*. Retrieved from: <https://www.ims-productivity.com/page.cfm/content/Time-Study/>. Accessed on 5 December 2019.

- Knomea. (2019). *Urban-population*. Retrieved from:
<https://knoema.com/atlas/Turkey/Urban-population>. Accessed on 10 December 2019.
- Kuruüzüm, O. (1992). *Verimliliği Arttırmada İş Etüdü Teori ve Uygulamaları*. İstanbul. İstanbul Teknik Üniversitesi Yayınları, 31.
- Nolde, C. J. (2013). *Demand Driven Employee Scheduling for the Swiss Market*. Retrieved from:
https://pdfs.semanticscholar.org/1beb/96a10e4a56818b8b56b1506ae6b5927018d7.pdf?_ga=2.129893196.1562458054.1580648076-1761431778.1577212635. Accessed on 7 December 2019.
- Richard, S. (1989). *Work Measurement Principles* Atlanta: Atlanta Publication Co. 2nd Edition, 10.
- USDA. (2019). *Turkey's Advanced Food Sector Provides Opportunities in Spite of Economic Downturn*. Retrieved from:
https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Food%20Processing%20Ingredients_Ankara_Turkey_3-29-2019.pdf. Accessed on 10 December 2019.

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