

Measuring the Relationship between Age and Productivity: A case Study of Orange West Sales Department

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Abstract

The aim of this paper is to focus on measuring the relationship between age and productivity at Orange West Sales Unit. Productivity can be measured through the following factors: target achievement 'volume,' customer satisfaction 'value,' and organization citizen behavior. Data was collected through a questionnaire that was distributed to 40 aged employees at Orange West Sales Unit randomly. However, 33 were returned amongst which 7 were ineligible due to missing information, therefore, 26 legitimate questionnaires ultimately constituted the basis on which this research was conducted.

Statistical Package for Social Sciences (SPSS) and other tools were used to test the hypotheses, and the research was found that there is a relationship between age and productivity when it comes to the volume and there was no relationship with other factors.

Key Words: Productivity, Motivation, Customer Satisfaction, Value, Job Experience, Volume.

Introduction

In a rapidly changing world, businesses are constantly struggling to stay ahead of the competition. Given the current economic conditions, an important part of doing so is generating sales and increasing sales volume. Sales professionals are being challenged more than ever before to perform as businesses and consumers remain hesitant to spend. As the economy slowly recovers, people are slow to take their wallets out again, making selling more difficult. Companies need to maximize their return on investments in attracting and retaining customers, and sales productivity is crucial to their success (Rarely Do, 2006).

Being Part of these economic challenges, Orange West Sales Department productivity depends on too many factors, as the most important one is the factor of the impact of the sales staff age on productivity. Understanding age-productivity profiles are of vital importance. Given that older individuals are less productive, aging working sales representatives can lower the company profit growth.

The Importance of Study

Orange Jordan is facing an issue which is the aging workforce. The work forces in orange sales unit are aging rapidly and the percentage of employees older than 40 years is growing noticeably. Then orange will need to deal with the issues arising from an older workforce eventually. Orange; through its sales management need to prepare itself for these changes and act accordingly. Also, will need to know what is changing in the individual when one age and whether this influences his productivity "Volume & Value."

Understanding the influence of age on sales staff productivity is crucial for the sales management. Negative stereotypes shows that 'older sales people cost more; investing in older workers is not worth the investment; older workers are less able to learn; older workers are less adaptable and flexible; they resist change; and older workers are less motivated.' The above stereotype needs to be proved or disproved and here the importance of the study appears (Posthuma, R. A., & Campion, M. A. 2009).

All that will be clarified after answering the following question:

What are the effects of age on Productivity?

Do the older workers have less organization citizenship?

Are the Older workers less motivated?

Main Hypothesis:

Ho1: There is no relationship at a significant level ($\alpha=0.05$) between age and productivity at Orange West Sales Unit.

Sub- Hypotheses

Ho1-1: There is no relationship at a significant level ($\alpha=0.05$) between age and target achievement 'volume' at Orange West Sales Unit.

Ho2-1: There is no relationship at a significant level ($\alpha=0.05$) between age and achieving customer satisfaction 'value' at Orange West Sales Unit.

Ho3-1: There is no relationship at a significant level ($\alpha=0.05$) between age and organization citizen behavior at Orange West Sales Unit.

Ho4-1: There is no relationship at a significant level ($\alpha=0.05$) between age and gender at Orange West Sales Unit.

Ho5-1: There is no relationship at a significant level ($\alpha=0.05$) between age and motivation at Orange West Sales Unit

Model

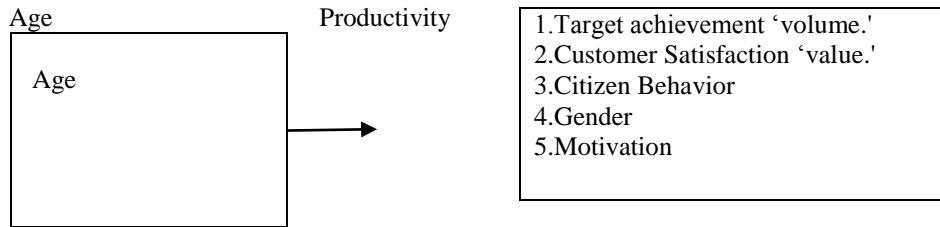


Figure (1) proposed a relationship between Age and Productivity aspects.

Procedural Definitions

Sales Volume Productivity: Sales volume productivity measures the sales unit's volume generated by each sales person on an average.

Sales Value Productivity: it measures the customer satisfaction toward the products and the sales rep way of selling.

Motivation: the psychological feature that arouses a human being to act towards a desired goal; the reason for the action which gives purpose and direction to behavior.

Organization citizenship Behavior: Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in the aggregate promotes the effective functioning of the organization (Organ, D. W. 1988).

Previous Studies

Due to lack of available resources, the researcher was not able to come across many neither previous Arabic studies nor articles directly related to the Age & Productivity, as was the case with English resources. Nevertheless, the following are some of the available sources that were obtained which were related in one way or the other to the subject of the paper.

Skirbekk Vegard (2003), Age and Individual Productivity: A Literature Survey

This article surveys supervisors' ratings, work-sample tests, analyzes of employer employee data sets and other approaches used to estimate how individual productivity varies by age. The causes of productivity variations over the life cycle are addressed with an emphasis on how cognitive abilities affect labor market performance. Individual job performance is found to decrease from around 50 years of age, which contrasts almost life-long increases in wages. Productivity reductions at older ages are particularly strong for work tasks where problem solving, learning and speed are needed, while in jobs where experience and verbal abilities are important, older individuals' maintain a relatively high productivity level. Skirbekk paper has a weakness of not having a proven statistical conclusions or results, and it might not be the reliable or generalizable source.

Wasmer Magorzata (2011), Ageing, Productivity, and Earnings: Econometric and Behavioral Evidence

This research aimed at estimating the actual profile of productivity for different age groups. The originality of this study is twofold. First, the estimated econometric model allows the imperfect substitution between different age groups and skill categories of workers. Up to now, workers belonging to different age groups were always assumed to be perfect substitutes. In order to evaluate labor productivity, we estimate the production function with a nested constant-elasticity-of-substitution (CES) specification in labor. Second, the labor force has been differentiated not only by age (as it is usually done) but also by skills. It allowed us observing the pattern of productivity for the young, mid-age and older workers separately within the low-skilled and the high-skilled category. The major focus of this research is the earning impact on productivity, while the age impact on productivity was not the driver of this study.

Jeanette N. Cleveland (1992) Self- and Supervisory Perspectives on Age & Work Attitudes and Performance

Up to now, little attention has been given to the relative influence of age on self- or other perceptions (e.g., the perception of one older person in a group with five younger people vs. the perception of three older persons in a group with three younger persons). The social-psychological literature demonstrates clearly that the characteristics or perceived characteristics of the situation can have a substantial impact on the influence of personal characteristics (Cleveland et al., 1988; Kanter, 1977; McCain, O'Reilly, & Pfefter, 1983). Furthermore, theories of self-assessment (Fisher, 1989) support the importance of the person's perception of the social environment as a key factor shaping the development of self-perceptions. This research has been conducted from the supervisory point of view which might be most of the time subjective.

Literature Review

How effective is your sales staff? Are they a high performance team, a mediocre performance team or a woefully "underachieving" and blatantly poor performance team? If you have mediocre, underachieving or poor sales people, what are you doing to change that? If your sales staff is not effective, not performing to its potential and is in need of improved performance ten strategic actions to take to change to Improve Sales Staff Productivity.

(Glenn Ebersole 2012.) Suggested the following strategic actions:

Strategic Action 1: Develop and implement a clearly defined and focused strategic marketing and sales plan for your business. Make sure every member of the sales staff is committed to the plan.

Strategic Action 2: Develop and implement an effective program to develop qualified leads for the sales staff.

Strategic Action 3: Develop and implement a system for accountability of the sales staff. Focus on accountability to improve performance.

Strategic Action 4: Recruit and retain a professional business coach to work with the sales staff to facilitate improvements. Coaching your top performers will help yield the fastest and highest results.

Strategic Action #5: Develop a reporting system that will document the results of the sales staff efforts.

Strategic Action 6: Fire the truly poor performing sales people instead of “pretending not to know” that there will not be any real improvement or change in their performance. Get rid of the agony and the pain of poor performers as soon as possible.

Strategic Action 7: Encourage and promote the strategic use of each individual sales person’s time. Provide coaching and mentoring to help each person understand how to use his or her time in a more strategic manner, which will lead to improved productivity and significant improvements in sales.

Strategic Action 8: Develop a strong sales support system to assist the sales people and make strategic use of today’s technology.

Strategic Action 9: Develop a sound sales management system and make sure that managers have the tools to manage the areas of sales responsibility given to them.

Strategic Action 10: Create and foster an environment of self-motivation.

Discussions:

Sales Productivity in Volume Terms:

Sales Volume productivity measures the sales unit’s volume generated by each sales person on an average. This is more of a supporting parameter to help build and manage your sales performance. A shareholder is more concerned about the sales value productivity. Sales volume productivity has to be carefully balanced, as both highs and lows have an undesirable impact.

This KPI measures the performance around sales unit volume (number of pieces or units sold) achieved per sales channel instance (sales executive, sales manager, sales outlet...) period of time.

There is a reason for separating value and volume productivity. One needs to look at both these KPIs to get the bigger picture. The combination of sales value and sales volume productivity gives “average ticket-size” productivity.

Business Objective behind the KPI:

Optimize the sales unit volume productivity, as per the business objective explanation & specification. Sales unit volume productivity KPI is an important component in terms of how an organization manages its business effectiveness. Here is how this KPI ‘could be’ linked to the organization performance:

- A large sales volume means more customers and greater visibility.
- A large sales volume along with lower sales means that we are selling low-ticket items
- A large sales volume along with lower sales means that we could be having low profitability, as every sale has a fixed (or semi-fixed) components like order processing, shipping, etc.
- A low sales volume means that we are focusing on only high-end customers. This could lead to a drying-up of your current target segment.

Therefore a lot depends on what is your strategy, and this defines your expectations out of the KPI.

Sales unit volume productivity KPI is calculated as sales unit volume achieved for all the sales invoice raised to the customer (reflecting as the accounts receivable in the financial books) divided by the total sales force. Here are the areas, which will need clarity within the organization to ensure that we know what we are measuring:

- What constitutes a customer return?
- Do we need to take into account the additional services being offered to get the sale? This increases the sales volume productivity but reduces the margin (sometime over the long term, by which the head of sales has got the promotion and moved on.)
- Do we need to take into account the sales volume productivity surge due to a sales campaign?

Success Factors of sales value productivity KPI Class

- The tenure of the sales person.
- The quality of training
- The quality of leads.
- Operations support.
- Direct sales force VS indirect sales force (direct sales force may give higher ticket-size and thus lower volumes)
- Maximizing the seasonality or a campaign

Research Methodology

Data Collection

The literature data were collected from various available secondary resources that include published articles, books, past studies and website materials. This paper concentrates on the descriptive and analytical approaches in testing its hypotheses in order to determine whether there is a relationship between age and productivity through the aid of the statistical analysis software. In other words, these research approaches set out to describe the field in a comprehensive way.

Research Limitations

The researcher faced a lack of Arabic resources and case studies that tackle the core issue of the research with regards to measuring the impact of age on productivity. Hence, the researcher was obligated to depend on previous studies, articles and case studies of western studies when discussing the theoretical section.

Hypotheses testing & analysis of statistical results

Forty questionnaires were distributed amongst Amman West Sales Unit, 33 were returned amongst which 7 were ineligible due to missing information. Hence, 26 legitimate questionnaires were ultimately the basis on which the research was conducted.

‘Likert’ scale “Strongly disagree- Disagree- Neutral- Agree- Strongly agree” was used to.....

Descriptive Statistical Analysis

This section revolves around analyzing the selected sample’s demographic characteristics. The following statistics were noticed from the analysis:

Table (1)

Gender	Frequency	Percentage
Male	18	65%
Female	8	35%
Total	26	100%

Table (1) Output of frequency analysis of the gender

From table (1), 65% of the sample responses were received by Males as opposed to the 35% from Females. This is an indicator that we still face a cultural barrier when it comes to allowing the females as doing some types of work like the males.

Table (2)

Age	Frequency	Percentage
21-40	20	77%
41-60	6	23%
Total	26	100%

Table (2) Output of frequency analysis of the age variable

From the previous table, we notice that 77% of the respondents were in the age group between (21 – 40) years of age and 23% between (41-60). This gives us an indication that the highest percentage of the sales forces belongs to the first range which means that this type of work is run by old people.

Inferential Statistical Analysis:

Hypothesis 1

Ho: There is no Relationship between age ranges and productivity with its indicator “Target Achievement “Volume “at a significant level (a=0.05) at Orange West Amman Sales Unit.

Table (3)

Target Achievement \ age range 1				
Scale	F Q1	F Q2	total	%
SA	10	10	20	50%
A	7	6	13	33%
N	0	2	2	5%
DA	3	2	5	13%
total	20	20	40	100%

Table (3) Output of frequency analysis of Target achievement variable for age range 1

Table (4)

Target Achievement \ age range 2				
Scale	F Q1	FQ2	total	%
SA	1	2	3	25%
A	1	1	2	17%
N	0	1	1	8%
DA	3	0	3	25%
SDA	1	2	3	25%
total	6	6	12	100%

Table (4) Output of frequency analysis of Target achievement variable for age range 2

From (table 3) & (4), we observe that there is a significant relationship between age and target achievement, as 83% of the sample answered agree & strongly agree from the age range 1, where 42% answered agree & strongly agree from the age range 2. By this; we come to the results in the rejection of the Ho hypothesis and instead accepting the Ha hypothesis which is

Ha: There is a Relationship between age Ranges & productivity with its indicator “Target Achievement “Volume “at a significant level (a=0.05) at orange West Amman Sales Unit.

Hypothesis 2

Ho: There is no Relationship between age ranges & productivity with its indicator “Achieving customer satisfaction “Value” at a significant level (a=0.05) at Orange West Amman Sales Unit.

Table (5)

Achieving customer satisfaction\ age range 1									
Scale	FQ1	FQ2	FQ3	FQ4	FQ5	FQ6	FQ7	total	%
SA	3	8	9	10	7	6	4	47	34%
A	9	8	10	9	8	9	10	63	45%
N	5	4	1	0	5	3	6	24	17%
DA	3	0	0	1	0	2	0	6	4%
total	20	20	20	20	20	20	20	140	100%

Table (5) Output of frequency analysis of achieving customer satisfaction variable for age range 1

Table (6)

Achieving customer satisfaction\ age range 2									
Scale	FQ1	FQ2	FQ3	FQ4	FQ5	FQ6	FQ7	total	%
SA	5	4	4	5	3	5	6	32	76%
A	0				1	0	0	1	2%
N	0	1	2	1	2	0	0	6	14%
DA	1	1	0	0	0	1	0	3	7%
SDA	0	0	0	0	0	0	0	0	0%
total	6	6	6	6	6	6	6	42	100%

Table (6) Output of frequency analysis of achieving customer satisfaction variable for age range

From table (5) & (6), we observe that there is no clear and significant relationship between the age ranges & achieving customer satisfaction as 79% from the age range 1 sample answered agree & strongly agree & 78% from the age range 2 sample answered agree & strongly agree, which results in the acceptance of the Ho hypothesis

Hypothesis 3

Ho: There are no significant differences when it comes to the impact of age on productivity with other non-demographic “Organization citizenship Behavior” at a significant level “a=0.05” at orange West Amman Sales Unit.

Table (7)

OCB\ age range 1						
Scale	FQ1	FQ2	FQ3	FQ4	total	%
SA	9	10	3	2	24	30%
A	1	5	1	3	10	13%
N	4	1	9	0	14	18%
DA	6	4	7	15	32	40%
total	20	20	20	20	80	100%

Table (7) Output of frequency analysis of OCB variable for age range 1

Table (8)

OCB\ age range 2						
Scale	FQ1	FQ2	FQ3	FQ4	total	%
SA	5	3	5	1	14	58%
A		1	0	0	1	4%
N	0	1	0	0	1	4%
DA	1	1	0	5	7	29%
SDA	0	0	1	0	1	4%
total	6	6	6	6	24	100%

Table (8) Output of frequency analysis of OCB variable for age range 2

From table (7) & (8), we observe that there is a significant relationship between age ranges & OCB as 43% from the age range 1 sample answered agree & strongly agree & 62% from the age range 2 sample answered agree & strongly agree which results in the rejection of the Ho hypothesis and instead of accepting the Ha hypothesis which is:

There are significant differences when it comes to the impact of age on productivity with other non-demographic “Organization Citizenship Behavior” at a significant level (a=0.05) at Orange West Amman Sales Unit.

Hypothesis 4

Ho: There are no significant differences when it comes to the impact of age on productivity with other non-demographic factors “Motivation” at a significant level (a=0.05) at Orange West Amman Sales Unit.

Table (9)

Motivation\ age range 1							
Scale	FQ1	FQ2	FQ3	FQ4	FQ5	total	%
SA	9	10	8	6	4	37	37%
A	10	9	8	9	10	46	46%
N	1	1	4	1	5	12	12%
DA	0	0	0	4	1	5	5%
total	20	20	20	20	20	100	100%

Table (9) Output of frequency analysis of Motivation variable for age range 1

Table (10)

Motivation\ age range 2							
Scale	FQ1	FQ2	FQ3	FQ4	FQ5	total	%
SA	0	1	2	1	2	6	20%
A	1	1	0	0	0	2	7%
N	0	0	0	0	0	0	0%
DA	2	2	3	2	4	13	43%
SDA	3	2	1	3	0	9	30%
total	6	6	6	6	6	30	100%

Table (10) Output of frequency analysis of Motivation variable for age range 2

From table (9) & (10), we observe that there is a significant relationship between age ranges & motivation as 83% from the age range 1 sample answered agree & strongly agree & 27 from the age range 2 sample answered agree & strongly agree which results in the rejection of the Ho hypothesis and instead of accepting the Ha hypothesis which is:

Ha: There are significant differences when it comes to the impact of age on productivity with other non-demographic factors “Motivation” at a significant level ($\alpha=0.05$) at Orange West Amman Sales Unit.

Conclusions

As what we have established through the statistical analysis we came to a conclusion that at West Amman Sales Unit the productivity/age classification is right to an extent, but it is not older people are worse than younger people. As what we had noticed when we tested the OCB, we found out that the older people have higher OCB than the younger people. Also when we have tested the achieving customer satisfaction variable, we found out that the older and younger people are having mostly the same results.

When it comes to achieving the target “volume,” we found out that the younger people have better results due to their physical and fresh mentality.

So we can say that to an extent there is a relationship between age and productivity when it comes to the “volume,” however, when it comes to the “value,” there is no clear and significant relationship between age and productivity.

Suggestions for Future Study

This paper describes the relationship between age and productivity as complete and accurate as possible. However, there is room for improvement to cover wider aspect specially if we implement a qualitative research methodology and we observed more aspects.

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