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From the Editorial Committee

We are giving you the next Vol. 27, No. 1(2022) issue of the Quarterly of the Faculty of Management of the Rzeszow University of Technology entitled “Modern Management Review”.

The primary objective of the Quarterly is to promote publishing of the results of scientific research within economic and social issues in economics, law, finance, management, marketing, logistics, as well as politics, corporate history and social sciences.

Our aim is also to raise the merits and the international position of the Quarterly published by our Faculty. That is why we provided foreign Scientific Council, as well as an international team of Reviewers to increase the value of the scientific publications.

The works placed in this issue include many assumptions and decisions, theoretical solutions as well as research results, analyses, comparisons and reflections of the Authors.

We would like to thank all those who contributed to the issue of the Quarterly and we hope that you will enjoy reading this issue.

With compliments
Editorial Committee

Sahoum ALJAZZAZEN¹
Ayman BALAWI²

RISK AND UNCERTAINTY IN CONSUMER DECISION-MAKING: AN OVERVIEW OF PRINCIPLES AND PERSPECTIVES

Consumers' decision-making power is irrational in everyday life due to risk uncertainty, limited information, perceived cost, and other variables; hence, it is critical to research consumers' decision-making to select the best out of numerous alternatives. This entails selecting a course of action to address a specific problem from among two or more possible alternatives- decision-making processes incorporate elements of uncertainty and risk. Therefore, this article aims to explore the principles, values, and approaches to decision-making risk and uncertainties by analysing recent literature. Decision-making analyses are conducted from a variety of analytical viewpoints. However, Tversky and Kahneman's prospect theory, published in 1979, remains one of the most widely utilised approaches for analysing decision-making under suspicion and ambiguity. Also, personal choices are a problem-solving approach with an emphasis on alternative selection. Ultimately, working on consumer decision-making and aging is critical for a complete knowledge of how customer loyalty and high-quality decision-making may be retained over a person's life.

Keywords: risk, uncertainty, decision making, prospect theory, aging.

1. INTRODUCTION

It is hardly a day without anyone facing problems or situations required to make a decision. Our lives are driven by what we decide; hence, it is also essential to consider how we make decisions to be mindful of how different factors might have affected past decisions; therefore, we can enhance future decisions (Johnson & Busemeyer, 2010). Individuals make decisions in the personal sphere and generally weigh the impacts of those decisions on others, for example, family members (Anam et al., 2021). Individuals often play a vital role in decision-making in companies (e.g., businesses, states, universities) but are typically part of a group-based decision-making method (Leder et al., 2021). How does a person know when they decide whether they are making an appropriate decision? Despite some field-specific expertise, one may be inclined to characterise decision-making as choosing among several alternatives. However, the apparent problems are determining what

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is best or optimal, requiring some criteria to be established, which might change the decision if these criteria change (Kazuhsa, 2021).

Moreover, what the specified goals are? Decision analysis theory includes axiomatic scientific instruments to answer these questions in a formal, repeatable manner. People also make choices in industry and economics. These decisions are sometimes crucial because they involve large sums of money (macro-decisions), and quite often, they simply represent a natural, almost cost-free action (micro-decisions). Meanwhile, microeconomic decision-making is considered by an individual customer while coping with life's normal behaviour, e.g., choosing an apartment or, more generally, choosing staples (Lodziński, 2020).

Furthermore, decision-making processes are still present in our culture (Kurahde & Wankhade, 2016). We make many decisions in our day-to-day life, including purchasing some objects or making an investment for that object. Most are apparent in the way in these decisions, but when there are several possibilities to decide at that time, risk and uncertainty exist what possible situation we should take for the better performance. Today from experience, we know that after the well-deliberated calculations, few people make decisions, regardless of whether the decision is in a work situation or a personal life. We also know that people frequently ignore the conventional rules during decision-making under a risky situation and that they often make decisions by intuition or on a *hunch* that seems right (Kurahde & Wankhade, 2016). Furthermore, People usually have to make decisions under uncertainty, also in circumstances where it is unclear or at least challenging to determine the probability of having a payoff. One approach to this question is to infer the probability of future payoff from the magnitude and thus leverage the inverse relationship between payoffs and probabilities in many environmental domains (Leuker et al., 2018).

Moreover, many researchers are interested in making the *right* decision under particular circumstances, while others are interested in describing a particular course of action; others are interested in learning what to make, while others are interested in understanding why (Johnson & Busemeyer, 2010; Anam et al., 2021). This judgment is rooted in our intuition but often not. Therefore, researchers have been seeking the best model for decision taking in this context over the decades. Sadly, growing forms of confusion are severely impacting our planet. Therefore, finding the optimal option is challenging since decisions are made under uncertainty in many problems (Kurahde & Wankhade, 2016; Leder et al., 2021).

Decision theory is typically partitioned according to how the decision is made under conditions of certainty if we understood that the decision-maker took each action inevitably leads to a particular outcome. Also, the risk is a risk if each action contributes to a series of potential unknown outcomes, but each outcome occurs with a known probability distribution. Uncertainty if each action leads to several potential outcomes, but the possibility of a specific outcome in the decision-maker is unknown (Polman & Wu, 2019). A mixture of risk and uncertainty provided experimental data-the field of statistical inference. Decision-making in certainty does not face any unique problems because each action has a single-valued or known outcome. The decision-maker chooses the action with the most desirable outcome. Under risk and uncertainty, however, decision problems have many potential outcomes correlated with each action. Choosing the course of action that maximises utility requires a set of decision rules consistent with the decision-maker objective (utility) function (Bullock & Logan, 1969).

The paper encompasses the following sections. Section 2 gives an overview of the risk and uncertainty. The following section explains decision-making in general, individual decision-making, and the effect of aging on decision-making by individuals in particular.

In section 4 provides an overview of prospect theory and some areas where we can apply prospect theory. Finally, the last section ends with a summary of the paper.

2. LITERATURE REVIEW

2.1. Risk and uncertainty

Risk has been defined as the likelihood of determining the technique or the alternatives for a better outcome. In several pieces of literature, the *risk* involves two elements; the likelihood of an adverse occurrence happening during a facility's lifetime of operation and the subsequent outcome when there has been a negative case. A scenario in which the decision-maker is unsure of the result, which means that decision-makers are not sure which result will happen, is considered a *risky situation* (Kurahde & Wankhade, 2016; Jedrusik, 2021). Uncertainty has a close connection with risk. The word *uncertainty* stresses that decision-making must be taken based on imperfect project information that does not yet exist physically. Uncertainty describes a condition in which a given occurrence relates either to known or unknown distinct possibilities. Also, uncertain circumstances classify employing *probability conditions* into various subcategories: forecasts, statistical probabilities (referred to experiential decisions), and a priori probabilities (referred to description decisions) (Sproten et al., 2018).

Uncertainty is a state of knowledgeless. There is no consensus on the meaning, terminology, or classification of uncertainty between the various fields. Uncertainties emerge from the random occurrence and three sources of error: *Data Errors* are technical problems; they occur due to mistakes in the calculation, sampling mistakes, and plain human errors. Their uncertainties could be calculated using statistical techniques. By gathering more comprehensive historical data, we were able to cut down the data errors. *Forecasting Errors* are associated with uncertain future events. Due to its dubious economic assessment of the future, the ability to reduce the predictive errors is limited, although the future remains unknowable despite their hard-to-use sophisticated methods. *Model Errors* are the residual error resulting in the disparity between the observed values and the estimate. The model error can occur because of the difficulty of representing the real world correctly in a mathematical model. Economic gain quantifications include the use of predicted traffic velocities and delays, fuel costs, regional income, and time assessment (Sproten et al., 2018).

In specific decision scenarios, one or more events that have many potential outcomes influence the desirability of an option, and the decision-maker may define a distribution of probabilities for those consequences (Jedrusik, 2021). Some scholars refer to this condition as *making decisions at risk*. Although there are several ways of interpreting probabilities, subjective probabilities are widely used in decision analysis to characterise the possibility of an uncertain occurrence. A subjective probability is the degree of belief of a rational subject. Therefore, there are many methods for determining statistical probabilities based on decision-makers or subject-matter experts' beliefs (Herrmann, 2017).

In the absence of certitude, some decision-makers are not considering benefits and losses in equal measure, and some alternatives a risk-neutral decision-maker would ignore. These expectations must, therefore, be modelled in a way that is compatible with this behaviour. Luce and Raiffa (1957) submitted a set of relevant propositions by which the expected utility could explain a comparison of alternatives.

The following is the exponential model, which is one of the prevalent models that depict risk:

$$U(x) = 1 - e^{-xR}$$

Parameter R refers to the risk threshold used to calculate how the decision-maker understands the risk. The aversion to cumulative risk is persistent for a decision-maker with the risk model (Luce & Raiffa, 1957).

2.2. Decision making

Every day we make several different kinds of decisions. What are we going to do tonight? Do we need to take the job offer, or not? Many decision-making theories suggest that all of these decisions can be abstracted and interpreted as the selection of a single course of action X defined by the possible outcome value $\{x_1, x_2, \dots, x_n\}$ which might arise from the selection of the action and the related likelihood that each result would happen if the action were chosen $\{p_1, p_2, \dots, p_n\}$ (Alexander, 2020). This illustration decreases the function of choosing to one of selecting simple random variables from the competition.

Mathematically, the most straightforward rule is then to pick the alternative X, which has the maximum expected value $EV(X)$:

$$"EV(X) = \sum_{i=1}^n P_i X_i"$$

For illustration, for someone who has to decide out of two alternatives: (A) a guaranteed result priced at \$2 million, and (B) an unknown alternative with a \$2 million chance of 85%, a \$6 million chance of 13%, and a 2% risk of nothing. Calculation of estimated value in Equation mentioned above Suggests that the second option should be taken, since $EV(B) = \$2.3 \text{ million} > \$2 \text{ million} = EV(A)$.

The EV rule tends to be fair for regularly played gambles. Nevertheless, it is clear to see that this target may not be so attractive for games with high stakes that are only played once. Many people do not make decisions according to the predicted value rule when the values (x) are set with significant objective amounts (e.g., \$2 million).

Additionally, people do not objectively interpret (monetary) outcomes but instead subjectively. For example, \$100 has a subjective value for someone who has only \$10,000 more than another millionaire Bernoulli³. This is likely because the subjective perception of earning \$5 million instead of \$1 million is not five times more pleasurable than earning \$1 million instead of \$0. Instead, the extra interest imposed on future milestones decreases as wealth grows – an extra \$1 million means more if you are broken than if you already have \$4 million (Johnson & Busemeyer, 2010).

2.3. Individual decision making

Decision-making is correlated with problem-solving, which involves alternate solutions, not just part of the path to their solution. For instance, the determination must be resolved if a student has been offered places on more than one course. The purpose of this problem is generally ambiguous and often a matter of personal choice (Ranyard, 2014). The decision-making role of the person can be taken mainly by reference to two factors under the principle of rational decision: desires and restrictions. The inner motives of people are favoured, and their external rewards are limited as a reaction to external stimuli, the

economic model of behaving attempts to account for behaviour changes (Zaleskiewicz & Traczyk, 2020). The individual values that have matured during socialisation manifest themselves as wishes in the sense of utility. Under this approach, the individual considers the alternatives available for each alternative (e.g., assesses benefits and drawbacks as benefits and costs) and chooses the most desirable alternative, subject to equivalent limitations. Restrictions limit the space for maneuver and, thus, all potential courses of action (Mathis, 2015).

The restrictions that apply to individual behaviour are typically relatively easy to define. Nevertheless, conversely, it is not easy to assess the interests of individuals. Thus, in general, preferences can only be defined indirectly in addition to the direct investigation (all related difficulties) by the evaluation of habits and restrictions on the order of choice of individuals (Zaleskiewicz & Traczyk, 2020). In comparison, preferences are usually more predictable than requirements, which shift somewhat gradually, if anything. Therefore, it is believed that human actions can be affected systematically by changing rewards.

In the same way, robust structural control of desires is believed to be challenging, short-term at least. For instance, by raising the fuel prices, traffic levels can be decreased more efficiently and quicker than by calls to refrain from using a vehicle (Mathis, 2015). The principle of rational choice purposely reduces individuals to a few individual attributes because emphasising essential factors is a central feature of economic modelling while disregarding less relevant issues. Human decision-making processes are an incredibly complex phenomenon that is affected by a vast number of unwieldy variables. In order to be able to deal scientifically with this phenomenon, the ambiguity must be reduced (Zaleskiewicz & Traczyk, 2020). Indeed, the purpose of the economic approach is not to clarify any given person's actual behaviour; these matters must be left to psychologists. Instead, economists are interested in the behaviour of large groups of people, so-called *aggregates*, such as customer or business behaviour (Ulen, Thomas S; Korobin, 2000).

2.4. Decision making and aging

Humans accumulate life experiences and knowledge as we age, which informs our decision-making. However, we are also seeing decreases in working memory and several forms of long-term memory. The mix of gains and losses might cause older adults to adopt new decision-making processes. It may even result in brain changes that assist older persons in compensating for memory deterioration (Frazier et al., 2019; Lighthall, 2019). Older persons handle choices involving memory retrieval using distinct parts of their brains. It's fascinating because their conduct resembles that of younger people, yet their brain activity patterns indicate that their decisions require more prefrontal cortex assistance (Frazier et al., 2019; Lighthall, 2019). Further, studying consumer decision-making and aging is particularly important to promote a deeper understanding of ways to sustain customer loyalty and high quality of decision-making during the lifetime (Carpenter & Yoon, 2011). A significant number of children born after 2000 in western countries will live until the age of 100 years or older, with an improved sharing of their mental health (Vaupel, 2010; Gavrilov & Gavrilova, 2012). Thus, at a higher age, many economic decisions will be made by individuals, and understanding the decision-making of cognitively stable older adults is increasingly relevant. In addition, although older adults usually avoid physical risks, they face changes in medical risk when using the internet or view themselves as less risk-seeking (Karl, 2016; Hanoch et al., 2018).

Many studies state that decision-making under risk decrease with age, Whereas other research showed no change in risk preferences (Henninger et al., 2010; Xia et al., 2017). A variety of theories for this have been established over the years, at first glance, lack of consistency: most importantly, the observed results may reflect variations in the demand for the tasks used concerning executive functions. Specific age-related shifts in value judgments may be another reason. When contrasted with statistical probabilities, older adults are more risk-free than young adults. Nevertheless, the former is less reliant when confronted with the probabilities above: learning from past experiences is essential when dealing with statistical probabilities (Hertwig & Erev, 2009). However, an additional distinction must be made between these tasks: conditions of statistical probabilities can be viewed as initially uncertain and riskier situations when exploring (Rolison et al., 2012). Aging usually results in a gradual decrease in cognitive function. It was evident that age-related declines in work and management begin in the mid-20s and get steeper as people mature in their 70s. In particular, processing speed is measured by how easily one can perform mental operations, such as matching patterns, which consistently decreases with age. Processing speed is also associated with working memory ability, and research also indicates that specific age-related cognitive performance changes are due to reductions in processing speed (Salthouse, 1996).

Research into financial decision-making for older adults has indicated associations between the benefits of experience and the costs of aging on the capacity of older adults to make investment decisions (Korniotis & Kumar, 2009). Results showed that older and more seasoned investors were more likely to use practical *thumb rule* approaches that illustrate the value of investment decision-making experience. However, older grownups could not apply their knowledge and experience to real investment choices, particularly lower socioeconomic status, lesser education, travelling, or minority members (Carpenter & Yoon, 2011; Karl, 2016; Kusev et al., 2017).

Often crucial to successful customer decision-making is which decision approaches are followed across the life cycle. While cognitive deficits may adversely affect decision quality, as illustrated in the financial decision-making context, older adults can choose strategies that enhance their purchase choices (Kusev et al., 2017). The years of experience and the previous know-how acquired by older adults help all of them respond to changes in deliberative and cognitive ability. These judgments should be made by themselves. In particular, it has been shown that old adults can remember items sold in food stores due to their vast knowledge and familiarity with foodstuff shopping contexts. These experiential effects are likely to play a significant role in helping older adults make successful and effective purchasing decisions (Castel, 2005). Besides, Kirmani (2004) showed by in-depth lifetime surveys of adults (i.e., ages 18–74) that older adults self-reported a wider variety of methods to cope with attempts at persuasion relative to younger adults. It was viewed as a result of older adults becoming more open to ads, and therefore hearing persuasive messages. These results indicate that the familiarity of older adults with attempts at persuasion may potentially make them somewhat immune to complicated appeals (Kirmani, 2004).

3. METHODOLOGY

The systematic review (SR) technique was used to identify and analyze data. To find relevant publications, we used the EBSCO discovery of science database. Among the

databases, the emphasis was given to *academic search complete*, *business source premium* & *science direct*. The search topics used for searching include *Risk and Uncertainty* and *Consumer Decision-Making*. The total records of search results observed from databases were narrowed down using the limiters such as years *from 2000-2021*. Also, the course or discipline option includes only economics, management, and business. The *'relevance of the topic* and the time of publication *'latest'* are applied in the selection process. Out of the total search queries result, 314, over forty articles are synthesised after imposing adequate limiters, removing duplicates, and none -business settings.

4. PROSPECT THEORY AND ITS APPLICATIONS

Tversky and Kahneman, in 1979, developed the prospect theory to describe risk choice theoretically. Prospect theory differs in many ways from expected utility theory. Decision-makers determine the value of total wealth in expected utility theory. Through prospect theory, utilities (called values) are related to shifts through resources relative to the status quo. Losses have a more significant effect than gains of equal size, a phenomenon known as loss aversion (Tversky & Kahneman, 1979).

Prospect Theory notes that risk-taking decisions are made based on a reference point. A reference point is a decision-maker conceptual construct used to analyse situations or opportunities for decision-making. Suppose the anticipated outcome of a decision is above the reference point of a decision-maker. In that case, it is called favourable because the person is said to be in a benefit frame and acts in a risk-averse manner by selecting or preferring a smaller but more positive payoff instead of a less defined but potentially higher positive payoff. On the other hand, when the expected outcome of a decision is below a decision-makers reference point, it is called unfavorable because an individual is defined as in a loss sense and is acting risk-based by choosing or preferring a more significant but less definite negative payoff, rather than choosing or preferring a lesser payoff. This goes against the logical idea of economic utility, which states that a greater expected benefit is preferred to a lower expected benefit and that a lower expected loss is preferred to a higher expected loss. In the minds of individuals, gain and loss frames are generated by interpreting information relevant to the decision or the reward rather than any ex-ante worldview. In response to the information provided, the risk preference is also produced. Such frameworks and references most often reflect a person's or a particular view of the world, generated by personal perceptions or personal balance. (Long & Nasiry, 2015).

Prospect theory incorporated four essential facets of cognitive science to reflect a more human-centred view of decision-making (Tversky & Kahneman, 1979). First, a particular *editing* stage is introduced in which the decision-making issue is being prepared, such as elimination of explicitly lower choices and simplification and cognitive ordering. Secondly, the concept of reference dependency was developed where outcomes are not entirely calculated but linked to specific parameters, including one's overall wealth or status quo. Second, it stated that outcomes could be viewed differently depending on whether the status quo was perceived as gains or losses. This implies that $UG(x)$ gains and $UL(x)$ losses have different utility functions. Fourthly, in particular, the principle of loss aversion was implemented that losses were more likely to receive a marginal benefit of continuously improving (a loss of 100\$ is much more aversive than a gain of 100). Formally defining these assumptions with the following equations may be expressed (Figure 1): $UG(x) = f(x-s)$ for $X - S > 0$ and $UL(x) = -\mu f(s-x)$ for $X - S < 0$ in which S is a quo, while f

is concave with gains, convex with losses and steeper with loss (α is a parameter for modelling the degree of loss aversion).

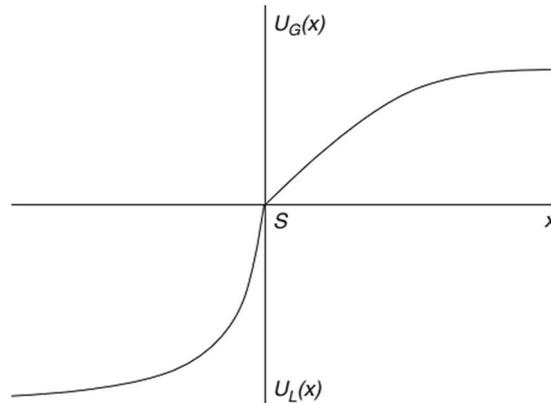


Figure 1. The Prospect Theory Value Function

Source: (Author's creation, 2021).

For the multiplier attached to each ranking, Kahneman & Tversky introduced the term weight of the decision. While decision weight was taken based on the objective probabilities, this principle was clearly distinguished from a purely probabilistic assessment. They also suggested a strictly convex shape for π , indicating that small odds and high-probability underweighting are overweight; a revised form suggests concavity with small odds shown in Figure 2 (Tversky & Kahneman, 1992).

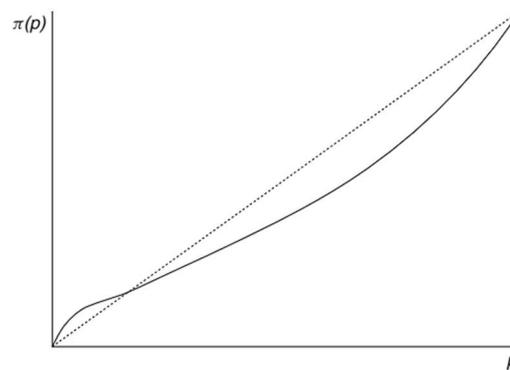


Figure 2. The Probability Weighting Function

Source: (Author's creation, 2021).

Prospect theory introduced a vital definition of decision weights, but this, in effect, poses the question of how psychologically individual weights are measured. Tversky and Kahneman (1979) applied the weighting theory of probability, translated as principles like prejudice and appeal, or affective ideas, such as elation and deceit. Computational

weighting models describe how individual weights are extracted from memory-based measures or differential concentration and *residence* in real outcomes or events (Dougherty et al., 1999). The extension of Fox and Tversky's (1998) support theory to decision making explains how individuals may estimate probabilities in situations of uncertainty that can then be used to extract weights for decision making. Support theory differentiates between diverse representations of events as the bearers of opinion (rather than the factual events themselves) and focuses on help for a focus or relevant interpretation compared to other potential explanations. This is a critical theory to apply under-risk decisions (known event probabilities) to uncertainty conditions (unknown event probabilities) (Johnson & Busemeyer, 2010).

4.1. Prospect theory applications

Prospect theory is, above all, a paradigm of decision-making under risk. Financing and insurance are among the clearest examples of Prospect theory applications in which risk perceptions are critical. Therefore, the following two subsections address attempts to incorporate prospect theory into these two areas (Quinn & Cockburn, 2018).

Finance is the economic field where prospect theory has been most widely applied. In finance, prospect theory applies to three main situations: average returns cross-section, a stock market aggregate, and a time-long estimation of financial assets. The Capital Asset Pricing Model (CAPM) is the best-known securities and average returns paradigm. This model, usually derived from the assumption that investors find the risk based on the anticipated value, says securities with higher *betas* and more returns than the overall market income. Over the past five years, substantial empirical support has been given to the implications of prospect theory for the cross-section of mean returns. First, several papers have verified the simple prediction that more positively skewed stocks would have lower average returns, using a range of techniques to calculate skewness. Second, several publications argued that the skewed projection hypothesis would shed light on specific empirical patterns. For instance, a well-established trend is that the long-term average return of stocks that carry out an initial public bid is less than the long-term return of a control group of stocks -stocks of companies that are similar but have not made an offering- to the issuing companies. However, one attractive characteristic of initial stock sales is incredibly optimistic: most of these stocks are not very good, but some are doing exceptionally well, such as Google and Microsoft. Therefore, prospect theory implies that offering inventories would have lower average returns (Barberis, 2013).

Insurance is another field in which perceptions of risk play a key role. It is also an excellent field for the use of the theory of prospects. Property and liability insurance, death insurance, and life insurance are the most relevant markets for personal insurance. So far, prospects have been used to demonstrate the first two of these three fields. (Barberis, 2013). Life, house, car, and health- citizens are barred daily by attempts to buy insurance to cover some form of unknown risk. Besides, protection against injuries from disease or car accidents by statute or by the state is in many political jurisdictions. However, most people do not understand how insurance can be valued; they do not understand risk management. They will not buy car insurance, thinking there is an outstanding risk of getting in an accident (Elliott, 1998). Barseghyan et al. (2013) evaluated and estimated the model using a systemic model's home and automobile insurance options. They also consider evidence that decisions by households play a role in assessing probabilities. In fact, their numbers suggest that the situation in the world in which a household files a claim is dramatically

overweight when choosing a scheme. It may be because this overestimates the probability of filing a claim; or because inflated judgment powers relate to tail outcomes, as in the estimation of probabilities.

Hu and Scott (2007) say that the principle of expectations is a way of understanding the ambiguous existence of annuity. In their opinion, the pension is a risky gamble, and the income is unknown until the pension is retired, less the sum charged initially for the annuity, which is the present figure for pre-death rental payment received. Besides, if anyone buys an annuity at age 65 and dies at age 66, this is a substantial loss: he paid a lot for this pension, but he did not earn any returns. On the other hand, this person provides a high *gain* up to 90 years of age because much more has been received than initially paid by the pension. Hu and Scott demonstrate that it would not be desirable if the annuity were treated as a game in this way and calculated according to the principle of perspective. Loss aversion has the most considerable role: retirement is not appealing simply because the person is more likely to benefit from possible retirement loss if the employee dies or lives a long time. However, probability weighting also matters: while the chance of dying very early and thus of substantial annuity loss is low, the weighting of probabilities ensures that in the mind of the decision-maker, this unpredictable event is necessary (Gottlieb, 2012).

5. CONCLUSION

A person's perceptions serve as the first point of entry for information received from the outside world. This paper attempts to demonstrate the decision-making under risk and uncertainty by emphasising individual decision-making. The crucial points found from the analysis are as follows. First, the words *risk* and *uncertainty* underline that decision-making must be taken based on incomplete knowledge, and the decision-maker is unaware of the outcome. Therefore, decisions should be taken after a thorough examination to prevent risky situational conditions. Additionally, we can assume that the decision-making conduct of older adults varies significantly from that of younger adults. They act in uncertain situations as young adults should do, so they are less averse to uncertainty in ambiguous circumstances. Besides, older adults are a rising part of the population, working to a higher age and making financial decisions at a higher age.

Moreover, the consideration of age difference in decision-making improves the general well-being of the older population. Finance and insurance are the fields of the economy in which prospect theory is most used. Prospect theory was developed as a model of risk-taking decision-making; therefore, it can better match situations where risk attitudes play a crucial role.

Lastly, the application of prospect theory to the study of consumer behavior has to be further studied, because prospect theory is able to explain customers' illogical behavior when posed with the decision to buy a product. Furthermore, companies can improve product innovation by better knowing consumer referral points. Also, the challenge for marketing researchers is to better understand customers more holistically.

REFERENCES

- Alexander, A. (2020). *Decision making in uncertain times* (A. Smet, L. Weiss, Eds.). McKinsey. Access on the internet: <https://www.mckinsey.com/business-functions/people-and-organizational-performance/our-insights/decision-making-in-uncertain-times>.

- Anam, R. K., Munir, M., Hadi, P. H. (2021). *Online shopping behavior in the perspective of martin heidegger's technological philosophy*. "Modern Management Review", 26(3). DOI: 10.7862/rz.2021.mmr.14.
- Barberis, N. (2012). *Thirty years of prospect theory in economics: A Review and Assessment*. "SSRN Electronic Journal", 4(2). DOI: 10.2139/ssrn.2177288.
- Bullock, J. B., Logan, S. (1969). *A Model for Decision Making Under Uncertainty*. "Agricultural Economics Research", 21(4).
- Carpenter, S. M., Yoon, C. (2011). *Aging and consumer decision making*. "Annals of the New York Academy of Sciences", 1235(1). DOI: 10.1111/j.1749-6632.2011.06390.x.
- Castel, A. D. (2005). *Memory for grocery prices in younger and older adults: The role of schematic support*. "Psychology and Aging", 20(4). DOI: 10.1037/0882-7974.20.4.718.
- Dougherty, M. R. P., Gettys, C. F., Ogden, E. E. (1999). *MINERVA-DM: A memory processes model for judgments of likelihood*. "Psychological Review", 106(1). DOI: 10.1037/0033-295x.106.1.180.
- Elliott, S. R. (1998). *Experiments in decision-making under risk and uncertainty: thinking outside the box*. "Managerial and Decision Economics", 19(4-5). DOI: 10.1002/(sici)1099-1468(199806/08)19:4.
- Frazier, I., Lighthall, N. R., Horta, M., Perez, E., Ebner, N. C. (2019). *CISDA: Changes in Integration for Social Decisions in Aging*. "WIREs Cognitive Science", 10(3). DOI: 10.1002/wcs.1490.
- Gavrilov, L. A., Gavrilova, N. S. (2012). *Biodemography of Exceptional Longevity: Early-Life and Mid-Life Predictors of Human Longevity*. "Biodemography and Social Biology", 58(1). DOI: 10.1080/19485565.2012.666121.
- Gottlieb, D. (2012). *Prospect theory, life insurance, and annuities*. "The Wharton School Research", 44.
- Gottlieb, D., Azevedo, E. M. (2012). *Risk-neutral firms can extract unbounded profits from consumers with prospect theory preferences*. "Journal of Economic Theory", 147(3). DOI: 10.1016/j.jet.2012.01.002.
- Hanoch, Y., Rolison, J. J., Freund, A. M. (2016). *Does Medical Risk Perception and Risk-Taking Change with Age?* "Risk Analysis", 38(5). DOI:10.1111/risa.12692.
- Henninger, D. E., Madden, D. J., Huettel, S. A. (2010). *Processing speed and memory mediate age-related differences in decision making*. "Psychology and Aging", 25(2). DOI:10.1037/a0019096.
- Herrmann, J. W. (2017). *Rational Decision Making*. "Wiley StatsRef: Statistics Reference Online". DOI: 10.1002/9781118445112.stat07928.
- Hertwig, R., & Erev, I. (2009). *The description – experience gap in risky choice*. "Trends in Cognitive Sciences", 13(12). DOI: 10.1016/j.tics.2009.09.004.
- Jedrusik, A. (2021). *Project risk management based on a set of best practices*. "Modern Management Review", 26(3). DOI: 10.7862/rz.2021.mmr.19.
- Johnson, J. G., Busemeyer, J. R. (2010). *Decision making under risk and uncertainty*. "Wiley Interdisciplinary Reviews: Cognitive Science", 1(5). DOI: 10.1002/wcs.76.
- Kahneman, D., Tversky, A. (1979). *Prospect Theory: An Analysis of Decision under Risk*. "Econometrica", 47(2). DOI: 10.2307/1914185.
- Karl, M. (2016). *Risk and Uncertainty in Travel Decision-Making: Tourist and Destination Perspective*. "Journal of Travel Research", 57(1). DOI: 10.1177/0047287516678337.

- Kazuhisa, T. (2021). *Escaping from bad decisions: a behavioral decision-theoretic perspective*. Academic Press.
- Kirman, A., Campbell, Margaret C. (2004). *Goal Seeker and Persuasion Sentry: How Consumer Targets Respond to Interpersonal Marketing Persuasion*. "Journal of Consumer Research", 31(3). DOI: 10.1086/425092.
- Komiotis, G. M., Kumar, A. (2011). *Do Older Investors Make Better Investment Decisions?* "Review of Economics and Statistics", 93(1). DOI: 10.1162/rest_a_00053.
- Korobkin, R. B., Ulen, T. S. (2000). *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*. "SSRN Electronic Journal", 88(4). DOI: 10.2139/ssrn.229937.
- Kurhade, M., Wankhade, R. (2016). *An Overview on Decision Making Under Risk and Uncertainty*. "International Journal of Science and Research (IJSR)", 5(4). DOI: 10.21275/v5i4.nov162585.
- Kusev, P., Purser, H., Heilman, R., Cooke, A. J., Schaik, V., Baranova, V., Martin, R., Ayton, P. (2017). *Understanding risky behavior: The influence of cognitive, emotional and hormonal factors on decision-making under risk*. "Frontiers in Psychology", 8(2). DOI: 10.3389/fpsyg.2017.00102.
- Leder, J., Lauer, T., Schütz, A., Gürer, Ö. (2021). *Background Uncertainty Can Increase Risk Aversion in Decision Making*. "PsyArXiv", 2. DOI: 10.31234/osf.io/6s4vf.
- Leuker, C., Pachur, T., Hertwig, R., Pleskac, T. J. (2018). *Exploiting risk – reward structures in decision making under uncertainty*. "Cognition", 175(2). DOI: 10.1016/j.cognition.2018.02.019.
- Lighthall, N. R. (2019). *Neural mechanisms of decision-making in aging*. "WIREs Cognitive Science", 11(1). DOI: 10.1002/wcs.1519.
- Łodziński, A. (2020). *Support of decision-making under risk by a risk-averse decision-maker*. "Decision Making in Manufacturing and Services", 13(1). DOI: 10.7494/dmms.2019.13.1-2.3473.
- Long, X., Nasiry, J. (2015). *Prospect Theory Explains Newsvendor Behavior: The Role of Reference Points*. "Management Science", 61(12). DOI: 10.1287/mnsc.2014.2050.
- Luce, R. D., Raiffa, H. (1957). *Games and decision*. New York: John Wiley & Sons, Inc.
- Mathis, K. (2015) 'European perspectives on behavioural law and economics' [In:] *European Perspectives on Behavioural Law and Economics*. Switzerland: Springer International Publishing. DOI: 10.1007/978-3-319-11635-8.
- Polman, E., Wu, K. (2019). *Decision making for others involving risk: A review and meta-analysis*. "Journal of Economic Psychology". DOI: 10.1016/j.joep.2019.06.007.
- Quinn, P., Cockburn, A. (2018). *Loss Aversion and Preferences in Interaction*. "Human-Computer Interaction, Taylor & Francis", 35(2). DOI: 10.1080/07370024.2018.1433040.
- Ranyard, R. (2014). *Decision Making Strategies*. "Wiley StatsRef: Statistics Reference Online". DOI: 10.1002/9781118445112.stat06715.
- Rolison, J. J., Hanoch, Y., Wood, S. (2012). *Risky decision making in younger and older adults: The role of learning*. "Psychology and Aging", 27(1). DOI: 10.1037/a0024689.
- Salthouse, T. A. (1996). *The processing-speed theory of adult age differences in cognition*. *Psychological Review*, 103(3). DOI: 10.1037/0033-295x.103.3.403.
- Sproten, A. N., Diener, C., Fiebach, C. J., Schwieren, C. (2018). *Decision making and age: Factors influencing decision making under uncertainty*. "Journal of Behavioral and Experimental Economics", 76. DOI: 10.1016/j.socec.2018.07.002.

- Tversky, A., Kahneman, D. (1979). *Prospect Theory: An Analysis of Decision under Risk*. "Econometrica", 47(2). DOI: 10.2307/1914185.
- Tversky, A., Kahneman, D. (1992). *Advances in prospect theory: Cumulative representation of uncertainty*. "Journal of Risk and Uncertainty", 5(4). DOI: 10.1007/bf00122574.
- Ulen, T.S., Korobkin, R.B. (2000). *Law and Behavioral Science: Removing the Rationality Assumption from Law and Economics*. "SSRN Electronic Journal", 88(4). DOI: 10.2139/ssrn.229937.
- Vaupel, J. W. (2010). *Biodemography of human ageing*. "Nature", 464(7288). DOI: 10.1038/nature08984.
- Xia, Y., Xiong, Z., Dong, X., Lu, H. (2017). *Risk Assessment and Decision-Making under Uncertainty in Tunnel and Underground Engineering*. "Entropy", 19(10). DOI: 10.3390/e19100549.
- Yoe, C. E. (2019). *Principles of risk analysis: decision making under uncertainty*. Crc Press, Taylor and Francis.
- Zaleskiewicz, T., Traczyk, J. (2020). *Emotions and Financial Decision Making*. "Psychological Perspectives on Financial Decision Making". New York: Springer. DOI: 10.1007/978-3-030-45500-2_6.

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PROTECTION OF CYBERSPACE IN POLAND AND THE CZECH REPUBLIC – THE ROLE OF SECRET SERVICES

Secret services are the key elements in the field of cyber security in Poland. Two of the national CSIRTs (Computer Security Incident Response Teams), i.e. CSIRT GOV and CSIRT MON are run by the following services: the Internal Security Agency and Military Counterintelligence Service. In the Czech Republic, CSIRTs/CERTs at the national level are operated by civilian entities and coordination in the event of a threat is the responsibility of the civilian National Cyber and Information Security Agency (NUKIB). The Polish Act on the National Cyber Security System does not provide for parliamentary control of the activities of national CSIRTs. In the Czech Republic, a special standing committee was established to control the activities of NUKIB. Fundamental differences in the structure of the cyberspace protection system in Poland and the Czech Republic may result from the adoption of different priorities in terms of values by political actors.

Keywords: cyber security, CERT/CSIRT, secret services, Internal Security Agency, Czech National Cyber and Information Security Agency.

1. INTRODUCTION

Back in 1991, the Federal Assembly of Czechoslovakia adopted Act No. 23/1991 introducing the Charter of Fundamental Rights and Freedoms as a kind of common constitution of the federation. This document was created, among others, on the basis of the Universal Declaration of Human Rights (1948), the International Covenant on Economic, Social and Cultural Rights (1966), the European Convention for the Protection of Human Rights and Fundamental Freedoms (1950), and the European Social Charter. The provisions of the Charter are based on the principle of the democratic state of law, which allows the state authorities to interfere with civil liberties only within the limits of the law. After the breakup of the federation, the Charter was adopted by the Czech National Council as the second most valid act after the Constitution of the Czech Republic. “The constitution in the narrower sense of the word and the Charter of Fundamental Rights and Freedoms as a catalog of fundamental rights and freedoms – they form the core of the constitutional order of the Czech Republic” (Vodicka, Cadaba, 2011).

In 1994, when the Czechs were creating their secret services, they very clearly separated the intelligence services from the police services. Czech special services do not have investigative powers. By situating the national cyber security system within the political

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system of the republic, Czech politicians placed it outside the secret services in a civilian office established for this purpose and controlled by the parliament.

Within the Polish political system, the processes of developing secret services were different and ultimately led to a continuous increase in their powers. It can be argued that the actors of the Czech political system implement the principles of the democratic state of law or liberal democracy in practice, even with regard to such a sensitive issue in the modern world as the protection of cyberspace. It seems that the model adopted in this respect in Poland goes in a completely different direction.

The aim of the research presented in this article was to compare the systemic and political positioning of cyber security protection in the political systems of Poland and the Czech Republic in the context of the role of secret services, relations between entities performing tasks in this area and the executive and legislative authorities, and the protection of civil rights and freedoms. The analysis used comparative studies “in which at least two cases are examined in at least one aspect” (Karpinski, 2006) and “in which data from more than one culture are compared. [with] data collected in more than one country or state” (Nowak, 2007) as the basic research method and system analysis. The cyber security protection system was treated as a subsystem of the political system of a given country.

2. SECRET SERVICES IN THE CYBER SECURITY SYSTEM IN POLAND – THE INTERNAL SECURITY AGENCY AND THE MILITARY COUNTERINTELLIGENCE SERVICE

In Poland, to manage risk at the national level, implement tasks to counteract cyber threats of a cross-sectional and cross-border nature, handle reported incidents, in accordance with Art. 26 of the Act on the National Cyber Security System (The Act, 2018), which constitutes an implementation of Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union (the so-called NIS Directive), three national Computer Security Incident Response Teams (CSIRTs) have been established: CSIRT MON, CSIRRT NASK, and CSIRT GOV.

CSIRT GOV is run by the Head of the Internal Security Agency (ABW). Leading the CSIRT GOV team is not the only task of the Internal Security Agency in the field of cyber security. The provisions applying to cyber security are those of Art. 5 Paragraph 2a of the Act on the ABW and AW (Foreign Intelligence Agency), which stipulates that the tasks of the Internal Security Agency include

identification, prevention, and detection of threats to security, significant from the point of view of the continuity of the functioning of the state’s ICT systems of public administration bodies or the system of ICT networks covered by the uniform list of objects, installations, devices, and services included in the critical infrastructure, as well as ICT systems of the owners and holders of objects, installations or devices of the critical infrastructure referred to in Art. 5b Paragraph 7 point 1 of the Act of 26 April 2007 on crisis management (Journal of Laws of 2018, Items 1401 and 1560) (The Act on the Internal Security Agency and Foreign Intelligence Agency, 2002).

In turn, via the Act on the National Cyber Security System, Art. 32aa was introduced to the Act on ABW and AW, on the basis of which an early warning system was created in

public administration entities and those included in the critical infrastructure in order to prevent terrorist attacks (The Act on the National Cyber Security System, 2018). This article gives the ABW the right to conduct “security assessments” in the abovementioned entities. They are to be conducted in accordance with a set plan, but also on an ad hoc basis. The manner in which these activities are carried out by the ABW is indicated in Paragraphs 4 and 8 of art. 32a:

4. The security assessment consists in carrying out security tests of the ICT system in order to identify vulnerabilities, understood as weaknesses of the resource or security of the ICT system which may be exploited by a threat, affecting the integrity, confidentiality, accountability, and availability of this system (The Act on the ABW and AW, art. 32a paragraph 4.)

Until 2019, CSIRT MON was operated exclusively by the Military Counterintelligence Service (SKW) (The official site of the Ministry of National Defense, 2018). This situation changed in 2020, when, on the basis of Decision No. 58/MON of the Minister of National Defense, Maciej Materka, the Head of the Military Counterintelligence Service, became the new Plenipotentiary of the Minister of National Defense for cyberspace security. The competencies of the new Plenipotentiary included the performance of the tasks referred to in Art. 51 of the Act of 5 July 2018 on the National Cyber Security System, as well as the coordination of cooperation with the National Cyberspace Security Center (NCBC), whose designated sections have been the core of the CSIRT MON and the SKW since 2020. Currently, it is these two institutions from the structures of the Ministry of National Defense (MON), with appropriate expert resources, that jointly carry out tasks in the field of combating threats and ensuring security in cyberspace (The official site of CSIRT MON, 2020).

3. SECRET SERVICES IN THE CYBER SECURITY SYSTEM IN THE CZECH REPUBLIC

The Cyber Security Act in the Czech Republic (Zákon č. 181/2014 Sb., o kybernetické bezpečnosti) was adopted on 29 August 2014 and entered into force on 1 January 2015. In the Czech Republic, completely different legal and organizational solutions have been adopted than in Poland. The Computer Emergency Response Teams (CERTs) listed in the Czech Cyber Security Act, which operate at the national level, were not established on the basis of the structures of special services, but are completely civil structures, which however does not mean that special services are excluded from this system. The national cyber security system in the Czech Republic consists of:

3.1. The governmental CERT unit of the Czech Republic – National Cyber and Information Security Agency (Národní úřad pro kybernetickou a informační bezpečnost – NÚKIB)

Since 2017, the National Cyber and Information Security Agency (Národní úřad pro kybernetickou a informační bezpečnost – NÚKIB) has been responsible for cyber security issues in the Czech Republic. Until 2017, tasks in the field of cyber security were performed by the National Cyber Security Center (Národní centrum kybernetické bezpečnosti – NCKB), which was established pursuant to the Resolution of the Council of Ministers No.

781 of 19 October 2011 (Usnesení vlády č. 781 ze dne 19.10.2011). The Agency (NÚKIB) was established on 1 August 2017 on the basis of Act No. 205/2017 on Cyber Security (Zákon č. 205/2017 Sb.), which amended Act No. 181/2014 (Zákon č. 181/2014 Sb.). NÚKIB is currently the central administrative body for cyber security, including the protection of classified information in IT and ICT systems and in the field of cryptographic protection. NÚKIB constitutes the governmental computer security incident response team (CERT) of the Czech Republic and cooperates with foreign CERTs and CSIRTs as part of its activities.

Meanwhile, the national CERT in the Czech Republic is operated by the CZ.NIC Association. This organization operates under an agreement concluded with the National Cyber and Information Security Agency (NÚKIB). The association is also responsible for leading the national CSIRT.CZ incident response team. The association consists of legal entities that are Internet providers in the Czech Republic. The association has been operating since 1998 and currently has 116 members. The main tasks of the association include keeping a register of domains registered under the CZ domain, securing the functioning of the CZ domain at the highest level, and conducting training and educational activities (The official site of the Nic.cz Association, Registr domén CZ).

The director of NÚKIB participates in the meetings of the National Security Council (BRS) and is a member of the Cyber Security Committee, which is the BRS's permanent working body for coordinating, planning, and ensuring cyber security of the Czech Republic. Since 2016, the Czech Republic has maintained in its diplomatic representations in the USA and Israel the so-called cyber attaches, diplomats with the rank of counselors, whose task is to establish direct contacts in the field of cyber security with state and private entities in these countries (Zpráva o činnosti Národního bezpečnostního úřadu, 2016).

3.2. Security Information Service (Bezpečnostní informační služba – BIS)

As part of its activities, BIS deals with threats to the security of the Czech Republic's communication infrastructure in the field of cyber security. The tasks of BIS include, for example, investigating various types of electronic attacks aimed at objects of the critical infrastructure, places where classified information is stored, etc. The service collects and analyzes all information regarding real and potential threats and risks related to the use of strategic information in communication systems, the destruction of or the breach in which could seriously affect the security and economic interests of the republic. It concerns computer systems of offices, public administration institutions, and other legal entities that are classified as critical infrastructure. Due to its activities, BIS checks various types of Internet forums where illegal transactions of selling sensitive data take place, or which may serve as contact points or ordering services related to an illegal activity consisting in conducting attacks or obtaining classified information.

The service does not deal with proceedings in the field of industrial security or tasks related to the security of ICT systems (The official site of the Security Information Service, Bezpečnostní informační služba).

3.3. Office for Foreign Relations and Information (Úřad pro zahraniční styky a informace – UZSI)

Czech civil intelligence – the Office for Foreign Relations and Information, which formally functions within the Czech Ministry of the Interior, conducts analytical activities in the field of cyber security.

4. ACTIVITIES WITHIN THE MILITARY SPHERE IN THE FIELD OF CYBER DEFENSE OF THE CZECH REPUBLIC AND POLAND

The Cyber Defense Strategy of the Czech Republic for the years 2018–2022 constitutes a separate document. The difference between cyber defense and cyber security is explained in the introduction to the strategy. According to this stance, ensuring cyber defense should be understood in the context of the comprehensive concept of state defense described in the Act on Ensuring the Defense of the Republic (Zákon o zajišťování obrany České republiky), which regulates all necessary activities aimed at ensuring sovereignty, territorial integrity, the principles of democracy and rule of law, and protection of citizens' lives and property against external aggression (Zákon č. 222/1999 Sb., Zákon o zajišťování obrany České republiky). Contrary to defense, cyber security is understood as a set of measures and activities aimed at protecting the state's cyberspace. These measures may be of legal, organizational, training, or technical nature, etc. The purpose of applying particular measures is to ensure confidentiality, integrity, and availability of information and data in the state's cyberspace.

The strategy is divided into an open and a secret part. The open part presents the basic vision and specific goals, the implementation of which is to significantly increase the defense potential of the republic. The applied measures are, in the assumption of the authors, to take into account the fact that one of the fundamental protected goods is the preservation and defense of fundamental rights and freedoms. The proposed defense measures were designed in line with the principles of proportionality so that the Czech Republic would remain a democratic and safe state (The official site of the Czech Army, Strategie kybernetické obrany ČR).

In accordance with the decision of the government of the Czech Republic of 2015, cyber defense was entrusted to the Military Intelligence (Vojenské zpravodajství). This service is the only Czech military intelligence service within which military intelligence and counterintelligence operate. The National Cybernetic Operations Center (Národní centrum kybernetických operací – NCKO) was established within the structure of this service. Meanwhile, within the Czech armed forces, cyber defense is handled by the Cybernetic Forces and Information Operations Headquarters (Velitelství kybernetických sil a informačních operací). Both of these institutions closely cooperate.

In Poland, the basic document in the field of cyber security which remained in force until 2019, i.e. the National Framework of Cyber Security Policy of the Republic of Poland for the years 2017–2022 for Specific Objective 2 – Strengthening the ability to counteract cyber threats, referred to military activities in cyberspace as follows:

The Polish Armed Forces, as basic element of the state defense system, must operate in cyberspace as effectively as in the air, on land and at sea. The ability to conduct a full range of military activities in cyberspace must therefore include: identification of threats, protection and defense of ICT systems, and combating sources of threats (<https://www.gov.pl>, The National Framework of Cyber Security Policy of the Republic of Poland for the years 2017–2022).

In February 2019, a plenipotentiary of the Ministry of National Defense for the establishment of cyberspace defense troops was appointed. Until the establishment of these troops, cyber defense is to be handled by the National Cyberspace Security Center. The unit

was created as a result of the merger of two institutions responsible for ICT security in the army – the National Center for Cryptology and the Information Technology Inspectorate. The tasks of the National Cyberspace Security Center include, inter alia, consolidation of the competencies and resources of the Ministry of National Defense in the field of cryptology (The official site of the Ministry of Digital Affairs). In addition to the abovementioned unit, the Cybernetic Operations Center operated as part of the cyber defense of the Republic of Poland. The Center constitutes a military unit specialized in the full range of military activities and operations in cyberspace. It is the only such unit in the Ministry of National Defense. The Cyberspace Defense Forces are to be formed on the basis of the Center (The official site of the Cybernetic Operations Center, 2018).

5. THE ROLE OF THE PRIME MINISTER IN THE CYBER SECURITY SYSTEM

In the Czech Republic, the highest body coordinating cyber security activities at the governmental level is the National Security Council (Bezpečnostní rada státu – BRS). The Council was established on the basis of Article 9 of Act No. 110/1998 on the Security of the Czech Republic (Ustavní zákon č. 110/1998 Sb., o bezpečnosti České republiky). It is composed of the prime minister and other appointed members of the Council of Ministers. The President of the Czech Republic not only has the right to participate in the meetings of the council, but s/he may also require information from its members and discuss issues that fall within his/her competence.

The Director of the National Cyber and Information Security Agency regularly participates in the meetings of the National Security Council and is a member of the Cyber Security Committee, which is the BRS's permanent working body for coordinating the planning of projects ensuring cyber security of the Czech Republic.

In Poland, the Cyber Security Council operates at the Council of Ministers. It constitutes a consultative and advisory body on cybersecurity matters which is chaired by the Prime Minister. The meetings of the Council are attended, inter alia, by the Head of the Internal Security Agency and the Head of the Military Counterintelligence Service (The Act of 5 July 2018 on the National Cyber Security System, art. 66 paragraph 4).

6. CONTROL OF THE PARLIAMENT

In the Czech Republic, the National Cyber and Information Security Agency (Národní úřad pro kybernetickou a informační bezpečnost – NÚKIB) is subject to the control of the Chamber of Deputies under § 24a of the Cyber Security Act (Zákon o kybernetické bezpečnosti, 2014), which for this purpose appoints a relevant control body in form of a committee. The committee consists of at least 7 members. The Chamber determines the composition of the committee so that every parliamentary club is represented in it. While exercising their mandate, members of the committee have the right to enter the premises of the agency. The deputies are then accompanied by the director of the agency or an employee designated by him/her. The director of the agency submits the following documents to the members of the control body: information on the activities of the agency, draft budget of the agency, evidence necessary to control the implementation of the agency's budget, and internal regulations of the agency. At the request of the committee, the director also provides information on particular security incidents in the field of critical infrastructure, significant information systems, and information systems of key service providers. If the control body

finds that the agency unlawfully restricts or threatens civil rights and freedoms or if the decisions of the agency are defective, the body has the right to demand explanations from the director. The director of the agency is obliged to report to the prime minister any violation of the law, especially in the field of the Cyber Security Act and the Act on Protection of Classified Information, committed by an employee during the performance of his/her duties.

In the Polish Act on the National Cyber Security System, there are no regulations relating to the control of the system by the parliament.

7. DIFFERENCES IN CYBER SECURITY STRATEGY

In 2013, works on a cyber security strategy for the years 2015–2020 began in the Czech Republic. The strategy was accompanied by the Cyber Security Action Plan for the years 2015–2020. The strategy for the years 2015–2020 is not only a vision but also a list of principles that will be followed by the authorities and offices of the republic in the course of attaining their goals. The main principles listed in the document are: protection of fundamental human rights and freedoms and the principles of the democratic state of law, as well as building trust and cooperation between the public and private sectors and civil society. In this context, the strategy states that one of the basic principles of operation of the National Security Agency (the predecessor of the National Cyber and Information Security Agency) in terms of ensuring cyber security is the protection of fundamental rights (<https://www.govcert.cz>, Národní strategie kybernetické bezpečnosti). In turn, the latest strategy in this area places great emphasis on cooperation with allies, education, and expansion of the expert base (<https://nukib.cz>, Národní strategie kybernetické bezpečnosti 2020–2025).

In Poland, until 2019, the basic document in the field of cyber security was the National Framework of Cyber Security Policy of the Republic of Poland for the years 2017–2022. This document was adopted by the Resolution of the Council of Ministers of 27 April 2017 and constitutes a kind of strategy. Throughout the text, there are only two passages relating to civil rights and freedoms:

By taking steps to implement the National Framework of Cyber Security Policy, the Government shall fully respect the right to privacy and take the position that the free and open Internet is an important element of the functioning of the modern society (<https://www.gov.pl>, The National Framework of Cyber Security of the Republic of Poland for the years 2017–2022)

and furthermore:

The mechanisms of the information exchange system shall be constructed in such a way as to ensure the protection of the interests of the participating entities, including the protection of business secrets, protection of the image, and protection of other essential values (<https://www.gov.pl>, The National Framework of Cyber Security of the Republic of Poland for the years 2017–2022).

The National Framework has been replaced by the Cyber Security Strategy of the Republic of Poland for the years 2019–2024. The main goal of this strategy is to increase

the level of resistance to cyber threats and the level of information protection in the public, military, and private sectors, and to promote knowledge and good practices enabling citizens to better protect their information. The latest strategy also states that “government actions will be undertaken with respect for the rights and freedoms of citizens and by building trust between individual market sectors and public administration” (<https://www.gov.pl>, Cyber Security Strategy of the Republic of Poland for the years 2019–2024).

8. PROTECTION SYSTEMS IN EUROPE

There are different cyberspace protection systems in place in Europe. The most centralized system in this area operates in France. At the same time, France is the only country in the European Union where the development of offensive capabilities enabling the support of military operations has been included in the objectives of cyber security policy. The entity responsible for cyber security policy is the government, and personally the prime minister. Activities in this field are conducted through the General Secretariat for Defense and National Security. The body responsible at the operational level is the National Agency for the Security of Information Systems – ANSSI. The IT Systems Security Operational Center – COSI operates within the structure of the said agency. Meanwhile, CERT operates under the authority of this center. Cyber defense of the entire military sphere is situated within the scope of the Ministry of Defense, and the coordinating body is the specialized Cyber Defense Division (Mickiewicz, 2017).

Great Britain and the Federal Republic of Germany have created rather decentralized cyberspace defense systems. In Great Britain, the central coordinating body is the National Cyber Security Center (NCSC) (CyberDefence24, UK: Inauguracja Narodowego Centrum Cyberbezpieczeństwa). The parent body of the NCSC is the British radio intelligence agency, the Government Communications Headquarters (GCHQ). The executive bodies of the British system are the department of the main ministries. In addition to NCSC, the cyber protection system also includes the Center for the Protection of National Infrastructure (CPNI), responsible for the development of guidelines for managers of objects and elements of the critical infrastructure, and the National Technical Information Office as a coordinator of providing information on the security of critical infrastructure. The units meant to fight specific threats are CERTs (Mickiewicz, 2017).

In the Federal Republic of Germany, there are federal bodies that coordinate and conduct activities in the field of cyberspace protection. The activities in this field are managed by the Federal Government Plenipotentiary for Telecommunications. The function of the forum coordinating cooperation between the administrative and economic spheres is performed by the National Cyber Security Council. The council is composed of representatives of federal ministries: of foreign affairs, internal affairs, national defense, economy, finance, justice and education, the ICT Planning Council, and the delegates of federal state authorities. At the operational level, threats to cyber security are dealt with by the National Center for Counteracting Threats to Cyberspace – NCAZ. The supervision over the center is carried out by the Federal Office for Information Security – BSI (Gesetz über das Bundesamt für Sicherheit in der Informationstechnik, 2009). The NCAZ coordinates the cooperation of federal institutions and federal states in the field of cyberspace protection. At the federal level, these entities include the Federal Office for the Protection of the Constitution (civil counterintelligence – BfV), the task of which is to detect

the initiators of a possible attack, the Federal Office for Civil Protection and Disaster Assistance, Federal Criminal Police Office (BKA), Customs Investigation Bureau, Federal Police, Federal Intelligence Service (BND), and military counterintelligence (Mickiewicz, 2017). The prosecution of the perpetrators of attacks is the responsibility of law enforcement, in particular the police, the BKA, the BfV, and the BSI.

As it seems, the cyber security system in the Czech Republic in the institutional sphere is the closest to the German model. There is one civil office functioning in the system which oversees the entire issue. Secret services are involved in the protection of cyber security, but they perform different tasks in this area, mainly consisting in detecting the perpetrators of hacker attacks or other criminal, espionage, or terrorist events. In the case of the Czech Republic, following the example of German solutions in the process of creating institutions related to security has quite a long tradition. According to Ladislav Pokorný, the first Czech secret service after 1990 was named similarly to the German Office for the Protection of the Constitution (Pokorný, 2012), and furthermore,

the inspiration derived from the German model of civil counterintelligence (BfV) is visible to some extent in Czech legislation to this day (a narrower concept of the competence of secret services, in the sense of preserving only the informational function, imperative of not concentrating powers, lack of executive powers)” (Pokorný, 2012). One can also add here what Pokorný does not mention, i.e. the enormous emphasis in all planning documents and laws on securing civil rights and freedoms as the basic values of liberal democracy. The very first program of the Civic Forum referred to these values: “the Czechoslovak Republic must be the democratic state of law in the spirit of Czechoslovakian statehood tradition and in the spirit of the applicable international principles, contained primarily in the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights (<https://www.rozhlas.cz>, 1989, Co chce Občanské fórum?, Deset pražských dnů, 17 – 27 listopad 1989, Dokumentace).

It is difficult to compare the Polish cyber security protection system with other systems in Europe. It can only be said that, like in Germany and Great Britain, it is a decentralized system. However, in none of the abovementioned systems do the secret services play such an institutionally dominant role. Only in Great Britain does the coordination body rely on radio intelligence. This may be due to the fact that the development of the Polish security sector went in a completely different direction than that of the Czech Republic. At the very beginning of the transformation in 1989 and 1990, the secret service structures were not separated from the Ministry of the Interior. The services were not deprived of their investigative powers. In later years, only the competencies and powers of the secret services were expanded. Perhaps these processes indicate that in Poland the values of liberal democracy have never taken root in the practice of political life.

9. CONCLUSIONS

1. On the basis of the comparative analysis, it can be concluded that within the political systems of Poland and the Czech Republic, completely different organizational solutions in the field of cyber security have been adopted. In Poland, once again, after granting special services the powers related to the implementation of tasks related to the

protection of classified information, their powers have been extended, this time in the field of cyberspace protection. This task involves the acquisition and processing of tremendous amounts of information in virtually all spheres of life and the interference with civil rights and freedoms. At the same time, the supervisory role in the field of cyber security has been assigned to the executive branch. Polish regulations do not take into account the role of the parliament in controlling the cyber security system.

2. In the Czech Republic, a completely different model from the Polish one was adopted. A civilian central office has been established to protect cyberspace and is controlled by a special parliamentary committee. Cyber security has also been clearly separated from cyber defense dealt with by the military. The protection of human rights and civil liberties is very strongly emphasized in all planning documents of strategic importance. It seems that practically since the establishment of the Czech Republic, there has been a consensus among the Czech political elite not to extend the powers of secret services and other entities in the internal security sector. However, the protection of the principles of the democratic state of law does not lead to chaos in this crucial aspect of state security that is cyber security.
3. The internal security sector is created by the political system and by ruling parties and politicians, but behind them are the values adopted in a given country. The process of building the internal security sector visible in the Czech Republic, consisting in a very clear separation of the activities of secret services from typically investigative activities, the imperative of not concentrating powers and thus also sensitive information and data in a single state institution, which is present in all planning documents, strategies, and laws, as well as the emphasis on the protection of civil rights and freedoms, common to the entire Czech political elite, prove that the values of liberal democracy in the Czech political system are deeply rooted and their observance is obvious. Adopted in Poland as soon as in 1990 by the democratic opposition and continued in the following years, the model, which is different from the Czech one and consists in extending the powers and competencies of secret services, may prove that some other model of democracy is being built in Poland.

REFERENCES

- Banasiński, C., ed. (2018). *Cyberbezpieczeństwo. Zarys wykładu*. Warszawa: Wolters Kluwer.
- Co chce Občanské fórum?*, Deset pražských dnů, 17 - 27 listopad 1989, Dokumentace [access: 13.02.2020]. Access on the internet: https://www.rozhlas.cz/17listopad/dokumenty/_zprava/644374
- Cyber Security Strategy of the Republic of Poland for the years 2019–2024 [access: 11.10.2021]. Access on the internet: <https://www.gov.pl/web/cyfryzacja/strategia-cyberbezpieczenstwa-rzeczypospolitej-polskiej-na-lata-2019-2024>
- CyberDefence24, UK: *Inauguracja Narodowego Centrum Cyberbezpieczeństwa. „Ważna współpraca z sektorem prywatnym”* [access: 12.02.2020]. Access on the internet: <https://www.cyberdefence24.pl/uk-inauguracja-narodowego-centrum-cyberbezpieczenstwa-wazna-wspolpraca-z-sektorem-prywatnym>
- Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union [access: 14.08.2019]. Access on the internet: <https://eur-lex.europa.eu/legal-content/PL/TXT/PDF/?uri=CELEX:32016L1148&from=PL>

- Gesetz über das Bundesamt für Sicherheit in der Informationstechnik [access: 12.02.2020].
Access on the internet: https://www.gesetze-im-internet.de/bsig_2009/
- Karpiński, J. (2006). *Wprowadzenie do metodologii nauk społecznych*. Warszawa: Wydawnictwo Wyższej Szkoły Przedsiębiorczości i Zarządzania.
- Mickiewicz, P. (2017). *System bezpieczeństwa cybernetycznego państw europejskich. Analiza porównawcza. „Rocznik Bezpieczeństwa Międzynarodowego”*, 2017 [access: 12.02.2020].
Access on the internet: file:///C:/Users/wgraca/Downloads/2017_1_4.pdf
- Národní strategie kybernetické bezpečnosti [access: 22.05.2019]. Access on the internet: <https://www.govcert.cz/download/gov-cert/container-nodeid-998/nskb-150216-final.pdf>
- Národní strategie kybernetické bezpečnosti 2020-2025 [access: 11.10.2021]. Access on the internet: https://nukib.cz/download/publikace/strategie_akcni_plany/narodni_strategie_kb_2020-2025_%20cr.pdf
- Nowak, S. (2007). *Metodologia badań społecznych*. Warszawa: Wydawnictwo Naukowe PWN.
- Pokorný, L. (2012). *Zpravodajské služby*. Praha: Auditorium.
- Strategie kybernetické obrany ČR [access: 2.08.2019]. Access on the internet: <http://www.acr.army.cz/assets/informacni-servis/zpravodajstvi/strategie-kyberneticke-obrany.pdf>
- The Act of 24 May 2002 on the Internal Security Agency and Foreign Intelligence Agency (Journal of Laws of 2002 No. 74, item 676) [access: 5.08.2019]. Access on the internet: <http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20020740676/U/D20020676Lj.pdf>
- The Act of 30 August 2011 amending the act on martial law and the powers of the Supreme Commander of the Armed Forces and the rules of his subordination to the constitutional bodies of the Republic of Poland and some other acts (Journal of Laws No. 222, item 1323) [access: 14.08.2019]. Access on the internet: <http://prawo.sejm.gov.pl/isap.nsf/DocDetails.xsp?id=WDU20112221323>
- The Act of 5 July 2018 on the National Cyber Security System (Journal of Laws of 2018, item 1560) [access: 4.08.2019]. Access on the internet: <http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20180001560/O/D20181560.pdf>
- The National Framework of Cyber Security of the Republic of Poland for the years 2017–2022 [access: 13.08.2019]. Access on the internet: https://www.gov.pl/documents/31305/0/krajowe_ramy_polityki_cyberbezpieczenstwa_rzeczypospolitej_polskiej_na_lata_2017_-_2022.pdf/0bbc7a32-64df-b45e-b08c-dac59415f109.
- The official site of the Czech Military Intelligence [access: 23.05.2019]. Access on the internet: <https://www.vzcr.cz/kyberneticka-obrana-46>
- The official site of the Ministry of Digital Affairs [access: 13.08.2019]. Access on the internet: <https://www.gov.pl/web/obrona-narodowa/narodowe-centrum-kryptologii>
- The official site of the Ministry of National Defense [access: 4.08.2019]. Access on the internet: <https://www.cyber.mil.pl/articles/o-nas-f/2018-11-20m-suzba-kontrwywiadu-wojskowego/>
- The official site of the Nic.cz Association. Registr domén CZ [access: 9.05.2019]. Access on the internet: <https://www.nic.cz/page/351/>
- The official site of the Security Information Service (Bezpečnostní informační služba) [access: 9.05.2019]. Access on the internet: <https://www.bis.cz/kyberneticka-bezpecnost/>
- Usnesení vlády č. 781 ze dne 19.10.2011, Ustavení Národního bezpečnostního úřadu gestorem problematiky kybernetické bezpečnosti a národní autoritou pro tuto oblast [access: 9.05.2019]. Access on the internet: <https://apps.odok.cz/zvlady/usneseni/-/usn/2011/781>.

- Ustavní zákon č. 110/1998 Sb., o bezpečnosti České republiky [access: 21.08.2019]. Access on the internet: <https://www.zakonyprolidi.cz/cs/1998-110>.
- Vodicka K., Cadaba L. (2011). *Politický systém České republiky*. Praha: Portal.
- Zákon č. 205/2017 Sb., Zákon, kterým se mění zákon č. 181/2014 Sb., o kybernetické bezpečnosti a o změně souvisejících zákonů (zákon o kybernetické bezpečnosti), ve znění zákona č. 104/2017 Sb., a některé další zákony [access: 9.05.2019]. Access on the internet: <https://www.zakonyprolidi.cz/cs/2017-205>
- Zákon o zajišťování obrany České republiky [access: 23.08.2019]. Access on the internet: <https://www.zakonyprolidi.cz/cs/1999-222>
- Zpráva o činnosti Národního bezpečnostního úřadu za rok 2014 [access: 9.05.2019]. Access on the internet: <https://www.nbu.cz/cs/informacni-centrum/povinne-zverejnovane-informace/906-vyrocní-zpravy-o-cinnosti-nbu/>
- Zpráva o činnosti Národního bezpečnostního úřadu za rok 2016 [access: 22.05.2019]. Access on the internet: <https://www.nbu.cz/cs/informacni-centrum/povinne-zverejnovane-informace/906-vyrocní-zpravy-o-cinnosti-nbu/>

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FINANCIAL KNOWLEDGE, ATTITUDE AND MANAGEMENT PRACTICES AMONG SMALL BUSINESS ENTREPRENEURS IN NIGERIA

A good level of literacy in financial management has been viewed as crucial to enhancing the growth of small business. However, the level of knowledge and attitude of managers of these businesses remains unclear. This study determines the level of financial literacy among small business managers. Using a survey research design, the study covers small business enterprises in Ogun State, Nigeria. Primary data obtained through questionnaire were analysed. The results show that the overall level of attitude of small business owners to insurance and savings are low. Similarly, based on financial knowledge relating to financing sources and interest estimation are also low. The overall financial management practices among the owners are also not encouraging. The findings suggest a need for an improved level of financial literacy among business enterprises to sustain the growth of the sector.

Keywords: management, financial literacy, financial attitude, financial knowledge, small business.

1. INTRODUCTION

The world over, small enterprises failure is known to be high and worrisome. Alese (2017) notes that “Financial Intelligence in 2013 showed that rate of SMEs failure in Nigeria stood at 70% within twenty years. In the US, National Business Incubator Association (2013) reports that within five years, about 80% SMEs close shop after their start-ups. While New Zealand SMEs rate of failure appear to be less than that of Nigeria and the US with 53% within 3 years, the US Small Business Administration (SMA) world report in 2013 indicated that the world aggregate of SME failure is about 33% within 3 years”. To address this problem and foster development of the SME sector in order to harness its potentials for economic development in Nigeria, government over the years have planned different intervention programmes for the sector. Most of the interventions however bother on granting soft loans since it is believed that finance is the bane of SME development.

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An enterprise has to make different decisions ranging from production to marketing, human resource and finance decisions. Therefore, it is important for the managers to have requisite knowledge to handle decisions in these various functional areas of an enterprise. Since SMEs are owner-managed and that finance can be central to these other organisational decisions, it is important that SMEs owners have requisite financial literacy level to make correct finance decisions for their firms. Accessibility of financial resources can be a major obstacle to the development of SMEs, as it prevents investments in new technology and expansion that would make them more productive and more competitive. Agyapong and Attram (2019) observed however that past studies (Hossain, Yoshino, Taghizadeh-Hesary, 2018; Amornkitvikai, Harvie, 2018) continue to focus on the availability or otherwise of finance with little attention to the literacy of the SME operators in terms of financial knowledge and know-how.

Possessing the right knowledge, skills, and understanding on the use of money and how money works is an important skill required of small business owners. Refera, Dhaliwal and Kaur (2016) observed that recent trend in finance and economics has made financial knowledge not just a luxury, but an essential survival tool as lack of financial knowledge leads to poor financial choices and decisions, which could in turn result in undesired financial and economic consequences. The authors also underscored the increasing importance and attention to financial literacy given the increasing cost of living (McCarthy, 2011), complexity of financial markets (Lusardi, Mitchell, 2013; Nalini, 2011; Miller, Godfrey, Levesque, Stark, 2009) among others. Nowhere is financial literacy more important, according to Eniola and Entebang (2017) than in MSME sector since they constitute the backbone of most economies; generating about 70% of employment (Kauffmann, 2005).

Even though, education has been found to explain level of financial literacy among people (Atakora, 2013), rural small business owners are particularly more susceptible to wrong or poor financial decisions since their educational status is low. Past studies have so far indicated that financial literacy is low among youths (Lusardi, Mitchell, Curto, 2010; Atakora, 2013), yet many MSME sector are youth driven. However, most of these studies were conducted in the developed world particularly among the OECD countries. However, it appears that the subject is beginning to gain attention among researchers in developing African countries.

The study of the Department for International Development's (DFID, 2008) revealed that financial literacy level is low in African nations when compared to other countries. The survey reported that only about half of the adult population in seven African countries have knowledge of basic financial products even as about 50% did not use neither formal nor informal financial products. According to Central Bank of Nigeria (2012), a large percentage of Nigerians lack financial literacy, and more than 46.3% do not have access to financial services and queue behind some developed and even developing countries. This has been one of the major challenges faced by SME in the country given that poor financial literacy causes ill-informed financial decisions which, in turn, have tremendous negative spillovers (OECD, 2013).

This study examines the level of financial literacy among small business owners. Specifically, it focuses on the level of financial knowledge, attitude and management practices among the entrepreneurs in the small business sector. A good financial knowledge and attitude in a growing business are expected to result in efficient business management and overall positive outcome.

2. LITERATURE REVIEW

Huston (2010) accentuates the position that there is no one-size-fits all definition of financial literacy. Thus, he describes financial literacy as how well an individual understands and makes use of personal finance-related information. The Organisation for Economic Cooperation and Development (2005) defines financial education as the process by which investors improve their understanding of financial products and, through instruction, and objective advice, develop confidence to become more aware of financial risks and opportunities in order to make informed choices, to improve their financial wellbeing. Lusardi and Mitchell (2013) suggested that financial literacy is ability to process financial information and make appropriate decisions about wealth accumulation, debt, financial planning and pensions to enable individual and household to cope with the complexity of products in financial market. In Nigeria, the Central Bank of Nigeria, CBN (2015) defines it as having knowledge and skill to manage their financial resources effectively and enhance personal economic well-being.

Fernandes, Lynch and Netemeyer (2013) in their study operationalised financial literacy as the knowledge of basic concepts of personal finance which concerns borrowing/debt on one hand and saving/investments on the other hand which lead to enhanced lifetime financial decision-making. Their definition supposes that financial literacy is a single dimension reflecting objective knowledge in the domains of personal finance covering borrowing/debt and savings/investments. The United States Financial Literacy and Education Commission (2007) describe financial literacy as effective management of financial resources with use knowledge and skills for a lifetime of financial well-being. ANZ (2008) defines financial literacy as the ability to make informed judgments and to take effective decisions regarding the use and management of money.

Financial literacy according to ANZ (2011) survey consists of five things. They are staying informed, planning ahead, financial control, choosing financial products and keeping track of finances. Bosma and Harding (2006) argue that many SMEs fail due to lack of financial literacy and insufficient business insight which subsequently undermines entrepreneurial activity. Glaser and Walther (2013) and Miller et al. (2009) contend that financial literacy can be very important for many reasons. Not only does it help to prepare businesses and consumers alike for hard financial periods, through promotion strategies such as such as diversifying assets, accumulating savings and obtaining insurance capable of mitigating risks; such behaviours as over-indebtedness, money illusion and poor savings can be mitigated when an individual is financially literate. Similarly, financial literacy helps people in making improved financial decisions and manage risk. Kotzè and Smit (2008) suggest that lack of personal financial literacy may adversely affect effective financial management of start-ups and hence possible failures. A good level of financial literacy can increase access to finance (Wise, 2013), while reducing the likelihood of loan default (Kotzè, Smit, 2008).

2.1. Measures of financial literacy

Different authors and researchers have employed different constructs to proxy and measure financial literacy. Common among the measures are computer literacy, financial attitude, financial knowledge, financial behaviour and mathematical literacy (Oseifuah, 2010; Wise, 2013). On his part, Sucuahi (2013) used financial skills, record-keeping, budgeting and savings as measures of financial literacy. While financial attitude according

to Mandell and Klein (2009) is the ability to assess novel and sophisticated financial instruments, analyse these instruments and utilize them in their own best long-term interests, financial awareness refers to individual's ability to comprehend and manage different financial strategies; and be aware of external service providers. Furthermore, it refers to the conceptual knowledge of financial product offerings by financial institutions and the ability to make informed decisions capable of facilitating achievement of the individual financial goal.

In terms of methodology, different researchers have used varying methods to study financial knowledge, measured by its different dimensions mentioned above and its effect on different outcomes. For instance, Eniola and Entebang (2017) used structural equation model (SEM) to analyse the influence of financial literacy of some SME business owners-managers' on firm performance in three states in the southwest Nigeria. Surprisingly, the authors found that financial knowledge and awareness of SME owner-managers evidently cannot be condition for the performance of SMEs.

Drawing on a tripartite theories knowledge-based perspective, peaking order and dual process theories, Ye and Kulathungawe (2019) examined the impact of financial literacy, access to finance and financial risk attitude on SMEs' sustainability in Sri-Lanka. Analysis of data obtained from 291 chief financial officers (CFOs) of SMEs using structural equation modelling revealed direct positive influence of three constructs on SME sustainability. Interestingly, the study reported that financial literacy is a predictor of access to finance and financial risk attitude. Moreover, access to finance and financial risk attitude partially moderated the relationship between financial literacy and SMEs' sustainability. Similarly, Agyapong and Attram (2019) had recommended policy makers should undertake efforts to enhance the financial literacy of owner-managers of SMEs based on the findings of their study on effect of financial literacy of small business performance in Ghana having found positive relationship between financial literacy and the firms' financial performance.

In their study, Bruhn and Zia (2013) analysed the effect of financial literacy program on corporate outcomes of some young entrepreneurs in Bosnia and Herzegovina. The results suggest that entrepreneurs who have higher levels of financial literacy recorded better business performance as well as sales. Andoh and Nunoo (2011) reported that poor financial literacy can inhibit SMEs from assessing financial products from financial institutions and thus concluded that the financial literacy of owners of SMEs is a critical factor which explains utilization of financial services by SMEs. Interestingly, Cole, Sampson and Zia (2008) noted that rural residents tend to have least level of financial knowledge.

Despite the growing body of knowledge on financial literacy, it appears researchers are not agreed on the measurement of the construct. Oseifuah (2010) had used financial knowledge, financial attitude and financial behaviour as measurement of financial literacy. Conversely, Fatoki (2014) employed more constructs comprising of insurance, analysis and control, understanding of funding sources, financial planning, bookkeeping, technology, business terminology, finance and information skills to indicate financial literacy among new micro-enterprises. Yet, Nigeria Deposit Insurance Corporation (NDIC, 2012) measured the concept with financial planning, money management, and personal financial behaviour. Similarly, Ebiringa and Okorafor (2010) adopted financial skills, financial knowledge and financial concepts and terms. Review of extant literature revealed that studies that empirically measured financial literacy in such areas as knowledge, awareness and attitude of the SME managers in Nigeria are scarce. It is against this backdrop that this

present study surveys the financial literacy levels among micro and small enterprises in rural areas in Ogun state, south-west, Nigeria.

3. METHODS

The survey was conducted in three local government areas that enjoyed proximity but highly commercial in Ogun state, South-West, Nigeria. We obtained primary data via questionnaire in a survey with the help of our postgraduate students who served as field research assistants. We used only SMEs with total number of full-time employees equal or less than 100 to avoid problem of SME classification and in agreement with National Association of Small Scale Industrialists (NASME) classification. Because it was difficult to ascertain the actual population of the study in the study area as no reliable data exists to the effect, we used purposive sampling method to select a sample of seventy-nine (79) MSMEs owner-managers. We filtered only businesses that have been in existence for three years minimum which is believed to allow for stability as suggested by Fatoki (2014). More so, it has been noted that the world over, 33% of SMEs close shops within 3 years (US Small Business Administration, 2013). We believe that a three years threshold allows us to test financial literacy, attitude and knowledge among the SME owners' hands-on experience on their businesses. In addition, we focused on SMEs with capacity to take advantage of limited financial instruments in the country. Ability to take advantage of these financial windows are crucial to the overall financial literacy and attitude of the SMEs. This is based on the importance of financial literacy and attitude as an effective decision-making factor regarding financial management of small businesses (Nohong et al., 2019; Mashizha, Sibanda, Maumbe, 2019). Similar approach had been used in earlier studies such as Arko-Achemfuor (2012) and Fatoki (2014). We carried out a pilot study of nine small business owners (three each from the local governments) to further confirm the usability of the instrument. The instrument in all had only eleven items considered brief enough to inspire participation in the survey. In line with the objective of the study, we employed descriptive statistics to analyse the data. Financial literacy was measured with constructs on financial attitude, financial knowledge and financial management practices.

4. RESULTS AND DISCUSSIONS

4.1. Characteristics of respondents

The demographics of the respondents are presented in Table 1. Males dominated the respondents with 79.74%. The analysis of age distribution of the respondents show that younger people are largely involved in small business enterprises. This distribution is expected to have effect on their financial orientation in business management. The statistics of age distribution show that 22.78% are below 30 years of age; 30.40% are in the age bracket of 31 and 40 years of age; 32.91% are within 41 and 50 years bracket. The level of education is also relatively high as 69.62% have Bachelor Degrees in various disciplines of management.

Table 1. Socio-economic distribution of the respondents

		Frequency	Percentage
Gender	Male	63	79.74
	Female	16	20.25
Age	Below 30	18	22.78
	31–40	24	30.40
	41–50	26	32.91
	51 and above	11	13.92
Qualifications	Diploma	16	20.25
	Bachelors	55	69.62
	Masters	8	10.13
Experience in Business	3–5 years	19	24.05
	6 to 10 years	44	55.70
	Above 10 years	16	20.25
Membership of Cooperative Societies	Yes	58	73.42
	No	21	26.58

Source: Authors own research.

4.2. Level of financial knowledge, attitude and management of small business owners

The analysis of financial information regarding small business owners is presented in this sub section. First, the criteria for the evaluation of the attitude, literacy and financial management of the business owners are presented in Table 2.

4.2.1. Criteria for evaluating level of financial literacy among business owners

The level of financial literacy among small business owners was evaluated based on the criteria suggested by Guliman (2005). Financial literacy is considered to be low if mean score is below 60% on percentage scale. The level is considered average if the level of financial literacy ranges between 60 and 80. However, the level of financial literacy is high if the percentage score is greater than 80 (Table 2).

Table 2. Criteria for evaluating level of financial literacy among business owners

Percentage score (mean)	Level
< 60	Low
60-80	Average
> 80	High

Source: Authors own research.

4.2.2. Level of financial literacy of small business owners

Results in Table 3 show the level of financial literacy among small enterprises in the study area. The result indicates a low level of financial literacy among the respondents. The overall percentage score of financial attitudes of the firms is 34.87% which is below 60% on the scale of Guliman (2005). Hence, the literacy level is ranked low. Although, the budgeting component of the financial attitude is average, having reach an average score of 63%, the score of attitudes to insurance and savings are respectively 19.0% and 22.5%. Similarly, financial knowledge components of the firms are all below 60% with a total

average of 44.65%. Consequently, the financial knowledge of the firms is also low. The overall financial management practices of the firms is 42.31%, indicating that the financial management practices of the firms is low on the scale of financial literacy.

Table 3. Financial attitude, knowledge and management practices of small business owners

	Percentage score (mean)	Remark (Literacy level)
Financial attitude		
Budgeting	63.0	Average
Insurance	19.0	Low
Savings	22.6	Low
<i>Total</i>	<i>34.87</i>	<i>Low</i>
Financial knowledge		
Knowledge of compound interest	33.3%	Low
Knowledge of sources of finance	56.0%	Low
<i>Total</i>	<i>44.65%</i>	
Financial management practices		
Record of all stock	39.74%	Low
Records of drawings from the venture	43.59%	Low
Documented business plan	29.49%	Low
Existence of feasibility study for the business	53.85%	Low
Total	42.31	Low

Source: Authors own research.

5. CONCLUSION

Although being financially literate can help individual and business units to make important financial decisions that will help them get the best benefits from their finances, financial literacy level remain low in Nigeria and Ogun state in particular. Although it is common to argue that the bane of SME development particularly in Nigeria is availability of finance. While the truism of this position before now was not in doubt, analysis of the findings of this study, like others, may begin to cast aspersion on this long held position. Government over the time through various intervention programmes provides funds that can be accessed by SMEs for development. But where the intended beneficiaries are not aware of such opportunities, or cannot make the best out of such funds even when they can access them since they know little about the working of money, the lofty goal of helping SMEs grow may be far from being achieved. This supports the findings of Ye and Kulathunga (2019) had suggested that financial literacy in the first instance is likely to affect access to finance.

Sequel to above, it is important that concerned government agencies look beyond providing funds for SMEs development and begin to pay attention to financial education for SMEs especially micro and small business owners/operators as this does not only equip them with knowledge of how to access finance but also use the funds thereby enhancing their survival. Non-governmental organisations as well as universities and other educational institutions can develop education programmes to assist this important sector of the economy in order to better their lot financially.

REFERENCES

- Ackah, C., Owusu, A. (2012). *Assessing the knowledge of and attitude towards insurance in Ghana*. Access on the internet: <http://yeungus.com/assessing-the-knowledge-of-and-attitude-towards-insurance-in-Ghana-free-related-pdf.html>.
- Alese, O. J. (2017). *Strategic management and the development of small and medium enterprises in south-west, Nigeria*. A Ph.D thesis of Olabisi Onabanjo University, Ogun state, Nigeria.
- Amornkitvikai, Y., Harvie, C. (2018). *Sources of finance and export performance: Evidence from Thai manufacturing SMEs*. "The Singapore Economic Review", 63(01).
- Andoh, F. K., Nunoo, J. (2011). *Sustaining small and medium enterprises through financial Service Utilization: Does Financial Literacy Matter?* Access on the internet: <http://ageconsearch.umn.edu/bitstream/123418/2/Sustaining%20SME%20article.pdf%20Jacob%20Nunoo1.pdf>.
- ANZ (with Social Research Centre) (2008). ANZ Survey of Adult Financial Literacy in Australia. Access on the internet: <http://www.anz.com>.
- ANZ (with Roy Morgan Research) (2011). Adult Financial Literacy in Australia. Access on the internet: <http://www.anz.com>.
- Agyapong, D., Attram, A. B. (2019). *Effect of owner-manager's financial literacy on the performance of SMEs in the Cape Coast Metropolis in Ghana*. "Journal of Global Entrepreneurship Research", 9. DOI: 10.1186/s40497-019-0191-1.
- Arko-Achemfuor A. (2012). *Financing small, medium and micro enterprises (SMMEs) in rural South Africa: An exploratory study of Stokvels in the Naled Local Municipality, North West Province*. "Journal of Social Anthropology", 3(2).
- Atakora, A. (2013). *Measuring the effectiveness of financial literacy programs in Ghana*. "International Journal of Management and Business Research", 3(2).
- Bosma, N., Harding, R. (2006). *Global Entrepreneurship Monitor (GEM) 2006 Report*. London. Babson College and London Business School.
- Bruhn, M., Bilal, Z. (2013). *Stimulating Managerial Capital in Emerging Markets: the Impact of Business Training for Young Entrepreneurs*. "Journal of Development Effectiveness", 5(2).
- Central Bank of Nigeria (2015). *National Financial literacy Framework*. Access on the internet: <http://cbn.gov.ng/out/cfpd/>
- Cole, S., Fernando, N. (2008). *Assessing the importance of financial literacy*. "ADB Finance for the Poor", 9(2).
- Eniola, A. A., Entebang, H. (2017). *SME Managers and Financial Literacy*. "Global Business Review", 18(3).
- Fatoki, O. (2017). *The Financial Literacy of Micro Entrepreneurs in South Africa*. "Journal of Social Sciences", 40(2).
- Fernandes, Lynch, Jr., Netemeyer, R. G. (2013). *The effect of financial literacy and financial education on downstream financial behaviors*. DOI:10.1287/mnsc.2013.1849.
- Glaser, M., Walther, T. (2014). *Run, Walk, or Buy? "Financial Literacy, Dual-Process Theory, and Investment Behavior"* (April 16).
- Hossain, M., Yoshino, N., Taghizadeh-Hesary, F. (2018). *Local Financial Development, Access to Credit and SMEs' Performance: Evidence from Bangladesh*. ADBI Working Paper 906. Tokyo: Asian Development Bank Institute. Access on the internet: <https://www.adb.org/publications/local-financial-development-access-credit-smesperformance-bangladesh>.

- Huston, S. J. (2010). *Measuring Financial Literacy*. "Journal of Consumer Affairs", 44(2). DOI:10.1111/j.1745-6606.2010.01170.x.
- Kauffmann, C. (2005). *Financing SMEs in Africa*, Policy Insights No. 7. OECD. Access on the internet: <http://oecd.org/dev/insights>.
- Kotze, L, Smit, A. (2008). *Personal financial literacy and personal debt management: the potential relationship with new venture creation*. "South African Journal of Entrepreneurship and Small Business Management", 1(1). DOI:10.4102/sajesbm.v1i1.11.
- Lusardi, A., Mitchell, O. S., Curto, V. (2010). *Financial literacy among the young*. "Journal of Consumer Affairs", 44(2). DOI:10.1111/j.1745-6606.2010.01173.x.
- Lusardi, M., Mitchell, O. (2013). *The Economic Importance of Financial Literacy Theory and Evidence*. Access on the internet: <http://arno.uvt.nl/show.cgi?fid=129675>.
- Lynch, J. G., Netemeyer, R, Spiller, S. A., Zammit, A. (2010). *A generalizable scale of propensity to plan: The long and the short of planning for time and money*. "Journal of Consumer Research", 37. DOI:10.1086/649907.
- Mandell, L., Klein, L. (2009). *The impact of financial literacy education on subsequent financial behavior*. "Financial Counseling Planning", 20(1).
- Mashizha, M., Sibanda, M., Maumbe, B., (2019), 'Financial literacy among small and medium enterprises in Zimbabwe', "Southern African Journal of Entrepreneurship and Small Business Management", 11(1). DOI:org/10.4102/sajesbm.v11i1.241.
- Miller, M., Godfrey, N., Levesque, B., Stark, E. (2009). *The case for financial literacy in developing countries: Promoting access to finance by empowering consumers*. Access on the internet: <http://brigaders.wdfiles.com/local-files/professional%3Abusiness-project-resources/Financial%20Literacy.pdf>.
- Nalini, G. S. (2011). Financial literacy of micro, small and medium entrepreneurs. "International Journal of Management Research Review" 1(5).
- Nohong, M., Ali, M., Sohilauw, M., Sobarsyah, M., Munir, A. (2019) *Financial literacy and competitive advantage: SME strategy in reducing business risk*, 40(32).
- Organisation for Economic Co-operation and Development (2005). *Improving financial literacy: Analysis of issues and policies*. Access on the internet: http://titania.sourceoecd.org/vl=4607980/cl=25/nw=1/rpsv/ij/oecd/themes/9998007x/v200_5n30/s1/p11.
- Oseifuah, E. K. (2010). Financial literacy and youth entrepreneurship in South Africa. *African Journal of Economic and Management Studies*, 1(2): 164–182. <https://doi:10.1108/20400701011073473>.
- Refera, M. K., Dhaliwal, N. K., Kaur, J. (2016). *Financial literacy for developing countries in Africa: A review of concept, significance and research opportunities*. "Journal of African Studies and Development", 8(1). DOI: 10.5897/JASD2015.0331.
- Sucuahi, W. T. (2013). *Determinants of financial literacy of micro entrepreneurs in Davao City*. "International Journal of Accounting Research", 1(1). DOI:10.12816/0001127.
- Wise, S. (2013). *The impact of financial literacy on new venture survival*. "International Journal of Business and Management", 8(23). DOI:10.5539/ijbm.v8n23p30.
- Ye, J., Kulathunga, K. (2019). *How Does Financial Literacy Promote Sustainability in SMEs? A Developing Country Perspective*. "Sustainability", 11.

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THE MANAGEMENT OF VILLAGE FUNDS TRANSPARENCY IN JAYAPURA CITY (A STUDY IN TOBATI, ENGGROS, AND NAFRI VILLAGE)

Village fund is managed by the village government based on the principles of transparency, accountability, and participation. However, the funds allocation is still used in inappropriate way. This study aims to know the community's knowledge and involvement on the village funding program and to know the transparency of the village funding management during 2016 until 2019. This study uses quantitative methodology with 125 respondents from three villages in Jayapura city – Tobati, Enggros, and Nafri village. The data were collected by observing, interviewing and giving questionnaire to the respondents. The results showed that the community's knowledge and involvement in the process of making and managing the village funds are very small. While the transparency level for the village funding is not yet worked in a proper way. Therefore, the management of village funds transparency in three villages in Jayapura city still needed a further optimalization.

Keywords: funding, transparent, funding management, social enterprises, regional fund.

1. INTRODUCTION

Village fund is a stated budget which transferred to villages with the aim to foster local development. It is expected that the funds can provide positive contribution for the community's prosperity. It also supported by the Government Regulation (No. 60/2014) concerning on Village Fund which explain that the village fund is a fund derived from local government budget (APBD) which transferred through state budget (APBN) (Ruru et al., 2017). Gayatri et al. (2017) added that village fund has aim to enhance the public service and decrease or eradicate the poverty. Saragi et al. (2021) stated that the village fund is intended to cover the gap between rural and urban area in public services and increase the social welfare within the rural areas. The Indonesian Government has made some fiscal policy to improve the economy of rural area and the most notable policy is the village fund (Sutiyono et al., 2018). However, some challenges are occurred during the management of the village funds, such as the unbalance distribution of village funds per capita among villages, slow absorption and implementation of village funds, budget implemented outside

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priority areas, late budget reports, and the unoptimal supervision of the village funds (Udjianto et al., 2021). In Thailand, village fund aimed for the group of household with lower income as priority first. It is also found to help in reducing credit constraints (Menkhoff & Rungkruxsirivorn, 2011).

Jayapura City is the smallest city in Papua Province, with an area of 940 km² (0.30 percent of the total area of Papua Province). Jayapura is split into five districts, including; Muara Tami, Abepura, Heram, Jayapura Selatan (South Jayapura), and Jayapura Utara (North Jayapura). Muara Tami District (626.7 km²) is the largest district, which dominated for more than half of the entire area of Jayapura City, whereas Jayapura Selatan is the smallest district, covering just 43.4 km². Even though, Jayapura Selatan is the smallest district, but it has the largest population density among others (Badan Penghubung Daerah Provinsi Papua, 2016). The government of Jayapura city has been allocated and transferred the village funds to three villages, that is, Tobati, Enggros, and Nafri village, during the year of 2016–2019, with total budget of 54 million rupiahs (3324628 Euros) that increased each year. Tobati is one of the village in Jayapura Selatan district, while Enggros and Nafiri are villages in Abepura district (Wikipedia, 2021). The allocating budget in 2016 was 1.1 million rupiahs (69637 Euros) and increased significantly in 2017 for 18.6 million rupiahs (1145661 Euros). Even though, in 2018 the budget was decreased to 3.6 million rupiahs (226559 Euros) but it re-increased with more significant amount from the previous year for 23.6 million rupiahs (1452517 Euros) in 2019. In detail, the total of village fund allocation on each village during 2016 until 2019 can be seen in Table 1 below:

Table 1. Village Fund Allocation in Jayapura city of 2016–2019

Village	2016	2017	2018	2019	Total revenue per village
Enggros	Rp. 373,540,445	Rp. 5,720,459,406	Rp. 3,297,977,307	Rp. 7,434,909,000	Rp. 16,826,886,158
Nafri	Rp. 395,999,620	Rp. 7,958,609,629	Rp. 4,598,020,399	Rp. 9,112,461,000	Rp. 22,065,090,648
Tobati	Rp. 363,406,585	Rp. 4,960,185,240	Rp. 2,789,984,805	Rp. 7,084,248,000	Rp. 15,197,824,630
Total	Rp. 1,132,946,650	Rp. 18,639,254,275	Rp. 3,685,982,511	Rp. 23,631,618,000	Rp. 54,089,801,436

Source: (BPKAD Jayapura).

In its implementation, the total of 54 million rupiahs has been allocated for priority areas as written in government regulations, such as (1) village administration, (2) village development, (3) village community development, and (4) village community empowerment.

The first is village administration, which distributed the fund to finance office operations as well as allowances/subsidy for the village apparatus and the Village Conference Agency (BAMUSKAM). The second is village development. The village fund has been distributed to pay for the development and house renovation program, building facility and procuring health equipment, transportation, education costs, bridge renovation, drainage channels, and environmental roads. Third, for village community development. The village funds have been distributed to funding the village community development programs, such as traditional institutions, indigenous women, Family Welfare Program (PKK), Youth Organizations, art studios, and farmer groups. The fourth is village community empowerment that have been distributed to finance entrepreneurship training programs, Integrated Service Post (Posyandu) cadre training, coral reef planting training, computer courses for youth and village officials, assistance for fish cultivation and procurement of

boats and nets, Capital assistance for village community businesses, and gender socialization.

The budget provided by the government is certainly not small. It comes with hope that it will make villagers to improve the quality of welfare in their life. Therefore, as one of the basic principles and main pillars of good governance, it is very important to be transparent in implementing the village fund management. Transparency defines as open, easy, and accessible to all parties in need and provided adequate and easy understanding (Ratmino & Winarsih, 2005). While, Lalolo (2003) stated transparency is a principle that guarantees access or freedom for everyone to obtain information about government administration, namely information about policies, the process of making, and the results that achieved. El Badawy et al. (2016, cited in Obianuju et al., 2021) added when succession is based on transparent and merit-based criteria, it may be a great motivation for people to perceive a clear path of progression. Transparency provides open and honest financial information to the public based on the consideration that the public has the right to know openly and thoroughly about the government's responsibility in managing the resources and its compliance with laws and regulations (Mursyidi, 2009). Transparency and accountability have relation with the equitable development throughout the village (Betan & Nugroho, 2021). Thus both have important role for the community or society.

However, the allocation of the village funds can be abused. There are unscrupulous village cadres who deliberately allocate funds inappropriately, then reduce the budget target and spend the funds own their own. Nadyastika and Siswanto (2019) claimed that one of the problems that can arise during the allocation of village funds is the potential of fund allocation to the village is not following the development priorities and the accountability is not similar to the actual conditions. These actions need to be anticipated and stopped, because it can obstruct or delay the progress of the village itself. Karlinayani and Ningsih (2018) stated that regional government is often ignore the transparency and accountability characteristic for allocation village fund management. Those characteristics can show the justice and equality that can build the village to further development and lead to the prosperity of the village community. The issue of budget transparency for development seems to be very closed to village communities. Therefore this study has purpose to know the level of village community knowledge and involvement on the programs funded by the village funds, and the transparency level of the village fund management.

2. METHODOLOGY

Quantitative approach is used as the methodology. It is used to calculate the community's knowledge and involvement level on the village fund along with the transparency level on the management of the funding. This study is done in three villages in Jayapura city, including Tobati, Enggros, and Nafri village which started on October 2019 until February 2020. The fundings given to those villages are in the form of; village funds, village funds allocation, revenue-sharing fund of regional tax, and regional retribution. The population of the study is the village apparatus and the villagers who live in those three village. While the sample is chosen from each target village with characteristics as below:

- a) Someone who receives or gets beneficiaries from the village funds programs (RT CODE).
- b) Someone who included in village foundation, such as village government apparatus, school institutions, health centers, village governments, community groups, as well

as informants of community leaders, traditional/custom leaders, religious leaders, and others (L CODE).

The collected sample based on the characteristic can be seen in Table 2 below:

Table 2. Respondents Characteristics

Village	Respondent group		Age			Total	Stay duration		Total	Ethnic group		Total
			17-35	36-60	>61		<30	>30		PA-PUA	NON PA-PUA	
Tobati	RT	50	11	39	-	50	5	45	50	50	-	50
	L	7	3	4	-	7	3	4	7	7	-	7
Nafri	RT	30	15	3	5	30	9	21	30	30	-	30
	L	8	2	6	-	8	1	7	8	8	-	8
Enggros	RT	21	6	13	2	21	5	16	21	21	-	21
	L	9	2	5	2	9	3	6	9	9	-	9
TOTAL RES.		125	39	77	9	125	26	99	125	125	-	125
PERCENTAGE			31,2%	61,6%	7,2%	30%	20,8%	79,2%	30	30%	0%	30%

Source: (Processed data, 2020).

The Table 2 above showed that most of the respondents are coming from Tobati village with total of 57 respondents, while Nafri village 38 respondents and Enggros village 30 respondents. Moreover, the total of respondents are dominated by those who were 36–60 years old (77 respondents or 61.6%) with stay duration more than 30 years (99 respondents or 79.2%).

The data collection technique is done using questionnaire, interview, and observation. From the total questionnaire, there are only 125 questionnaire that can be processed. The data analysis technique is using frequency distribution technique which arranges the data based on a certain category. The collected data is grouped into some category, each data can only be put into a category, and it cannot be put in two or more categories.

3. RESULTS

This study found that, in its practice, there is a condition of unbalanced information between the management party of the village fund (agent) and the resident party of the beneficiary (principal). This happens because one party obtains and exploits the information of their stuff, and the other party does not receive the same information. For example, in village development planning, communities are rarely invited to seminars, so information about a project is known only to specific groups. This situation undermines the quality of programs and activities that are supposed to be held for villagers and, due to the lack of transparency, affects public trust in governance programs. In addition, countries, especially those that implement regional autonomy and fiscal decentralization systems, have low transparency in the management of the disbursed budget, and the budget quality is not optimal, which should arouse the attention of all countries.

The level of community knowledge and involvement to village fund programs

The level of community knowledge which measured based on the respondents' perception on the programs that funded by the village fund is seen in Table 3 below.

Table 3. The level of community awareness and participation in village fund programs

No	The level of community's knowledge on village fund programs	Percentage	
		Yes	No
Community's knowledge on village fund programs			
1.	Having role and involvement in village fund programs	41%	59%
2.	Seeing and knowing about the village fund programs	43%	57%
3.	Knowing that the programs are funded by village funds	65%	35%
Community's perception on their involvement in village funds programs			
1.	The community is involved in the program organization process, which is discussed in a village discussion forum.	39.26%	60.74%
2.	Participation of the whole village apparatus and beneficiaries of the village program.	42%	58%
3.	There is a complaint procedure from the community that is offered in the execution of village initiatives.	16.36%	83.64%

Source: (Processed data, 2020).

Based on the Table 3 above, it is seen that there is 41% of the respondents involved in the village programs and the rest of 59% is not involve. It is also known that 43% of the respondent see and know about the village programs and 57% did not know. Moreover, for the funding information, most of the respondents already know that the fund is taken from the village fund. Meanwhile, the involvement level of the community in the process of planning, implementing, and monitoring on the use of the village fund is not yet run optimally. There is 39.26% of the total respondents stated that they were involved in the program arrangement process through village discussion. But, it should be noticed that more than half of the respondents (60.74%) claimed that they were not involved in the program arrangement process.

The level of transparency of village fund management by village organizers

The transparency level of village fund management is measured based on the community's perception that written in their questionnaire answers. The result on the openness of the information can be seen in following Table 4 below.

Table 4. The level of village fund management transparency by village organizers

No	The level of transparency in village fund programs management	Percentage	
		Yes	No
1.	The planning of village funding program has been delivered to all villagers	35%	65%
2.	The village funding program is informed to villagers through media information	18%	82%
3.	The budget of village fund program list in a year is presented openly to stakeholder and villagers	24%	76%

Source: (Processed data, 2020).

Table 4 above indicated that the transparency level in the process of planning, implementing, and monitoring of the village fund is not yet implemented well. This showed

by the respondents' answer who stated that they did not know about the program (65%). Moreover, only 18% of the total respondents who know about the village fund program through media information, and the rest of 82% claims know nothing. This means that the publication or information regarding the village fund program is lack. Last but not least, 76% respondents said that there is no budget or activity list that can be accessed by the villagers.

4. DISCUSSION

Referring to the results, most of the respondent said they do not know about the program and claimed they are not involved within the implementation of the programs. They also get less opportunity to participate in budget planning proposal. One of the respondents also said that in planning the village development, the villagers are seldom to be invited to the forum. Moreover, the implementation of the program is not fully involved the whole villagers and there is a tendency in giving the support fund to a certain group of people only. This is supported by Bustang et al. (2018) who stated that the community is not yet involved in participation, including the planning, the preparation of the document, and the surveillance of the fund use. They also found that the Head of the Village use and allocate the village funds without seeing on the community's needs. Moreover, the process of distributing social subsidy/assistance is not yet optimal for the community, because the system is still unclear and the government is seem not prepared (Hirawan, 2020). Besides, the level of financial literacy of Jayapura city resident is quite high (Erari et al., 2021), thus they can be involved or informed about the village fund programs. Therefore, it can be concluded that the villagers in Jayapura city are still having lack of information on the village fund management.

The programs funded by village funds are still limited to physical programs and less to non-physical programs, which causing the public ignorance. The tendency for publication is only done at the village office with information of the draft budget that has been prepared. However, in practice, throughout the year, the community was never invited to certain forums to discuss the disbursement of village funds or the progress of the program implementation. They were not even invited to evaluate the village funds. These make the community know nothing about the programs. Moreover, there is no regulation that organize, in a clear way, the community participation in monitoring the village development and this can lead to the corruption (Herdiana, 2019). Therefore, it still needs a further optimization for each programs that funded from the village fund.

5. CONCLUSION

Village-level fund management is representative of regional financial management within a country, especially for countries with regional autonomy and fiscal decentralization, such as Indonesia. Village-level funds are funds allocated to villages by the state and managed by the village government. The regional budget is expected to be felt by everyone, as the success of community fund management is representative of the success of national fund management. Based on the result and discussion above, it can be concluded that the regional government of Jayapura city has been allocated and shared the village fund during 2016-2019 to each village, including Tobati, Enggros, and Nafri village. The village fund is allocated and realised in the form of programs or activity, either the physical or non-physical activity. The community knowledge and involvement in the process of preparing

and managing village fund programs is least, thus further optimization is needed, which seen from the lack of community involvement in village discussion of the existence of programs disbursed from village funds. The level of transparency in the process of implementing village fund programs has not yet been fully implemented properly. It is seen from the lack of open information from the village administration to the community regarding the budget and activities sourced from village funds. The head of village fund management must follow the existing national or regional head of management. The researchers believe that if there is no transparent application of regional financial management to beneficiary groups, the quality of a country's regional financial management will definitely not work well, and it is even prone to public budget fraud.

REFERENCES

- Badan Penghubung Daerah Provinsi Papua. (2016). *Kota Jayapura*. Badan Penghubung Daerah Provinsi Papua Di Jakarta. Access on the internet: <https://penghubung.papua.go.id/5-wilayah-adat/mamta/kota-jayapura>.
- Betan, N. A. U., Nugroho, P. I. (2021). *Akuntabilitas dan Transparansi Pengelolaan Dana Desa*. "Jurnal Penelitian Dan Pengembangan Sains Dan Humaniora", 5(1).
- Bustang, B., Akhmad, A., Hakim, L. (2018). Effectiveness of Village Fund Management: A Case Study in Bone District, South Sulawesi. "Bappenas Working Papers", 1(2), 185–196. DOI: 10.47266/bwp.v1i2.19.
- Erari, A., Patma, K., Lamba, R. A. (2021). *Financial literacy on small and micro business of the indigenous people of papua in jayapura city*. "Modern Management Review", 26(4).
- Gayatri, G., Latrini, M. Y., Widhiyani, N. L. S. (2017). *Transparansi dan Akuntabilitas Pengelolaan Keuangan Dana Desa untuk Mendorong Kemandirian Masyarakat Pedesaan*. "Jurnal Ekonomi Kuantitatif Terapan", 10(2). DOI: 10.24843/JEKT.2017.v10.i02.p07
- Herdiana, D. (2019). *Kecenderungan Perilaku Koruptif Kepala Desa dalam Pembangunan Desa*. "Matra Pembaruan", 3(1). DOI: 10.21787/mp.3.1. 2019.1-11.
- Hirawan, F. B. (2020). *Optimizing the Distribution of the Social Assistance Program during the COVID-19 Pandemic*. "Centre for Strategic and International Studies". Access on the internet: <https://www.csis.or.id/publications/optimizing-the-distribution-of-the-social-assistance-program-during-the-covid-19-pandemic>.
- Karlinayani, S., Ningsih, E. S. (2018). Akuntabilitas Pemerintah Desa dalam Pengelolaan Anggaran Pendapatan dan Belanja Desa (Studi pada Alokasi Dana Desa di Kabupaten Gayo Lues). "Jurnal EMBA: Jurnal Riset Ekonomi, Manajemen, Bisnis Dan Akuntansi", 3(2).
- Lalolo, L. (2003). *Indikator dan Alat Ukur Prinsip Akuntabilitas, Transparansi dan Partisipasi*. Badan Perencanaan Pembangunan Nasional.
- Menkhoff, L., Rungruxsivorn, O. (2011). *Do Village Funds Improve Access to Finance? Evidence from Thailand*. "World Development", 39(1). DOI: <https://doi.org/10.1016/j.worlddev.2010.09.002>.
- Mursyidi, M. (2009). *Akuntansi Pemerintahan di Indonesia*. PT. Refika Aditama.
- Nadyastika, G., Siswanto, D. (2019). *The Management of Village Funds – Village Fund Policy Implementation (Case Study in Candirejo Village, Nganjuk Regency, East Java Province, Indonesia)*. "Proceedings of the Asia Pacific Business and Economics Conference (APBEC 2018)". DOI: 10.2991/apbec-18.2019.56.

- Obianuju, A. A., Ibrahim, U. A., Zubairu, U. M. (2021). *Succession planning as a critical management imperative: A systematic review*. "Modern Management Review", 26(4). DOI: 10.7862/rz.2021.mmr.26.
- Ratmino, R., Winarsih, A. S. (2005). *Manajemen Pelayanan*. Penerbit Pustaka Pelajar.
- Ruru, N., Kalangi, L., Budiarmo, N. S. (2017). *Analisis Penerapan Alokasi Dana Desa (ADD) dalam Upaya Meningkatkan Pembangunan Desa (Studi Kasus Pada Desa Suwaan, Kecamatan Kalawat, Kabupaten Minahasa Utara)*. "Going Concern : Jurnal Riset Akuntansi", 12(01). DOI: 10.32400/gc.12.01.17140.2017.
- Saragi, N. B. (2021). *Indonesia's Village Fund Program: Does It Contribute to Poverty Reduction?* "Jurnal Bina Praja", 13(1). DOI: 10.21787/jpb.13.2021.65-80.
- Sutiyono, G., Muluk, S., Mafira, T., Rakhmadi, R. (2018). *Indonesia's Village Fund: An Important Lever for Better Land Use and Economic Growth at the Local Level*. Climate Policy Initiative. Access on the internet: <https://www.climatepolicyinitiative.org/publication/indonesias-village-fund-an-important-lever-for-better-land-use-and-economic-growth-at-the-local-level>.
- Udjianto, D., Hakim, A., Domai, T., Suryadi, S., Hayat, H. (2021). *Community Development and Economic Welfare through the Village Fund Policy*. "The Journal of Asian Finance, Economics and Business", 8(1). DOI: 10.13106/jafeb.2021. vol. 8, no. 1.563.
- Wikipedia. (2021). *Daftar distrik, kelurahan, dan kampung di Kota Jayapura*. Access on the internet: https://id.wikipedia.org/wiki/Daftar_distrik_kelurahan_dan_kampung_di_Kota_Jayapura.

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ORGANIZATIONAL CULTURE DIMENSIONS AND EMPLOYEES' COMMITMENT

Presently, new issues are emerging in the area of employee commitment which is potentially impeding the performance of the majority of firms. This study seeks to investigate the effect of organizational culture (reward system, communication, and teamwork and management support) on employee commitment from the perspective of multiple Industries in Lagos State, Nigeria. The study is anchored on descriptive research design and the data were collected using cross-sectional survey methods from two hundred and sixty-nine (269) valid questionnaires. The data collected were analyzed with Pearson Product Moment Correlation and was further used to test the formulated hypotheses. The findings of the study showed that all the components of organizational culture are significantly related to employee commitments. On this basis, the study recommends that organizations should ensure that policy measures are put in place to guarantee that organizational culture dimensions are significantly improved upon in organizations in order to stimulate employees' commitment.

Keywords: organisational culture, reward system, communication, teamwork, management support employee commitment.

1. INTRODUCTION

There have been several debates in the literature on strategies and variables that may be used in the process of establishing and operating a functional and productive organization. Central to these variables birthed the concept of organizational culture and employee commitment (Acquah, Sarkodie, Baffoe, Lennox, Amon, Nunoo, 2020). The level of employee commitment and loyalty to their jobs can be reinforced through positive organizational culture which is usually evident in employees' feelings of pride, social inter-connectedness, entertainment and honour (Al-Roweitei, 2004; Agwu, 2013). Over the years, employee commitment had been a major focus in management and business research due to its capability and potentials of influencing labour turnover, performance and employee productivity. Acquah et al. (2020) observed that the willingness of employees to remain with a company can be measured by their level of commitment. Thus, employee

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commitment reflects the belief employees have in the vision, mission and goals of the organization which in effect can be applied towards striving for goals and objectives achievement (Newstrom, Davies, 2002; Niacker, 2008).

In today's competitive business environment, new challenges in the area of employee commitment is beginning to spring up which perhaps affects organizations from performing at maximum efficiency (Acquah et al., 2020). In many organizations, several ill-defined cultural practices have resulted to corruption, nepotism, and lack of transparency/accountability, inefficiencies, low productivity and misappropriation of corporate funds (Agwu, 2013). The absence of strong organizational culture has exposed most organizations to social vices that may affect employee commitment negatively and level of involvement in policy implementation.

Consequently, Al-Roweitei (2004) reports that reinforcing employee commitment can only be achieved through positive organizational culture. Organizational culture had been an important concept and strategy in bringing out desired outcome from employees such as commitment, satisfaction, loyalty, and turnover (Acquah et al., 2020). Nonetheless, studies have contended that organizational culture could exert substantial influence on employee commitment. Some are of the opinion that organizational culture is capable of influencing the thoughts, and feeling of employees (Acquah et al., 2020; Deal, Kennedy, 1982; Peters, Waterman, 1982). The study of Boon and Arumugam (2006) revealed that there is a significant relationship between organizational culture and employee commitment of semi-conductor organizations in Malaysia. In order words, when there is a successful implementation of organizational culture, then employees are more likely committed to their work which further bring about change initiatives in organizations. Researchers such as Meyer and Allen (1991), Ricardo and Jolly (1997), Lau and Idris (2001) and Adekola (2012) among others, identified and validated various dimensions of organizational culture to be: Training and development; reward/recognition; communication; innovation and risk taking; decision making; learning; team work; fairness and consistency. However, the study of Naser (2016) reported that only four dimensions of organizational culture namely: reward system, communication, team work and management support have significant impact on employee commitment. Hence, these four dimensions have been adopted for this study.

Despite the pool of literature on organizational culture and employee commitment, most of these literature focused on the holistic and combined effect of organizational culture on employee commitment (Boon, Arumugam, 2006; Drenth, Thierry, Wolf, 1988; Nystron, 1993; Akinbayo, 2010), whereas there is dearth of investigation on how each of these dimensions of reward system, communication, team work and management support can exclusively influence employee commitment and most especially from the multiple Industry perspectives in developing economies.

Therefore, this study seeks to determine the relationship between organizational culture on the strength of reward system, communication, and teamwork and management support and employee commitment from the perspective of multiple Industries in Lagos State, Nigeria.

The following research questions have been coined to address the study's perceived problem statement:

1.1. Research questions

- i. What relationship exists between reward system and employee commitment?
- ii. What relationship exists between communication and employee commitment?

- iii. What relationship exists between team-work and employee commitment?
- iv. What relationship exists between management support and employee commitment?

2. LITERATURE REVIEW

2.1. Conceptual framework

2.1.1. Organizational culture

Organizational culture does not have a single meaning or definition. The subject has been researched from several perspectives, from fields of sociology, anthropology down to applied disciplines of management science and organizational behavior. The following concepts are views of authors from the fields of applied sciences, and are more applicable to the scope of this study.

Robbins (2000) postulates that as a concept, culture has had a long and tested history. Some organizational researchers and managers have used it in the last decade to suggest the environment and procedures that companies build around their conduct of people or to refer to an organization's espoused values and credo.

Schein (1999) defines culture as a sequence of common basic principles developed by the group as it solved external adaptation and internal integration issues that have worked well enough to be considered valid, and thus the new members guided to perceive, think and incorporated into it.

Mullins (1999) defines organization culture as a collection of activities, values, opinions, strategies, and attitudes that provide a dominant context for what an organization does and thinks. Aswathappa (2003) refers to culture as a "complex whole of knowledge, belief, art, beliefs, law, custom and other skills and habits acquired by man in a society." While Collins and Porras (2000) note that organizational culture is a system of common sense kept by members that distinguishes one organization from another. They accept that these common definitions are a set of key features, which include and that seven primary features can capture the corporate values and essence of an organization's culture. Such characteristics are **Innovation and risk-taking** i.e., the degree to which staff are empowered to be inventive and take risks; **Attention to detail**, the degree to which professionals are predictable demonstrates a thorough understanding of correctness and meticulous attention to detail.; **Outcome orientation**, the extent to which management focuses on outcomes or performance rather than the strategies and procedures used to achieve such outcomes; **People orientation**, the extent management decisions take into account the effects of outcomes on people within the company; **Team orientation**, effectiveness of tasks coordinated around teams and not individuals; **Aggressiveness**, i.e., the degree to which individuals are competitive towards organisational goals and **Stability**, the degree to which organizational operations stress the preservation of the status quo as opposed to development. Each of these features occurs on a scale from low to high. The organization's assessment of these seven elements offers a composite image of the company's culture.

Moorhead and Griffin (1995), developed some cultural principles, which are either general or specific to peculiar situation. These values help staff understand how to act within organizations (Moorhead and Griffin 1995).

2.2. Dimensions of organizational culture

As defined by Naser (2016), the four dimensions of organizational culture that have the greatest impact on the behavior / commitment of employees includes communication, rewards recognitions, training and development, etc.

2.2.1. Teamwork

For productivity and the organizational commitment of workers in contemporary workplaces, the concept of teams and teamwork is increasingly relevant (Adebanjo, Kehoe, 2001). Teamwork facilitates the fulfillment of affiliate needs within the work environment and has been directly linked to organizational engagement (Karia, Asaari, 2006). A case study by Osland (1997) in Central America shows that working together within a production unit contributes to improved workers attitudes. Anschutz (1995) concluded that teamwork commitment, continuous learning and flexibility were the key drivers of organizational performance in establishing a partnership between workers and managers. Karia and Ahmad (2000) examined the impact of the Empowerment and Teamwork (E&T) practices on 104 workers in five Malaysian public and private organizations who have adopted some sort of E&T practices; they noted that an organization with a certain degree of teamwork experienced an increase in the organizational commitment of its employees. Silos (1999) said that how people work together is the key to Japanese success and also suggested that teamwork contributes to more dedication and employee involvement within the company.

2.2.2. Organizational communication

Organizational communication refers to the process by which individuals and entities function in a variety of ways and at different locations to achieve organizational goals (Brunetto, Farr-Wharton, 2004). Several authors note that communication is important for strengthening employee commitment and producing positive results (Goris et al., 2000). Stuart (1999) argued that communication can affect the morale of workers, which in turn affects the commitment of the organizations. In addition, organizational engagement is greatly influenced by the way the organizational goals are communicated to employees-and the role of employees in advancing these goals. Robbins (2001) suggested that there is a connection between the quality of the contact between employee-management and the resulting degree of employee engagement and commitment.

2.2.3. Organizational reward systems

Employee engagement is one of the main factors influencing the performance of every company. Organizations rank in the top percentile with a motivated workforce. The factors that motivate people at work are incentives, job characteristics, pay, training and growth, job security, working conditions, acknowledgement and appreciation, performance assessment, leadership, promotion, etc. Financial incentives are a standard way of rewarding staff. But there are other variables that influence the degree of motivation of the employees in addition to wages. Depending on the individual, there are different needs of the employees to be met in order to bring more effort into their work.

2.2.4. Management support

Management support for employees plays an important role in employee commitment. Both non-profit and for profit organizations need effective managers or leaders to motivate employees (Drucker, 1992). Employees see the managers who evaluate their commitment

and report to higher level management as representatives of the organization. As a result, employees perceive the support from their managers as management support (Eisenberger, 2002). Employees who consider their manager to be qualified, trustworthy, and whose managerial style they like are more inclined to share the organization's values and objectives, and to value the organization (Gaertner, Nollen, 1989; Benkhoff, 1997). Managers with a democratic management style involve employees in the decision-making process and as a result employees show better commitment (Savery, 1993; Dick, Metcalfe, 2001). Research shows that there is a linear positive relationship between management support and employees' commitment: the higher the level of management support that employees feel they receive, the higher their levels of employees' commitment (Porter, Steers, Mowday, Boulian, 1974; Dick, Metcalfe, 2001). Conversely, lower levels of management support reduce employees' commitment, lower levels of performance and higher levels of turnover, absenteeism, and stress (Shanock, Eisenberger, 2006). Bureaucratic organizations, in which management support is by definition low, have relatively low levels of employees' commitment (Dick, Metcalfe, 2001).

Training and development can be defined as the process of providing employees with new skills or supporting those deficiencies in correct performance (Poh, 2001). Past research studies have provided substantial evidence that training and development foster skills advancement and lead to greater commitment, well-being and sense of belonging, thus directly enhancing the company's competitiveness (Acton & Golden, 2000). Bartlett (2001) investigated the association between employee attitudes towards training and organizational engagement with a study of 337 registered nurses from five hospitals, using the social exchange hypothesis as a guide for the relationship research. He found that the perceived access to training, the social impact of training, the incentive for learning and the perceived benefits of training lead to organizational commitment in a positive way. An efficient training and development plan will create more favorable attitudes and loyalty for staff, according to Cherrinton (1995), and enable employees to strengthen and promote themselves. Furthermore, Deming (1986) emphasized the importance of training and growth for continuous updating and improvement, identifying one source of human motivation at work as intrinsic motivation: the desire to grow; to learn and to improve oneself. Cherrington (1995) also found that most learning environments are profoundly improved due to the satisfaction and commitment associated with the production of new knowledge or skills.

2.3. Employees' commitment

The devotion of employees relates to the feeling of voluntary participation in organizational activities by employees. Commitment is a method of recognizing workers with organizational priorities that may have several constituencies on the top management, shareholders, unions, and or the general public of the company (Cooper, 2001). Omoniyi and Adedapo (2012) described commitment as a force that binds a person to a course of action related to a particular objective; while Cooper in the same year described commitment as 'the mechanism by which the interests of an entity and those of its individual become increasingly combined or congruent;' which also conveyed that it requires the readiness of workers to achieve goals in collaboration with others through their individual employment.

Therefore, employee commitment is characterized as the intensity of individual identification with and participation in a specific organization (Omoniyi, Adedapo, 2012).

Robbins (2001) also defined employee commitment as 'a situation in which the employee identifies with a particular organization and its goals and wishes to remain a member of the organization'.

Omoniyi and Adedapo (2012) reported that it can be assumed that greater employee commitment with the company increases job satisfaction which in return increases individual efficiency. They also demonstrated that dedication decreases turnover and improves efficiency. Employees with high organizational commitment are thought to work harder to contribute to the success of the company.

In this case, Liou (2008) attributes an organization's success to the commitment and involvement of employees. She said a high atmosphere of commitment improves retention rates for staff, decreases operating costs and enhances employee efficiency and productivity. Newstrom and Davies (2002) define employee commitment as the degree to which an employee identifies with the business and wishes to continue to participate actively. It is a measure of the willingness of workers to stay with an organization in the future, like a strong magnetic force that attracts one metallic object to another. This also reflects the employees' faith in the purpose and objectives of the organization, the willingness to invest effort in its achievement, and the desire to continue to work there. Long-term staff, those who have had personal success in the business and those who work with a dedicated community of employees are usually more engaged. Luthans (1995) explains that organizational commitment as an attitude is most frequently described as:

- i. A desire on behalf of the company to exert high levels of effort;
- ii. A deep desire to remain a part of a given organization;
- iii. Confidence in the beliefs and value of the company and its goals

It has been accepted that commitment is a vital ingredient of organizational culture and it is an attitude regarding the employees loyalty on the organisation and of course the mechanism for those that are participants in the workplace showing how they communicate their need to the organisation. Various personal (age, organizational tenure, and systems such as positive or negative affectivity, or internal or external control attributions) and organizational (Job design and leadership style of the supervisor) variables assess the attitude of organizational commitment. After making the initial decision to join an organization, non-organizational variables, such as the availability of alternatives, can also affect subsequent participation. A three component model proposed by Meyer and Allen (1996) is gaining that support because of this multidimensional nature of organizational commitment. As follows, the three dimensions are:

- ***affective commitment*** includes the emotional connection of workers to, affiliation with, and participation in the organization;
- ***continuance commitment*** requires dedication depending on the costs associated with the employee leaving the company; and
- ***normative commitment*** requires the feelings of responsibility of the workers to remain within the organisation.

Pareek (2004) defines organizational commitment as the sense of continued association with the organization by an individual, appreciation of the values and goals of the organization and willingness to help the organization achieve those goals and values.

Dedicated staff, according to Madigan, Norton and Testa (1999) should work diligently, conscientiously, have value, endorse the company's programs or goods and seek quality improvement. In exchange, they expect a working environment that promotes growth and

empowerment, enables a better balance between work and personal life, provides the resources needed to meet the needs of customers, and provides their education and training as well as that of their colleagues.

Hellriegel (2001) stresses that organizational commitment goes beyond loyalty to or active contribution to the achievement of organizational objectives. Organizational commitment indicates a wider approach to work than satisfaction with work because it refers to the whole company rather than just the task. Moreover, commitment is usually more enduring than satisfaction, since it is less likely to be modified by everyday events.

2.4. Theoretical framework

2.4.1. Social Exchange Theory of Commitment

Social Exchange Theory (SET) is one of the most common Employee Commitment Theories. SET describes the development of obligations through interactions between parties in a state of mutual interdependence. SET's basic concept is to build overtime relationships into anticipation, trustworthy and reciprocal commitment as long as both parties follow such exchange rules. The rules of exchange contain principles of mutuality, such that one party's actions contribute to reaction by the other party. Let's suppose, when employees are given economic and other resources by their employers, they feel appreciated by responding kindly and recompense employers.

It is known as employee commitment between workers and employers in a two way relationship. One way is from the employee side to reimburse their employers by job engagement degree. Organizations will completely put workers into their work characters or positions, and devote more physical, cognitive, and emotional resources to them. Responding to employers' behavior is a psychological approach for workers. Employees are most difficult to improve their level of performance; thus, employees should trade their commitment for organizational benefits and resources. The theory of social exchange shows why workers get engaged and disengage with their employment and employers. If a company provides its workers with resources, they feel appreciative of reimbursing employers with excessive engagement.

According to Kahn's description, workers feel grateful and hold themselves more intensively in the performance of their job roles as reward for their employers (Saks, 2016). It increases the connection of trustworthiness and trust. Therefore, workers with a higher degree of engagement are likely to have a strong quality relationship with their companies, and would like to report to employers' positive actions and objectives. In comparison, when employers fail to offer certain opportunities or services to the workforce, they are more likely to disengage from their job positions. Accordingly, the degree to which an employee requires cognitive, emotional, and physical support depends on economic and socio-emotional services obtained from employers (Saks, 2016). The literature clarified the value of involving workers in work.

The organization's productivity relies on employee satisfaction or well-being, according to Xanthopoulou et al (2015). If wellness is positive and operational, it would have a positive impact on employee engagement, which will enable employees to perform according to organizational standards and goals. The theory of social exchange was used to explain how obligations produced by interactions between parties, which are in the state of mutual interdependence, embrace some sort of exchange, re-engage and commit in an

organization. The interdependence here was the employer-employee relationship, and how they embrace the three modes of exchange under review.

2.5. Empirical review

2.5.1. Organizational reward system and employee commitment

Some previous studies were examining the effect of affective behavior as a mediator across different variables. Dinc and Plakalovic (2016) examined the mediating role of an affective commitment between climate care and employee performance. Camelo-Ordaz et al., 2011, discovered that HRM activities do not directly affect information exchange but have a positive effect on it by mediating the role of affective commitment. Martin-Perez and Martin-Cruz further discussed the role of affective involvement as mediator between organizational incentives and information transfer. This research explores the indirect effect of organizational incentives on organizational efficiency through an affective intermediary commitment (Camelo-Ordaz et al., 2011; Dinc, Plakalovic, 2016; Martin-Perez, Martin-Cruz, 2015).

Rewards provide a solution to inspire and direct employee behaviour. Hence, incentives create affective loyalty by inspiring employees to put their energies into the company and dedicate their time to it (Martin-Perez, Martin-Cruz, 2015; Mowday et al., 1979).

In all organizations, incentives / rewards play an important role in creating and sustaining the affective commitment that enhances employee efficiency and job stability (Malhotra et al., 2007; Wang, 2004; Young, Worchel, Woehr, 1998). Organizational incentives / rewards / bonuses provide both advantages to their organizations' employees (Herzberg, 1966; Kalleberg, 1977; Mottaz, 1988). Similarly, Shannawaz and Hazarika (2004) evaluated organizational culture on OCTAPACE Scale of Pareek (1997) in two hospitals and established dimensions of organizational culture as substantial predictors of organizational commitment.

In a study designed to assess the impact of reward and recognition on job satisfaction and employee motivation in both private and public sector organizations in Pakistan, Danish and Usman (2010), it was found that rewards and recognition contributed positively to motivation. They concluded that good reward / incentive management leads to increased employee productivity and commitment. These findings are similar to the results of Ghorbani and Ladoni (2013), who conducted a survey of 84 manufacturing managers, marketing managers and senior managers from home appliance companies in Iran to evaluate the effect of system incentive mechanisms on the development of new products. Their study results showed that a positive and statistically significant correlation existed between reward management and the development of new products.

They concluded that managers can influence the development of new products through the joint creation, implementation, and design of successful incentive systems. In a study of 84 employees of the Kenya Power and Lighting Company (KPLC) in Nakuru, Njanja et al. (2013) examined the impact of compensation on employee efficiency. The results of the study found that financial compensation had no substantial effect on the productivity of workers. The study concluded that businesses should aim to take into account the needs of their employees to incorporate the right motivational strategies.

Dalvi and Ebrahimi (2013), among 180 Isfahan food industry managers in Iran, examined the impact of reward on sales and marketing cooperation. The findings from their study showed that sales and marketing department organizational benefits had a negative

effect on the employees' morale. They came to the conclusion that organizations should build their compensation plans based on an employee's ability, dedication and productivity to reduce organizational conflicts. Furthermore, they indicated that incentive systems should be tailored to meet the needs of workers. Roberts (2005) found that a positive relationship exists between rewards, recognition and motivation in an analysis of the relationship between rewards, recognition and motivation of 1373 insurance company employees in the Western Cape. He concluded that businesses should review their current incentive systems to ensure greater employee engagement and enhanced work performance.

In a study of 100 employees who were randomly selected from two tourism businesses in Malaysia, Gohari et al (2013) explored the relationship between rewards and employee efficiency. Their study results showed a good relationship between the incentives and the employees' performance. The study concluded that managers should consider employees' incentive needs before introducing any compensation management strategy to increase their motivation while ensuring that their organizations achieve their objectives. Similarly, in a survey of 1000 workers from various industries in Korea, Joo (2010) explored the impact of the perceived organizational learning culture on organizational participation. Study results have shown that the organizational learning culture has an important impact on organizational involvement. He concluded that managers and human resource professionals can strengthen employee organizational commitment by designing, developing and implementing the required human resource strategies. Hence, the following null hypothesis was developed:

H₀: There is no significant relationship between reward system and employee commitment.

H₁: There is significant relationship between reward system and employee commitment.

2.5.2. *Communication and employee commitment*

Employee commitment cannot be effective to the extent of contributing very well to the achievement of an organisation if there is little or no effective communication. This means that the levels both horizontal and vertical communication must be taken seriously for the efficiency of operation in an organisation. If need be, let there be decentralization depending on the structure of the organisation to allow free flow of communication from the top to bottom as well as from one functional level to the other, this encourages smooth operation and relationship within the organisation and between persons (Miller, 1993). It reduces noise and other irrelevant things that are capable of truncating the goal of the enterprise. Effective communication enhances commitment and brings job satisfaction at all level of the organisation. Hence, the following null hypothesis was developed:

H₀: There is no significant relationship between communication and employee commitment.

2.5.3. *Teamwork and employee commitment*

In a study conducted by Boakye (2015), using Komfo Anokye Teaching Hospital and Ejisu Government Hospital on the effect of teamwork on employee performance, several team performance measures were examined including team confidence, acknowledgement, and rewards. To evaluate the relationship between the two variables, that is, teamwork and organizational efficiency, the analysis used correlational techniques. The study found that teamwork contributed positively and significantly to success in the organization. In another

report, Manzoor, Ullah, Hussain and Ahmad (2011) used the staff of the higher education department of Khyber Pakhtoon Khawa, Peshawar Province of Pakistan to work on the impact of teamwork on employee results. The study that was developed as a descriptive survey design found that the relationship between teamwork and employee performance is positive and important.

In a study of Jones, Richard, Paul, Sloane, and Peter (2007) on the impact of team building in the organization, it was found that as compared to individual effort, workers working within the team would generate more production. Also, in another study by Ingram (2000) on linking teamwork to success, it has been found that a successful manager is the one who assigns tasks in a group or team type to his / her employees in order to take the full production from the employees. In another study conducted by Conti and Kleiner (2003) about how teamwork in an organisation can be strengthened, it was found that teams offer greater commitment, challenges and a sense of achievement. It was concluded that team organizations would recruit and retain the best individuals as workers.

Walid and Zubair (2016) carried out a study on the influence of successful teamwork on employee performance in a related growth, using the entertainment company as the study area in Kuala Lumpur, Malaysia. The analysis followed descriptive research design as well as exploratory design. The outcome showed that good communication, confidence level, leadership and transparency have a positive and important impact on the performance of employees, while intrapersonal skills and cohesion have no impact on the performance of employees. Similarly, Agwu (2015) conducted a study in the Liquidified Natural Gas Plant, Bonny, Nigeria to evaluate the impact of teamwork on employee efficiency. Descriptive research architecture was accepted in the report. Data analysis findings suggest that there is a major connection between teamwork and the success of employees. It was concluded that it is important to maintain the current team building in the factory.

Ooko (2013) conducted a study on the effect of teamwork on achieving goals in organizations in Kenya, using SOS children's village, Eldoret was the area of study. The analysis adopted descriptive architecture of the report. The study found that by acknowledging success, promotions, healthy working conditions and equal incentives and remuneration, job satisfaction was to be achieved. If done correctly, this was to affect team performance. It was concluded that SOS did not have good teamwork despite the employees being conscious of how much they can accomplish by working in teams. Teseema and Soeters (2006) also conducted a study on team promotion practice in an organization, and found that there is a positive relationship between team promotion practice and perceived employee efficiency. Hence, the following null hypothesis was developed:

H₀: There is no significant relationship between team-work and employee commitment.

H₁: There is significant relationship between team-work and employee commitment.

2.5.4. Management support and employee commitment

Dawley, Andrews, and Bucklew (2008) found perceived organizational support to be the stronger predictor of organizational engagement particularly when compared with superior mentoring and guidance. That has been demonstrated by the social exchange theory. From this point of view, social exchange theory implies that by subtracting their expenses from the advantages it offers, expatriates can assess the relative value of their partnership with the organization. The costs incurred at the university would include the time and resources of the expatriate. While the compensation would not only be monetary but would also include the resources offered by the University.

This will result in a positive partnership if the assistance given were greater than the time and effort exerted, which is likely to translate into positive behavior such as better results and higher engagement. Subsequently, perceived organizational help is further appreciated by employees if the assistance and benefits are based on the initiative of the company itself and not on external or internal factors such as unions or legislative regulations. This is because they see the company as being sincerely concerned for the well-being of expatriates. Support for mentors and administrators can also be seen as being inspired and thus less respected by personal interests.

In a study to see the moderating impact on perceived organizational support and commitment of the locus of control and work autonomy, Aube, Rousseau, and Morin (2007) found that the more control an employee feels or the more power they have over their task, the weaker the impact on their affective commitment of perceived organizational support. This study thus authenticates the value of perceived organizational help as an impetus to the affective and normative commitment of employees (Aube, Rousseau, Morin, 2007). It is argued that if employees obtain high levels of organizational support, it would have an effect on increasing affective and normative commitment as it will be an indicator not only of how much the organization supports them, but also of their values. In another study by Gupta, Vohra, and Bhatnagar (2010), they found that autonomy was negatively related to all of the components of commitments, and concluded that organizations need to focus on their support activities if they wish to affect organizational involvement. All these findings corroborate Rhoades and Eisenberger's (2002) claim that perceived organizational support is positively related to affective involvement.

Currie and Dollery (2006) found, in a separate police-personal survey that continued commitment to being faithful to its sense as a condition of cost-benefit analysis was related to tenure instead. The longer the term, the more resources and cash the worker has invested in the company. They thus demonstrate a stronger commitment to continuity, since the costs of leaving the company and moving to a new environment would be less attractive than sticking to the same company. As the employees had less perceived organizational support, the research also found evidence for the lack of affective commitment. The study found that organizational commitment decreased as age, rank and years of service increased when looking at organizational participation as an institution as a whole. This is because employees assume the organization's level of support declines as the employee gains seniority.

The literature indicates that affective commitment is the one component of significant interest among the three components of organizational commitment and is also the one component that has drawn the most studies. Jain, Giga, and Cooper (2008) concluded that well-being or organizational support has been shown to be positively connected to affective and normative commitment and to continued commitment. Since continued commitment is the situation under which workers stay with the organization because they believe they need it, higher organizational support will reduce the feeling of having to stay with the organization and increase the decision to stay with the organization because they want it or believe it should.

Employees with a dedication to rules and consistency are more likely to contribute less so long as they earn the benefits, they feel are due. As such research has centered on affective commitment, what impacts it has and how it can be affected and increased. Nevertheless Suliman and Iles (2000) propose that continuing commitment in organizations

should be promoted as it is a productive event as the overall contribution is of greater importance. Hence, the following null hypothesis was developed:

H₀: There is no significant relationship between management support and employee commitment.

3. METHODOLOGY

3.1. Research design

The design adopted for this research is descriptive research design and data were collected through cross-sectional survey methods. This method is mostly used to research what happens in a specific group/community at a given time. The study design is primarily intended to assess the relationship between the selected dimensions of organizational culture and the commitment of employees with specific reference to Nigerian Aviation Handling Company Plc (NahcoAviance), Skyway Aviation Handling Company Plc.(SAHCO Plc.) and Mutual Benefits Assurance Company Limited, all located in Lagos State. A cross-sectional survey gathers data at one point in time to draw inferences about a population of interest

3.2. Population of the study

The population of the study is put at eight hundred and twenty (820). These were further distributed across the selected multiple Industries in Lagos State, Nigeria. The population comprises all members of staff of Nigerian Aviation Handling Company Plc (NahcoAviance) with 350 employees, Skyway Aviation Handling Company Plc with 359 employees and Mutual Benefits Assurance Company Limited with 111 employees.

3.3. Sample size and techniques

The sample size of this study was put at two hundred and sixty-nine (269) determined by the Taro Yamane formula. The sample size was further approached using simple random sampling technique. This technique draws a portion of population such that each member of the population has an equal chance for participation and chance of selection.

3.4. Methods of data analysis

Data collected from field survey were analyzed using descriptive and inferential statistic. The descriptive statistic focused on frequency tables and the inferential statistic used was correlation analysis with the support of the Statistical Package for Social Sciences (SPSS version 20.0).

4. RESULTS AND DISCUSSION

This section focuses on presentation, analysis and interpretation of data collected from the study sample size. The result of data analyzed using the inferential statistics have been presented in the form of table below.

4.1. Test of hypotheses

These hypotheses were verified using the correlation analysis with the support of the (SPSS version 20.0 – Statistical Package for Social Sciences) and the view to determining their acceptance or rejection of some variables and determining the relationship/connection that exist amongst other variables.

Table 1. Correlation matrix (N= 200)

		S						
		REWsY	Org Comm	Teamw	MgtSuprt	Affet	Cont	Nom Comt
REWsY	Pearson Correlation	1						
	Sig. (2-tailed)							
OrgCom	Pearson Correlation	.540**	1					
	Sig. (2-tailed)	.000						
TeaWk	Pearson Correlation	.463**	.462**	1				
	Sig. (2-tailed)	.000	.000					
MgtSuprt	Pearson Correlation	.467**	.447**	.524**	1			
	Sig. (2-tailed)	.000	.000	.000				
AfecComt	Pearson Correlation	.528**	.328**	.399**	.427**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
ContComt	Pearson Correlation	.388**	.261**	.185**	.132	.381**	1	
	Sig. (2-tailed)	.000	.000	.009	.063	.000		
NomComt	Pearson Correlation	.311**	.224**	.121	.028	.270**	.399**	
	Sig. (2-tailed)	.000	.001	.088	.696	.000	.000	1
Comt	Pearson Correlation	.548**	.362**	.318**	.271**	.745**	.816**	.691
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	200	200	200	200	200	200	200

Hypothesis one

H_0 : There is no significant impact of organizational reward system on employees' commitment in the selected organizations in Lagos.

In analyzing the above hypothesis, the result of the Pearson Product Moment Correlation test on Table 1 above was considered.

A close look at the table revealed is a Pearson correlation coefficient results, (r) (.528**). This implies that there is a positive association between organizational Reward system and employees' commitment in the selected organizations in Lagos state the p of value 0.000, which is less than the critical value ($p < 0.05$) is an indication that the association is substantial.

Conclusion: There is a significant impact of organizational reward system on employees' commitment in the selected organizations in Lagos.

Hypothesis Two

H_0 : There is no significant influence of organizational communication on employees' commitment in the selected organizations in Lagos.

Table 1 revealed that the correlation coefficient (r) is (.224**). This infers that the association that occurs between organizational communication and employee commitment in the selected organizations in Lagos is strong and positive. In addition, the p value is 0.001, which is less than the critical value (i.e $p < 0.05$) is an indication that the association is substantial.

Conclusion: There is a significant influence of organizational communication on employees' commitment in the selected organizations in Lagos.

Hypothesis Three

H_0 : *There is no significant relationship between organizational teamwork and employees' commitment in the selected organizations in Lagos.*

A close look at Table 1 revealed a correlation coefficient (r) is (.185**). This infers that the association that occurs between organizational teamwork and employees' commitment in the selected organizations in Lagos is solid and positive. In addition the p value is 0.009, which is less than the critical value (i.e $p < 0.05$). This is an indicating of a substantial association between the variables, the null hypothesis (H_0) was rejected.

Conclusion: There is a significant relationship between organizational teamwork and employees' continuance commitment in the selected organizations in Lagos.

Hypothesis Four

H_0 : *There is no significant relationship between management support and employees' commitment in the selected organizations.*

Table 1 revealed a Pearson correlation coefficient result of r (.271**) between these variables. This infers that the association that occurs between management support and employees' commitment in the selected organizations in Lagos is robust and positive. In addition, the p value is 0.000, which is less than the critical value (i.e. $p < 0.05$) indicating that the association is substantial.

Conclusion: There is a significant relationship between management support and employees' commitment in the selected organizations.

4.2. Discussion of findings

A close look at the Pearson Product Moment Correlation test (PPMC) of Hypothesis One as evident on the correlation matrix Table 1 for employees' commitment against organizational reward system showed that the Pearson correlation coefficients of the explanatory variable was (.528**) (+ve and significant). Therefore, there is a major impact of organizational reward system on employees' commitment in the selected organizations in Lagos. This is in line with Molahosseini, Kahnouji, Shamsiyeh, and Kahnouji (2014) that employees' conduct at all levels of the company is influenced by the conduct of managers who benefit from their ability to use resources. Managers may then use incentives to inspire employee behavior and thereby produce the necessary organizational performance. Armstrong (2012) concluded that, because workers get a sense of collective benefit, desired motivation is easily and efficiently accomplished when incentives are well handled.

Result of Hypothesis Two as revealed in the result on Table 1 indicated that the Pearson correlation coefficients of employees' commitment against the organizational communication was (.224**). Since the correlation coefficients was positive and significant,

H₀ was rejected and H₁ was accepted which stated that there is a substantial influence of organizational communication on commitment of employees in the particular organizations in Lagos. This is in tandem with Miller (1993) that employee commitment cannot be effective to the extent of contributing to the achievement of an organisation if there is little or no effective communication.

In the same vein, Hypothesis Three using results on Table 1 revealed a Pearson correlation coefficient of (.185**) for employees' commitment as against organizational teamwork. Since the correlation coefficients was positive and noteworthy, H₀ was rejected and H₁ was accepted. Teamwork is vital in virtually every company in today's global business climate mainly for complex projects that require different skill sets (Samson, Daft, 2003).

Result of Hypothesis Four as depicted in the result of the management support on Table 1 indicated that the Pearson correlation coefficient of employees' commitment against the management support was (.271**). Since the correlation coefficient was positive and significant, H₀ was rejected and H₁ was accepted which stated that there is a substantial association between management support and employees' commitment in the particular organizations. Studies have indicated that management supports and employee commitment to the organization are relatively linked. Dawley et al. (2008) found perceived organizational support to be the stronger predictor of organizational engagement particularly when compared with superior mentoring and guidance.

5. CONCLUSION AND RECOMMENDATIONS

Based on the results from the hypotheses tested, the study established and corroborate with the study of Naser (2016) that reward system, communication, team work and management support have significant impact on employee commitment. The study further revealed that these dimensions could independently affect employee commitment apart from its joint effect which serves to be the study gap in literature. Hence, there is significant relationship between organizational reward system and employees' commitment; there is a significant relationship between organization communication system and employees' commitment; there is a significant relationship between teamwork and employees' commitment; and lastly, there is a significant relationship between management support and employees' commitment.

Based on the conclusions, the study further proposed the following recommendations that Organizations should ensure that policy measures are put in place to guarantee that organizational culture dimensions are significantly improved upon in organizations in order to promote employees' commitment. Through this employees are motivated to provide quality service to the organizations and nation in general.

Organizations should carry out a periodic audit of the organizational culture dimensions in order to identify area(s) for improvement on one hand and also to appraise employees' commitment of their employees in order to continue to enjoy highly motivated work forces that will guaranty quality service for the general public.

REFERENCES

- Acquah, H. E., Sarkodie, N. A., Baffoe, E., Lennox, A., Amon, D. B. N., Nunoo, J. (2020). *Influence of Organisational Culture on Employee Commitment: Evidence from Environmental Protection Agency in Ghana*. "International Journal of Technology and Management Research", 5(3).
- Agwu, M. O. (2013). *Organizational culture and employee's commitment in Bayelsa State Civil Service*. "Journal of Management Policies and Practices", 1(1).
- Boakye, E. O. (2015). *The impact of teamwork on employee performance*, University of Ghana.
- Akinbayo, T. (2010). *Work family role conflict and organizational commitment among industrial workers in Nigeria*. "Journal of Psychology and Counselors". July 10, Vol. 2(1).
- Al-Roweitei, F. (2004). *Formulating the mission, vision, and values of modern corporations*. Access on the internet: <http://fm.jsad.net/printthread.php>.
- Armstrong, M. (2012). *Armstrong's handbook of human resource management practice*. New York, NY: Kogan Page Publishers.
- Aube, C., Rousseau, V., Morin, E. M. (2007). *Perceived organizational support and organizational commitment: The moderating effect of locus of control and work autonomy*. "Journal of Managerial Psychology", 22(5).
- Boon, O.K., Arumugam, V. (2006). *The Influence of Corporate Culture on Organizational Commitment: Case Study of Semiconductor Organization in Malaysia*. "Sunway Academic Journal", 3.
- Camelo-Ordaz, C., García-Cruz, J., Sousa-Ginel, E., Valle-Cabrera, R. (2011). *The influence of human resource management on knowledge sharing and innovation in Spain: the mediating role of affective commitment*. "The International Journal of Human Resource Management", 22(7).
- Conti, B., Kleiner, B. (2003). *How to increase teamwork in organization*. "Journal of Quality", 5(1).
- Currie, P., Dollery, B. (2006). *Organizational commitment and perceived organizational support in the NSW Police*. "Policing: An international Journal of Police Strategies & Management", 29(4).
- Dalvi, M., Ebrahimi, H. (2013). *Investigating the effects of reward on the cooperation in the sale and marketing department from managers' perspective (Isfahan Food industries Case Study)*. "International Journal of Academic Research in Business and Social sciences", 3(1).
- Danish, R., Usman, A. (2010). *Impact of reward and recognition on job satisfaction and motivation: An Empirical Study from Pakistan*. "International Journal of Business and Management", 5(2).
- Dawley, D. D., Andrews, M. C., Bucklew, N. S. (2008). *Mentoring, supervisor support, and perceived organizational support: What matters most?*, *Leadership & Organization Development Journal*, 29(3).
- Deal, T. E., Kennedy, A.A. (1982). *Corporate cultures*. Reading, MA: Addison-Wesley.
- Dick, G., Metcalfe B. (2001). *Managerial factors and organizational commitment – a comparative study of police officers and civilian staff*. "International Journal of Public Sector Management", 1478(2).
- Dinc, M. S., Plakalovic, V. (2016). *Impact of caring climate, job satisfaction, and affective commitment on employees' performance in the banking sector of Bosnia and Herzegovina*. "Eurasian Journal of Business and Economics", 9(18).

- Drenth, P. J. D., Thierry, C., Wolff, C. J. (1998). *Organizational psychology*, 2nd Edition. London: Psychology Press.
- Ghorbani, H., Ladoni, T. (2013). *A Study of the Effect of Reward system's Mechanisms on New Product Development considering the Mediating Role of Knowledge-Sharing (Case study: Home Appliances Province Manufacturing Companies in Esfahan)*. "International Journal of Academic Research in Business and Social Sciences", 3(11).
- Gohari, P., Ahmadloo, A., Boroujeni, M., Hossainipour, S. (2013). *The relationship between rewards and employee performance*. "Interdisciplinary Journal of Contemporary Research in Business", 5(3).
- Gupta, M. A., Vohra, N., Bhatnagar, D. (2010). *Perceived organizational support and organizational commitment: The mediational influence of psychological well-Being*. "Journal of Business and Management", 16(2).
- Herzberg, F. (1966). *Work and the nature of man*. Cleveland, OH: World.
- Homans, M. (2014). *Women writers and poetic identity*. Princeton University Press.
- Jain, A. K., Giga, S. I., Cooper, C. L. (2009). *Employee well-being, control and organizational commitment*. "Leadership and Organizational Development Journal", 30(3).
- Jones, A., Richard, B., Paul, D., Sloana, K., Peter, F. (2007). *Effectiveness of team building in the organization*. "Journal of Management", 5(3).
- Joo, B. (2010). *Organizational commitment for knowledge workers: The roles of perceived organizational learning culture, leader-member exchange quality and turnover intention*. "Human Resource Development Quarterly", 21(1).
- Kalleberg, A. L. (1977). *Work values and job rewards: A Theory of Job Satisfaction*. "American Sociological Review", 42(1).
- Malhotra, N., Budhwar, P., Prowse, P. (2007). *Linking rewards to commitment: an empirical investigation of four UK call centres*. "The International Journal of Human Resource Management", 18(12).
- Manzoor, R., Ullah, H., Hussain, M., Ahmad, Z. M. (2011). *Effect of teamwork on employee performance*. "International Journal of Learning and Development", 1(1).
- Martin-Perez, V., Martin-Cruz, N. (2015). *The mediating role of affective commitment in the rewards – knowledge transfer relation*. "Journal of Knowledge Management", 19(6).
- Miller, D. (1993). *Some organizational consequences of CEO succession*. "Academy of Management journal", 36(3).
- Mollahosseini, A., Kahnouji, K., Shamsiyeh, A., Kahnouji, A. (2014). *An assessment of the relationship between managers' power resources and employees' commitment of governmental organizations in Rafsanjan South Eastern Iran*. "International Journal of Academic Research in Economics and Management Science", 3(1).
- Mottaz, C. J. (1988). *Determinants of organizational commitment*. "Human Relations", 41(6).
- Mowday, R. T., Steers, R. M., Porter, L. W. (1979). *The measurement of organizational commitment*. "Journal of Vocational Behavior", 14(2).
- Naser, S. (2016). *Exploring organizational commitment and leadership Frames within Indian and Iranian Higher Education Institutions*. "Bulletin of Education and Research", 29(1).
- New storm, J. W., Davis, K. (2002). *Organisational Behaviour: Human Behaviour at Work*. New Delhi Tata Mcgraw: Hill Publishing.
- Niacker, N. (2008). *Organisational Culture and Employee Commitment; a case study of Nampak Tissue paper mill*. "Research Gate".

- Njanja, W., Maina, R., Njagi, K. (2013). *Effect of reward on employee performance: A case of Kenya Power and Lighting Company Ltd, Nakuru, Kenya*. "International Journal of Business and Management", 8(21).
- Nystrom, P.C. (1993). 'Organizational cultures, strategies and commitments in the health care organization'. "Healthcare Management Review", 18(1).
- Ooko, A. P. (2013). *Impact of teamwork on the achievement of targets in organizations in Kenya. A study of SOS Children's villages, Eldoret*. A Masters Degree Thesis Submitted to the University of Nairobi.
- Pareek, U. (1997). *Partnership in human resources function*. "Indian Journal of Industrial Relations", 32(3).
- Rhoades, L., Eisenberger, R. (2002). *Perceived organizational support: A review of the D.*, Samson, R.L., Daft (2003). Management. Melbourne: Nelson Australia Pty Limited.
- Roberts, R. (2005). *The relationship between rewards, recognition and motivation at insurance company in the Western Cape*. Unpublished MBA Project: University of the Western Cape.
- Shannawaz, M. G., Hazarika, N. (2004). *Organizational commitment and organization culture: A study of two hospitals in Assam*. "Journal of Indian Academy of Applied Psychology", 30(1-2).
- Suliman, A. M. T., Iles, P. (2012). *Is continuance commitment beneficial to organizations? commitment-performance relationship: A New Look*. "Journal of Managerial Psychology".
- Tessema, M. T., Soeters, J. L. (2006). *Practices and challenges of converting former fighters into civil servants: the case of Eritrea*. "Public Administration and Development: The International Journal of Management Research and Practice", 26(4).
- Walid, A. S., Zubair, H. (2016). *Impact of effective teamwork on employee performance*. "International Journal of Accounting, Business and Management", 4(1).
- Wang, Y. (2004). *Observations on the organizational commitment of Chinese employees: comparative studies of state-owned enterprises and foreign-invested enterprises*. "The International Journal of Human Resource Management", 15(4-5).
- Waterman, R. H., Peters, T. J. (1982). *In search of excellence: Lessons from America's best-run companies* (p. 360). New York: Harper & Row.
- Worchel, S., Woehr, D. J. (1998). *Organizational commitment among public service employees*. "Public personnel management", 27(3).

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A REVIEW ON MACRO-ECONOMIC VIEW IN ETHIOPIA'S ENTREPRENEURSHIP UNDER COVID-19³

The COVID-19 pandemic has caused a greater challenge for the investors and policymakers to mitigate the consequences of this pandemic. Through a review of the literature on the economics of the coronavirus (COVID-19) pandemic, this study explores the effects of the pandemic on the entrepreneurship taking into account the gross domestic product, employment, and inflation (consumer price index) of Ethiopia during the first years of the pandemic. The review reveals that adverse economic effects have been observed due to the COVID-19 pandemic in addition to fatalities. The pandemic has influenced in a negative way the country's economy by reducing the GDP growth which has been recorded as one of the fastest economies for the last decade. The partial shutdown taken by the government as a response of the pandemic has led million lose their work increasing the unemployment rate and thus triggering inflation on consumers goods.

Keywords: COVID-19, entrepreneurship, employment, gross domestic product, inflation.

1. INTRODUCTION

On the 100th anniversary of the 1918 influenza pandemic the deadliest infectious disease outbreak in recorded history with estimated death of 50 million people and 500 million estimated confirmed cases numerous other outbreaks of disease have set up a persistent presence among modern-day headlines. Among these are severe acute respiratory syndrome (SARS), H1N1 influenza pandemic, middle east respiratory syndrome (MERS), Ebola, Zika, Nipah virus, cholera, yellow fever, and Lassa fever. The frequency and diversity of disease outbreaks are expected to grow steadily, as they have for the past 30 years (World Economic Forum, 2019).

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The recent pandemic discoveries of COVID-19 have led many governments to take drastic measures. Pandemic and related restrictions are creating a global crisis, shaping the economic landscape, and challenging entrepreneurs (Kuckertz et al., 2020; Brown and Rocha, 2020).

The lockdown of large parts of society and economic life has come as an exogenous shock to many economic actors, mostly innovative startups. The lockdown measures as a response to the spread of the new coronavirus threaten the existence of many innovative startups. In countries which constitute the world's largest economies, sparking fears of an impending economic crisis and recession (Buck et al., 2020).

In Ethiopia from January 2020 to March 2021, there were 167,133 confirmed cases and 138,639 recoveries of COVID-19 with 2,442 deaths (World Health Organization, 2021). Country wide state of emergency was declared from April 2020 for six months thus restricting the economic activity.

As we are in the middle of a pandemic outbreak, it is very difficult to estimate its long-term effects. Although society has been hit by several pandemics in the past, it is difficult to estimate the long-term economic, behavioral, or societal consequences as these aspects have not been studied to a great extent in the past therefore large number of research are needed (Donthu & Gustafsson, 2020).

This research will aim to explore the influence of pandemics on entrepreneurship in Ethiopia by taking macroeconomics indicator of gross domestic product, inflation, unemployment during COVID-19.

In fulfilling the research aim, three more specific research questions were set:

RQ 1– How entrepreneurial gross domestic product of Ethiopia has been impacted by COVID-19?

RQ 2– How entrepreneurial employment of Ethiopia has been affected by COVID-19?

RQ 3– How entrepreneurial inflation of Ethiopia has been influenced by COVID-19?

2. LITERATURE REVIEW

In its most basic modern definition, entrepreneurship is the act of an individual starting their own business. However, in economic terms, the majority would agree the general view that entrepreneurship involves the creation of a new business enterprise and bearing its risks in exchange for foreseen profit opportunities. Others would also agree with both of the following definition of entrepreneurship: being the container for innovations hitting and shifting the market, or the act of simply monitoring the current market to satisfy demands that are presently unfulfilled (Leonaris, 2011).

Even in calmer times innovative startups face susceptibility of newness and smallness (Stinchcombe, 1968) that threaten their continued existence. This situation is likely to deteriorate in times of pandemics thus menace a tremendous potential for innovation that has been accumulated in recent years and was meant to generate economic and potentially societal and ecological value.

The COVID-19 pandemic has generated anomalous human loss and financial difficulties worldwide. The outbreak has forced many businesses to close, leading to an exceptional disruption of commerce in most industry sectors. Retailers and brands face many short-term and long-term challenges, such as those related to health and safety, the supply chain, the workforce, cash flow, consumer demand, sales, and marketing (Donthu & Gustafsson, 2020).

As of late 2021, the COVID-19 pandemic has infected more than 230 million people, claiming the lives of close to five million individuals globally while the United States leads the world in both the total number of cases (over 43 million) and deaths (close to 700,000) (Johns Hopkins University, 2021). Aside from the incalculable cost resulting from the loss of human life at such a massive scale, COVID-19 has shaken economies and is predicted to continue to do so in the future (Erikson, 2020).

Ethiopia is already struggling to escape poverty before the pandemic reaches its maximum level of outbreak, with deficits and debt financing, which is now affected by falling revenue from exports and tourism and decreasing remittances from Ethiopians living overseas (Tesso, 2020).

The federal and regional governments announced measures such as suspending large gatherings and inter-city public transport, authorities have not introduced a comprehensive lockdown to try to contain COVID-19 (International Crisis Group, 2020). Even with those measures the country's economy has been declining at an alarming rate.

2.1. Over all facts about ethiopian economy

Ethiopia has designed a successive growth and transformation plans (GTP) for the period 2010–2015 as GTP I and 2016–2020 as GTP II by retaining agricultural sector growth as the prime driver of economic growth and poverty alleviation. The sector's strategy was further informed by the Agriculture Growth Program (AGP) I and II and lessons drawn from implementation of the past development plans (National Planning Commission, 2016).

During the GTP I and II phases, much emphasis was given that preparation to transit industrial base will be paved by embarking on a new journey of strengthening the small and medium manufacturing enterprises and by engaging in light manufacturing enterprises. In this connection, the manufacturing sector growth registered an average of 20% during the GTP I. To ensure this transformation, ranges of public investments were set within the plan for continued scale-up of the successes registered in the past. Transparent and efficient agricultural marketing system were attempted to be strengthened (Tesso, 2020).

The agricultural strategy directed on placing major effort to support the intensification of marketable farm products both for domestic and export markets, and by small and large farmers. Fundamentals of the strategy included the shift to produce high value crops, a special focus on high-potential areas, facilitating the commercialization of smallholder agriculture, and supporting the development of large-scale commercial agriculture where it was feasible (National Planning Commission, 2016).

During the past 10 years, Ethiopia has registered a fast growth rate and has become the fast African growing economy. Strong but slowing real GDP growth was averaged to 10.4% per annum on in the past 10 years but decelerating from 9% in 2018/19 to 6.2% in 2019/20 (IMF, 2019).

The country experiences a continuous trade balance deficit, amounting to 12.5% of GDP in 2018/2019 primarily reflecting a low level of exports from a mostly undiversified basket of commodities (USD 2.67 billion in 2018/2019) and a high level of dependence on imported intermediate inputs, capital goods, fuel, and food (wheat). There has been a high level of investor interest in Ethiopia but declining FDI inflows, from USD 4.1 billion in 2016/17 to USD 3 billion in 2018/2019. A bright spot, however, is remittances which have risen from USD 4.4 billion in 2016/17 to USD 5.7 billion in 2018/2019. The same can be said for official development assistance (ODA) disbursement which rose by about 17.6%

in 2018/2019 to USD 4 billion from USD 3.4 billion in 2017/2018 with per capita official development assistance (ODA) increasing from USD 32.2% in 2017 to USD 41 in 2019 (National Bank of Ethiopia, 2019).

The other economic characteristic of Ethiopia is a high debt burden, with the country's external debt stock at USD 27 billion or 28.1% of GDP and total debt at USD 54 billion or 56% of GDP in 2018/2019 (Tesso, 2020).

Ethiopia's Debt Sustainability Assessment (DSA) by the World Bank and IMF placed at high risk of debt distress although recent efforts by the government to restructure external debt (reduced stock, longer maturities) has brought the country some breathing space (IMF, 2019).

Table 1. Ethiopia economy data

	2015	2016	2017	2018	2019
Population (million)	89.8	91.2	92.7	94.1	95.6
GDP per capita (USD)	828	897	910	1,021	-
GDP (USD bn)	74.3	81.8	84.4	96.1	-
Economic growth (GDP, annual variation in %)	8.0	10.1	7.7	9.0	-
Fiscal Balance (% of GDP)	-2.3	-3.2	-3.0	-2.5	-
Public debt (% of GDP)	55.8	57.7	61.1	57.6	-
Money (annual variation in %)	21.7	25.1	29.8	22.5	12.4
Inflation rate (CPI, annual variation in %, eop)	10.0	6.7	16.5	10.6	19.5
Inflation rate (CPI, annual variation in %)	10.1	7.3	10.9	13.8	15.8
Exchange rate (vs USD)	21.26	22.40	27.58	28.20	32.00
Exchange rate (vs USD, aop)	20.76	21.90	24.07	27.63	29.28
Current account (% of GDP)	-10.8	-8.2	-7.0	-5.3	-
Current account balance (USD bn)	-8.0	-6.7	-5.9	-5.1	-
Trade balance (USD billion)	-13.8	-13.6	-12.9	-12.6	-
Exports (USD billion)	2.9	2.8	3.0	2.7	-
Imports (USD billion)	16.7	16.4	15.9	15.3	-
Exports (annual variation in %)	-13.4	-3.6	7.6	-10.7	-
Imports (annual variation in %)	8.8	-1.8	-3.2	-3.6	-
International reserves (USD)	3.8	3.0	3.0	4.0	-
External debt (% of GDP)	28.3	29.1	31.6	29.2	-

Source: (Focus Economic, 2021).

2.2. Macroeconomic influence of pandemics

The first and most crucial aspect of an epidemic or pandemic is, and will always remain, human suffering and the loss of lives. Nevertheless, the spread of a virus can also have important economic implications. Several studies focusing on this aspect of the impact of epidemics and pandemics have found that the effects across the economy can be significant (Sohrabi et al., 2020).

Outbreaks and epidemics are causing more economic damage when they occur. Recent work on pandemics suggests that the potential economic losses from outbreaks of infectious disease are massive and similar in magnitude to the annual impact of climate change framing economic losses on a global scale (World Economic Forum, 2019).

As research indicates that pandemics are reoccurring events, the current pandemic has had enormous but hopefully short-term effects on all our lives. Countries have closed their borders, limited the movement of their citizens, and even confined citizens in quarantine within their homes for months. Infrastructure and routines to monitor citizens to limit the spread of the virus have been rolled out, exerting a great pressure on the economy to execute these rules and regulation (Donthu & Gustafsson, 2020).

In many studies of pandemics, analysis has understandably focused on short-term impacts. Even then, direct measures based on data from past episodes are not generally available (Meltzer, Cox & Fukuda, 1999). An alternative would be to look at microeconomic outcomes of a given population in episodes for which high-quality administrative data are available (Karlsson, Nilsson & Pichler, 2014). Absent such data, economic historians must use more aggregated data at the regional or national level to study the relationship between pandemic incidence and economic outcomes (Brainerd & Siegler, 2003; Barro, Ursua & Weng, 2020).

The micro, small and medium enterprises (MSMEs) a sector generate substantial employment and output in many countries (Nichter & Goldmark, 2009). The sectors' share of overall employment is higher in developing countries, which are typically more focused on small-scale production.

In addition, studies in five African countries (Botswana, Kenya, Malawi, Swaziland and Zimbabwe) found that MSEs generate nearly twice more level of employment than registered, large-scale enterprises and the public sector do (Mead & Liedholm, 1998). A study examining firms with fewer than 10 workers found that they generated 58% of total employment in Paraguay, 54% in Mexico, and 53% in Bolivia. The contribution of the MSE sector to total output differs across countries. For example, MSMEs contribute approximately 31% of overall GDP in the Dominican Republic, 13% in Kenya, and 11% in Pakistan (SMEDAP, 2002).

2.2.1. Gross domestic product

According to assumptions and estimates from rating agency S&P, COVID-19 could reduce the baseline GDP growth rate for 2020 for the world by 0.3 percentage point (ppt); for China by 0.7 ppt; for Asia-Pacific by 0.5 ppt; and for the USA and Europe by 0.1 to 0.2 ppt. The virus created a shock for oil demand: over the past years, China has grown to account for around 50 % of world oil demand, so when demand in the country dropped by around 25% because of the quarantine measures, the impact on the price of oil was significant (SPX | S&P 500 Index | MarketWatch, 2020).

According to Angelus and Nicole the estimated impact of such a pandemic upwards, bringing the total cost to 2.2 %-8 % of global GDP (US\$3 trillion). The report further notes that, in such an event, South Asia's GDP could potentially fall by 2 % (US\$53 billion), and sub-Saharan Africa's GDP by 1.7 % (US\$28 billion) (Angelus and Nicole, 2020).

Ethiopian real GDP growth of the year was the lowest seen in 17 years, affected in part by the COVID pandemic, though it remains among the highest rates seen globally in 2020 (Cepheus Research and Analytics, 2020). GDP is expected to grow at a quicker pace this fiscal year (8 July 2021 – 7 July 2022) as the reopening of economies releases pent-up

demand and supports the external sector. However, risks are heavily skewed to the downside: Rising public debt levels, protracted instability, and high susceptibility to Covid-19 flare-ups due to a low vaccination rate all cloud the outlook. Focus Economics panelists see the economy growing 6.5% in FY 2021, which is down 0.1 percentage points from last month's forecast, and 6.4% in FY 2022 (Focus Economic, 2021).

Ethiopia's economy experienced strong, broad-based growth averaging 9.4% a year from 2010/11 to 2019/20, Ethiopia's real gross domestic product (GDP) growth slowed down to 6.1% in 2019/20 due to COVID-19. Industry, mainly construction, and services accounted for most of the growth. Agriculture was not affected by the COVID-19 pandemic and its contribution to growth slightly improved in 2019/20 compared to the previous year. Private consumption and public investment explain demand-side growth, the latter assuming an increasingly important role (The World Bank, 2021).

Focus Economy stated that Ethiopia economic activities weakened more through the second quarter of financial year 2020 (8 July 2020–7 July 2021). Restrictive measures to minimize the spread of the coronavirus remain largely in place. As such, domestic demand is set to be dented in the quarter. Moreover, rising new Covid-19 cases globally will likely challenge the external sector and further weaken foreign demand, thereby dragging on the economy in the quarter (Focus Economic, 2021).

2.2.2. Inflation

2.2.2.1. Consumer Price Index

One of the powerful economies of the world United States has reported a significant higher inflation for the all-items consumer price index for the first three months of the pandemic, as social-distancing rules and preferences induced more consumer expenditure in food and groceries and prevented spending in categories such as transportation. By May, the annual inflation rate of the US COVID-19 index was 0.95%, compared to only 0.13% of the official CPI (Alberto Cavallo, 2020).

Laborde et al. (2020), Swanned & McDermott (2020), & Torero (2020) estimate that due to the COVID-19 pandemic over 140 million people – many of them in sub-Saharan Africa will fall into extreme poverty and suffer from food insecurity and hunger. A major contributor to the increased food insecurity is the reduction of income among vulnerable populations.

Because of reduced demand due to the global recession, some researchers predict that commodity prices will decrease globally (Laborde et al., 2020). Meanwhile, others predict price increases, at least in the short run, due to hoarding and changes in purchase and storage patterns (Reardon et al., 2020). Increased marketing costs due to complications in logistics linked to the pandemic (Hahn, 2020) may further widen the wedge between farm and consumer prices (Narayan & Saha, 2020; Reardon et al., 2020). While significant food price movements have been seen in some cases, they seem highly context specific (Akter, 2020; de Paulo Farias & de Araújo, 2020; Yu et al., 2020), with price rises noted in some cases most often for perishables such as meat, fish, and vegetables (Akter, 2020; Lele et al., 2020; Mogue, 2020) and declines in others (Harris et al., 2020; Narayan & Saha, 2020).

Few of the many reasons that contributed to farm and consumer price changes during the pandemic in Ethiopia were. First, the ban on international trade and disruptions to inter-regional trade led to a more localized marketing system. It seems that this wider market access before the pandemic played a price-stabilizing role, leading to large price swings

during the pandemic. Second, urban demand fell due to income losses and the widespread fear that eating raw vegetables would increase the likelihood of contracting the virus. Changes in production costs and local supply changes likely also played a role for some products (Hirvonen et al., 2021).

According to Mood's Analytics which bases its report on the international financial statistics fund the second populated country in Africa, Ethiopia's consumer price index has been considerably rising during the period of the COVID-19 (Moody's Analytics, 2021).

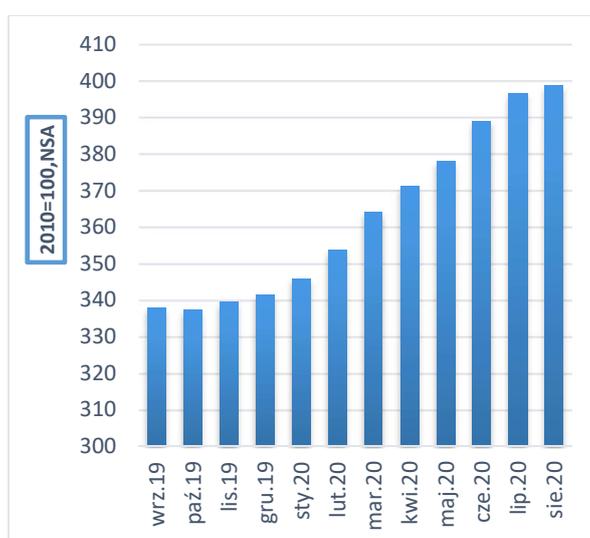


Figure 1. Consumer Price Index of Ethiopia

Source: (Ethiopian Consumer Price Index – Moody's Analytics, 2021).

The value chain agents in Ethiopia under study indicated that their businesses were seriously affected by the COVID-19 pandemic. Most agents reported a decrease in demand, turnover, and clients; increased losses; less competition; higher transport costs; and changes in procurement areas (Hirvonen et al., 2021).

2.2.3. Employment

Labor markets around the world were disrupted in 2020 on a historically unprecedented scale. In 2020, 8.8 per cent of global working hours were lost relative to the fourth quarter of 2019, equivalent to 255 million full-time jobs. Working-hour losses in 2020 were approximately four times greater than during the global financial crisis in 2009 (International Labour Organization Monitor, 2021).

Ethiopia is having 40% of national under employment rate with the average two million number of people entering to the market annually (Job creation Commission, 2021).

According to International Crisis Group in Ethiopia there could be at least one million job losses because of COVID-19 when around two million young Ethiopians annually enter the labor market, and the urban unemployment rate is approximately 20% (International Crisis Group, 2020).

Unemployment is up and inactivity is decreasing, as households need additional members to start earning an income. Precarious work is growing as formal employment shrinks and informal work progresses; the crisis is hitting the weaker much harder. Rising unemployment and loss of income have been much more marked for the least educated, who are also those for whom earning an income is a matter of survival in the very short term. While incomes from employment have remained stable in the formal sector, they have dropped significantly in the informal economy (-30%); the outlook in August was gloomy; 60 per cent of workers were afraid of losing their jobs in the coming weeks, and two out of three businesses expect sales in 2020 to be “much worse” than in 2019 (Job Creation Commission, 2021).

3. RESEARCH METHODS

The research questions under study have focus generally on influence of pandemic on entrepreneurship in Ethiopia it has also looked in to the specific like influence of COVID 19 on the entrepreneurial at macroeconomics level taking gross domestic product, employment, and inflation (consumer index price) of Ethiopia. The methodology followed in this study is mainly an assessment of the overall situation and specific review at Ethiopia level about economic turmoil due to COVID-19 pandemic and its repercussion on the macroeconomic performance. Narrative or traditional literature reviews was used with the principal purpose to give the author and reader a comprehensive overview of the topic and to highlight significant areas of research.

4. RESULT

Significant macroeconomic after-effects of pandemics persist for years and decades. As a part of major contributors to the economy startups face immediate and tangible consequences of the pandemic outbreak especially in the form of reduced sales while fixed costs remain; a combination that threatens startups liquidity and long-term survival.

To understand the influence of the pandemic on the entrepreneurship in macroeconomics level in Ethiopia the study used narrative literature review the following result were found.

The pandemic has influenced in a negative way the country’s economy by reducing the GDP growth which has been recorded as one of the fastest economies for the last decade. The partial shutdown taken by the government as a response of the pandemic has led one million people lose their work increasing the unemployment rate which were 40% and the unemployment in the informal sector has increased by 30% while the formal sector unemployment was stable. Inflation on consumers goods during the pandemic has shown the following characteristics reduced demand due to the global recession, price increases, at least in the short run, due to hoarding and changes in purchase and storage patterns.

5. CONCLUSION

The economic climate is currently unfavorable for innovation because of the COVID-19. Key partners, customers, and investors are themselves fully engaged in responding to the crisis and the uncertainty as to how the crisis will develop discourages any experimentation.

The study concluded that when markets are gridlocked, startups are forced to deal with barriers to access for funding which can adversely affect their onward growth trajectories, and which also leads most of them to shutdown reducing or even eliminating their contribution to the gross domestic product. As businesses lost revenue because of COVID-19 lockdowns, they passed the shock on to their employees by downsizing and temporary layoff which in turn is increasing unemployment country wide. As lock down continue because of the COVID-19 consumers spending increase on food, grocery and essential items putting pressure on the supply chain that is already operating at the maximum capacity. Because of the COVID-19 unhealthy and sudden demand rise has been seen that the system is not equipped to handle it increased the average price paid by consumers for goods and service which directly affect the inflation rate to rise.

Future research should focus on the effects of the COVID-19 on capital flows, exchange rates, and various sectors of the economy. It will be a challenging task for the policymakers to face the health crisis or to correct the macroeconomic and financial issues posed by the COVID-19. Furthermore, there is greater scope for future research to examine how the developed and emerging economies function in the pandemic situation and adopt policies to face the health crisis as well as macroeconomic and financial issues

REFERENCES

- Akter, S. (2020). *The Impact of COVID-19 Related 'Stay-At-Home' Restrictions on Food Prices in Europe: Findings from a Preliminary Analysis*. 12, 4. "Food Security", Forthcoming. DOI: 10.1007/S12571-020-01082-3.
- Cavallo, A. (2020). *Inflation with COVID-19 Consumption Baskets*. Harvard Business School & NBER.
- Angelos Delivorias, A., Scholz, N. (2020). Economic Impact of Epidemics and Pandemics. PRS. European Parliamentary Research Service.
- Barro, R. J., Ursua, J. F., Weng, J., (2020). *The Coronavirus and the Great Influenza Pandemic: Lessons from the "Spanish Flu" for the Coronavirus's Potential Effects on Mortality and Economic Activity*. "NBER Working Paper" 26866.
- Brainerd, E., Siegler, M. (2003). *The Economic Effects of the 1918 Influenza Epidemic*. CEPR Discussion Paper 3791.
- Buck T, Arnold M, Chazan G, Cookson C. (2020) *Coronavirus Declared a Pandemic as Fears of Economic Crisis Mount*. Access on the internet: <https://www.ft.com/content/D72f1e54-6396-11ea-B3f3-Fe4680ea68b5>.
- Cepheus Research and Analytics (2020). *Ethiopia's GDP Statistics: A Data Pack and Some Observations*.
- De Paulo F., De Araújo, F. F. (2020). *Will COVID-19 Affect Food Supply in Distribution Centers of Brazilian Regions Affected by the Pandemic? "Trends in Food Science & Technology"*, 103.
- Donthu, N., Gustafsson, A. (2020). *Effects of COVID-19 on Business and Research*. "Journal of Business Research", 117. DOI: 10.1016/J.Jbusres.2020.06.008.
- Erikson, S. (2020). *Pandemics Show Us What Government is for*. "Nature Human Behavior", 4(5).
- Focus Economic (2021). *Ethiopia Economy – GDP, Inflation, CPI, And Interest Rate* (Focus-Economics.com).

- Hahn, W. (2020). *Livestock, Dairy, and Poultry Outlook, LDP-M-312*. U.S. Department of Agriculture, Economic Research Service.
- Harris, J., Depenbusch, L., Pal, A. A., Nair, R. M., Ramasamy, S. (2020). *Food System Disruption: Initial Livelihood and Dietary Effects of COVID-19 on Vegetable Producers in India*. "Food Security", 12(4).
- Hirvonen, K., Minten, B., Mohammed, B., Tamru, S. (2021). *Food Prices and Marketing Margins During the COVID-19 Pandemic: Evidence from Vegetable Value Chains in Ethiopia*. "Agricultural Economics". DOI: 10.1111/Agec.12626.
- International Crisis Group (2020). *Managing the Politics of Ethiopia's COVID-19 Crisis*. Crisis Group.
- International Labour Organization Monitor (2021). *COVID-19 and the World of Work. Seventh Edition Updated Estimates and Analysis*. wcms_767028.pdf (ilo.org).
- Job Creation Commission (2021). *Basic Employment Statistics. Job Creation Commission – Job Creation Commission Ethiopia* (jobscommission.gov.et).
- Johns Hopkins University (2021). *Coronavirus Resource Center. COVID-19 Map – Johns Hopkins Coronavirus Resource Center* (jhu.edu).
- Jorda, O., Singh, S. R., Taylor, A. M. (2020). *Longer-Run Economic Consequences of Pandemics* (Report No. W26934). National Bureau of Economic Research.
- Karlsson, M., Nilsson, T., Pichler, S. (2014). *The Impact of the 1918 Spanish flu Epidemic on Economic Performance in Sweden: An Investigation into the Consequences of an Extraordinary Mortality Shock*. "Journal of Health Economics", 36(C).
- Kuckertz, A., Brandle, L., Gaudig, A., Hinderer, S., Reyes, C. A. M., Prochotta, A., Steinbrink, K., Berger, E. S., (2020). *Startups in Times of Crisis. A Rapid Response to the COVID-19 Pandemic*. "Journal of Business Venturing Insight", E0019.
- Laborde, D., Martin, W., Swinnen, J., Vos, R. (2020). *Covid-19 Risks to Global Food Security*. "Science", 369(6503).
- Lele, U., Bansal, S., Meenakshi, J. V. (2020). *Health and Nutrition of India's Labour Force and COVID-19 Challenges*. "Economic & Political Weekly", 55(21).
- Leonaris, R. (2011). *Sustainable Entrepreneurship and its Viability*. Rotterdam: Erasmus School of Economics.
- Mead, D. C., Liedholm, C. (1998). *The Dynamics of Micro and Small Enterprises in Developing Countries*. "World Development", 26(1). DOI: 10.1016/S0305-750X(97)10010-9.
- Meltzer, M. I., Cox, N. J., Fukuda, K. (1999). *The Economic Impact of Pandemic Influenza in The United States: Priorities for Intervention*. "Emerging Infectious Diseases", 5(5).
- Mogues, T. (2020). *Food Markets During COVID-19. Special Series on Covid-19*. Washington DC: International Monetary Fund.
- Moody's Analytics (2021). *Ethiopia Consumer Price Index (CPI)*. Moody's Analytics (economy.com).
- Narayan, S., Saha, S. (2020). *One Step Behind: The Government of Indian and Agricultural Policy During The COVID-19 Lockdown*. "Review of Agrarian Studies, Forthcoming", 10(1).
- National Bank of Ethiopia. (2019). *The Annual 2018/19 Report*. Addis Ababa, Ethiopia.
- National Planning Commission. (2016). *Federal Democratic Republic of Ethiopia Growth and Transformation Plan II (GTP II) (2015/16-2019/20)*.
- Nichter, S., Goldmark, L. (2009). *Small Firm Growth in Developing Countries*. "World Development", 37(9). DOI: 10.1016/J.Worlddev.2009.01.013.

- Reardon, T., Bellemare, M. F., Zilberman, D. (2020). *How COVID-19 May Disrupt Food Supply Chains in Developing Countries* [In:] Swinnen, J., Mcdermott, J. (Eds.), *COVID-19 And Global Food Security*. Washington DC: IFPRI.
- Sohrabi, C., Alsafi, Z., O'Neill, N., Khan, M., Kerwan, A., Al-Jabir, A. et al. (2020). *World Health Organization Declares Global Emergency: A Review of the 2019 Novel Coronavirus (COVID19)*. Int J Surg. SPX, S&P, 500 Index, Marketwatch [Internet]. Access on the internet: <https://www.marketwatch.com/investing/index/spx>.
- Stinchcombe, A. L. (1968). *Social Structure and Organizations*. University of Chicago.
- Wallace, S. L. (1999). *Social Entrepreneurship: The Role of Social Purpose Enterprises in Facilitating Community Economic Development*. "Journal of Developmental Entrepreneurship", 4(2).
- Swinnen, J., Mcdermott, J. (2020). *COVID-19 and Global Food Security*. Washington DC: IFPRI.
- Tesso, G. (2020). *Review of the Impact of COVID-19 on Economic Growth, Unemployment and Progress Out of Poverty in Ethiopia*. Impact of COVID-19 On Ethiopian Economy.
- The World Bank (2021). *Ethiopian Overview*. Ethiopia Overview: Development News, Research, Data World Bank
- Torero, M. (2020). *Without Food, There Can Be No Exit from the Pandemic*. "Nature", 580.
- World Economic Forum. (2019). *Outbreak Readiness and Business Impact Protecting Lives and Livelihoods Across the Global Economy* [In:] Collaboration With Harvard Global Health Institute. White Paper.
- World Health Organization. (2021). *Ethiopia: WHO Coronavirus Disease (COVID-19) Dashboard*. WHO Coronavirus Disease (COVID-19) Dashboard.
- Yu, X., Liu, C., Wang, H., Feil, J. H. (2020). *The Impact of COVID19 on Food Prices in China: Evidence of four Major Food Products from Beijing, Shandong, and Hubei Provinces*. "China Agricultural Economic Review", 12(3). Engineering, Vol. 26, Surface and Coatings Technology, Vol. 202, 2008.

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