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Human error reduction for cost efficiency improvement in the butchery area of a chicken processing company

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Abstract

It is in the nature of a human to make mistakes. However, it does not necessarily follow for it not to be reduced or eliminated in a system. A company may experience significant monetary losses due to human error due variability of products being produced. This study aims to reduce, if not eliminate, the probability of occurrence of human error in a chicken processing company. Also, the study used a descriptive research design which applied a two-step methodology – the general to specific approach. For the general approach, human reliability assessment tool: Human Error Assessment and Reduction Technique (HEART) was utilized in identifying the area or process in the business where the probability of human error occurrence is highest. Afterwards, the specific approach was done targeting the area with highest error probability occurrence. The study used survey questionnaires and random sampling techniques for this phase. As a result, the area with the highest error probability of occurrence is the butchery or the chopping area. Equipped with the findings from the study, several recommendations have been proposed addressing the concerns regarding human error reduction.

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Keywords: Human error; Human Error Assessment and Reduction Technique; Human reliability assessment; Probability of human error

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1. Introduction

“Not all human errors are necessarily the fault of the person who made the error. In many cases, the error is either force by external circumstances or by obsolete rules.” [1] Human error in organization or business is one of the vital considerations that contribute to operational disruption which could later on lead to loss and/or wastage of resources and profit. This is the reason why the main goal of Human Error Analysis is to minimize human error and maximize system performance. This can be made possible with the aid of Human Reliability Assessment (HRA) techniques and tools under the broad field of Ergonomics such as HEART (Human Error Assessment and Reduction Technique) – which is applied in this study – by the use of qualitative and quantitative methods to assess the human contribution to risk [2].

1.1. Problem statement

The company is experiencing a significant amount of monetary losses due to uneven sizes of the chicken chops they are selling – some of these chops being too small to be sellable. The smaller chops are sold at a lesser price but the larger chops could not be sold at a higher price which results in losses.

If the business continues to do so, they will be incurring a significant amount of monetary loss cumulatively in a year, which jeopardizes their overall efficiency and overall earning potential. Also, inconsistent product quality (uneven size of chicken chops being sold) could lead customers to choose buying from a competitor instead.

A three-month sales report presents the total number of chicken chops versus the out of standard size cuts; and the total sales versus the corresponding discount for the uneven chicken chops sold. The standard price per chicken chop (any part i.e. leg, wing, breast, back, thigh, neck) is 14 Philippine Peso (Php) while the uneven smaller size is sellable at 11 Php or below. This discount reflects as losses from the expected revenues. (see Fig. 1 and 2)

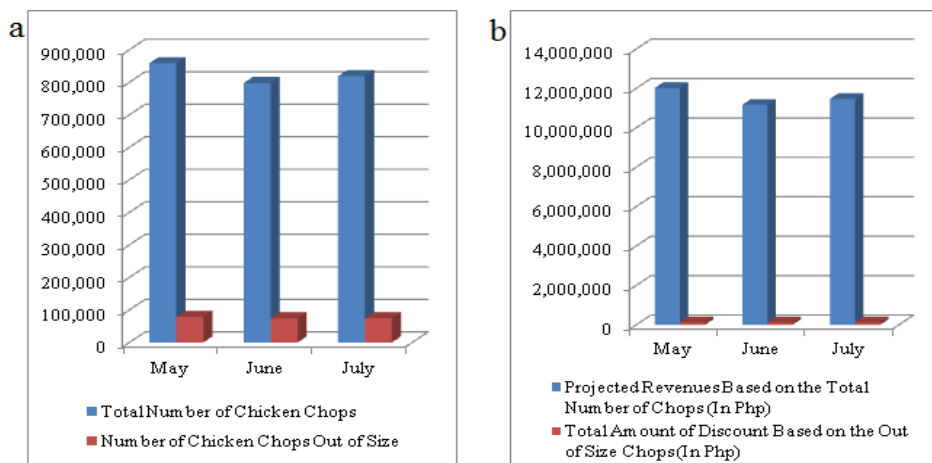


Fig. 1. Three-Month Sales Report: (a) Number of Chicken Chops; (b) Projected Revenues VS. Discount Amount.

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