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Intention to Quit of Proactive Health Workers: The Intervening Role of Employee Engagement and the Moderated Mediating Effect of Job Autonomy

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Abstract

As a necessary condition for the sustainability and success of teaching hospitals, maintaining proactive health personnel with the ability to be high performers is acknowledged. A few studies have logically clarified and empirically simplified the relationship between proactive employees and intention to quit, which signifies an engaged, proactive tendency to establish actual turnover behavior. However, this study target to resolve these research gaps. This paper predicted that the correlation between proactive health workers and intention to quit was likely mediated by employee engagement and job autonomy as a center point mechanism of motivation. Job autonomy (JA) as a significant framework is expected to buffer the link between proactive health employee and employee engagement. The present article developed a moderated mediated model that incorporates these variables. This study was consistent with previous studies carried out on health workers in Nigerian teaching hospitals. The results of this research help to expose the attrition intentions displayed by conscientious health workers.

Keywords: Proactive Worker, Intention to Quit, Employee Engagement, Job Autonomy

How to Cite:

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1. Introduction

Organizational members' turnover leads to a shortfall of social and human capital, which has a detrimental influence on organizational productivity (Tziner & Birati, 1996). When high performers who make a significant contribution to an organization quit, the impact of the loss is substantially greater (Fuller & Marler, 2009). For the reason that energetic personnel strive to initiate good behavior instead of adapting to unfamiliar situations that leads to change-oriented goals (Bateman & Crant, 2017). Proactive personnel developed into high-achievers

who exercise control over their environs and make every effort for significant change (Bakker et al., 2012). As a result, retaining active people with the ability to be high achievers is considered as a necessary prerequisite for an establishment's continued existence and growth (Bergeron et al., 2013). Thus, determining whether or not proactive people of a company will depart and how to keep those individuals is critical.

Researchers discovered that when employees want to leave a company, they tend to plan ahead instead of leaving on the spur of the moment (Bateman & Crant, 2017). As shown in a meta-analytic assessment, their intention to quit has a strong explanatory power among the characteristics predicting their actual turnover behavior (Griffeth et al., 2000). As a result, the concept of turnover intention has been emphasised. Furthermore, an employee's proactivity, also known as proactive personality (PP), refers to the tendency to take action to increase efficiency and effectiveness (Bateman & Crant, 2017). As a result, the likelihood of proactive personnel leaving appears to be explained by the association between proactive personality and intention to quit. Furthermore, only few researches have looked into the link between these two constructs in depth. Many previous investigations revealed the relationships between them without providing a theoretical justification. In the literature, there have also been some inconsistencies. Some researchers have discovered, for instance, that proactive personality (PP) is associated with a lower likelihood of quitting (Wang et al., 2011), others, on the other hand, have shown a link between proactive behavior and intention to quit (Vandenberghe & Ok, 2013). Another research has found a statistically negligible link between the two (Allen et al., 2005). These inconsistencies suggest that the correlation between proactive personality (PP) and intention to quit may be more challenging as previously thought.

To tackle these theoretical gaps, the researchers propose that additional study would ponder on the previous variables. To begin, it is crucial to investigate the methods via which proactive personality is linked to a desire to quit. Personality, as a distant trait, influences behavior through proximal states like motivation, as per distal-proximal paradigm (Barrick et al., 2009). As a result, we should investigate a psychological construct that provides substantial explanations of the integral of the relationship between proactive personality and quitting intentions (Mathieu & Taylor, 2006). Job engagement has been considered as an indication of motivation in addition to happiness. Hence, this paper concentrated on the mechanism by which PP of employees is correlated to their intention to quit (Schaufeli et al., 2008). As a result, we propose that PP is associated with intention to quit indirectly via work engagement.

Secondly, based on the circumstances, the correlation between PP and work engagement (WE) may vary. Trait activation theory states that certain events stimulate a trait further than the others (Tett & Burnett, 2003). Job autonomy is at the foundation of motivational work design techniques, and it improves the proactivity of job officers (Morgeson & Humphrey, 2006). As a result, we focus on job autonomy as a crucial related component. Job autonomy is thought to buffer the link between proactive PP and WE in this present study.

Finally, an integrated approach is required to completely comprehend the correlation between PP and intention to quit in an attempt to postulate a further realistic understanding of the links. The theoretical model is based on the (JDR) job demands-resources framework of WE,

that presumes which individual and job resources, either separately or together, envisage WE, which has a beneficial impact on work performance (Bakker, 2011; Bakker & Demerouti, 2008). Individuals that rank extreme on positivity, resilience, self-efficacy, and self-confidence, for example, are employees competent to organize their workplace resources and are typically more involved in their job, according to the framework (Bakker & Demerouti, 2008). We used the framework as a theoretical model to investigate the indirect or mediating impact of personal resources and the desire to quit through work engagement, as well as the moderating influence of job resources in this link. Employees with personal resources are more likely to manage and affect their organization efficiently (Hobfoll et al., 2003), and proactive personalities are more likely to begin change and influence their surroundings (Bakker & Demerouti, 2008). Personal resources and PP appear to play a related function. Furthermore, according to the work personality's theory, one of the usual job resources is job autonomy (Bakker & Demerouti, 2008; Abdulrab et al., 2017; Kumdi et al., 2017; Gadi & Kee, 2020a). As a result, we conclude that the (JDR) job demands-resources framework of WE aligns to the research hypothesis that proactive individuals will be further engaged at work and have a lower intention to resign if they feel autonomy in executing their jobs. As a result, we're trying to come up with a moderated mediation assumption that reports for job autonomy as the moderating environment and WE as the intervening mechanism in the link between PP and quitting intention.

The goals of this research are to see if WE mediates' the link between PP and intention to quit, if job autonomy (JA) moderates the relationship between PP and WE, and if JA moderates the mediated link between PP and intention to quit. Figure 1 depicts our study model that reflects these goals. These systematic and thorough methodologies are intended to aid in better understanding proactive employees' intentions to leave.

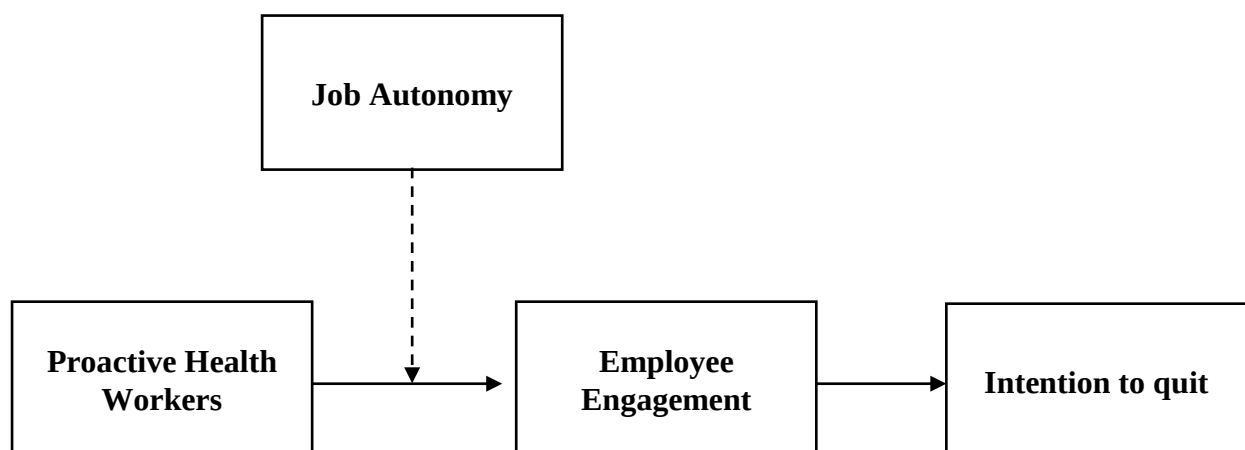


Figure 1. Research model

2. Literature Review

The study first look at the function of WE as a bridging factor in explaining proactive employees' intentions to leave. Furthermore, by concentrating on the increasing significance

of JA in the link between PP and WE, we look at how engaged proactive employees are when they are given autonomy over their responsibilities. We also recommend using the integrated framework to fully comprehend the roles of job characteristic and emotional state in the relationship between PP and intention to quit.

2.1. Mediating Role of Work Engagement (WE)

This theory of job engagement arose from efforts to comprehend individuals' general psychological states, which ranged from sick to well. This was conceived as the polar inverse of burnout, which depicts a condition of exhaustion (Schaufeli et al., 2008). Recent research suggests, however, that WE is neither the polar inverse of burnout, nor is it fully independent of burnout (Jiménez et al., 2019; Schaufeli & de Witte, 2017). In other words, work engagement has lately been recognized as having a negative link with burnout, but it also has its own set of characteristics (Jiménez et al., 2020; Gadi & Kee, 2020b; Albadayneh & Alrawashdeh, 2017). As a result, the problem is important to focus on not only to the qualities of WE that coincide with burnout, also to its unique personalities in order to comprehend the linkages between WE and other constructs.

Work engagement (WE) is seen as “an encouraging, satisfying, job-related state of viewpoint described by vigor (increased degrees of energy and psychological resistance whereas performing, likely to engage effort in one's job, and perseverance even in the face of difficulties), dedication, and perseverance even in the face of problems” (a sense of significance, enthusiasm, inspiration, pride, and challenge), and absorption (the state of being entirely absorbed and extremely immersed in one's task, in which time flies by and it is difficult to extricate oneself from it)” (Schaufeli et al., 2002). We use the distal-proximal technique, which states that distal employee dissimilarities have indirect impact on behavior via proximal employee dissimilarities, to explain how PP relates to intention to quit (Barrick et al., 2009; Caponecchia et al., 2020). We argue that WE is the intermediate mechanism that accounts for the relationship between PP and intention to quit.

Individuals with a high PP are likely to be very engaged with their job. “A stable propensity to take individual idea in a wide range of undertakings and jobs” is reflected in PP (Yang et al., 2017). Employees that are not proactive are less likely to “look for opportunities, not taking initiative, act, and endure to achieve closure by effecting about transformation” (Bateman & Crant, 2017). They're also skilled at spotting or generating possibilities that will enable them to be more effective (Brito & Oliveira, 2016). Individuals with PPs are further expected to have a strong, devoted, and absorptive technique to their job, and to make a significant contribution to the quality of their life at work. In light of this, researchers claim that “PPs is likely associated to engagement since persons that are immersed in their workplace are similarly inclined to engage themselves in their organization” (Vermooten et al., 2019). These findings show that having a proactive personality is linked to higher levels of job satisfaction (Bakker et al., 2012; Albrecht et al., 2015).

We also predict that engaged employees will have a lower likelihood of quitting. Burnout has long been thought of as a stressor and a contributing influence to high turnover (Kubayi, 2018). Job engagement is expected to reduce intention to leave because WE and burnout are philosophically and empirically opposites (Ugwu et al., 2013). In relation to this logic, it is vital to consider the characteristics of job engagement that distinguish it from burnout. Since

engaged individuals are further energetic, passionate, and involved in their job, they are more likely to discover their job fundamentally engaging, to feel self-influenced to complete jobs, and to enjoy difficulties placed on them at work (Sheehan et al., 2019). Furthermore, employees manage to keep good psychological health devoid of feeling discomfort or sadness (Gupta et al., 2018), which would encourage them to stay in their current jobs and not leave. Consequently, assessed to disengaged individuals, engaged employees have further pleasant job knowledge and a stronger bond to their employers, which leads to a lower likelihood of quitting (Seibert et al., 2001; Ibrahim et al., 2019; Bakker & Albrecht, 2018).

To summarize, proactive individuals are more liable to be involved in their job, which reduces their desire to leave. As a result, it's acceptable to assume that PP is associated to intention to quit indirectly via WE. We propose the following hypothesis based on this expectation:

Hypothesis 1. Work engagement mediates the relationship between proactive personality and intention to quit.

2.2. Moderating Role of Job Autonomy

The researchers believe that the intensity of the link between an employee's PP and their WE will vary depending on the context. "Individuality traits are exhibited as reactions to trait that are applicable to environmental cues," according to trait activation theory (Muldoon et al., 2017). Similarly, innate attributes like personality are expressed in response to situational cues connected to the traits' characteristics. Given that the job serves as the primary link between employees and companies, it's important to concentrate on the job contexts in which they operate. Furthermore, because autonomy is a core job characteristic (Singh & James, 2016; Beehr et al., 2001) and has the potential to stimulate employee proactivity (Tummers et al., 2015; Gruman & Saks, 2011), job autonomy is expected to perform a vital situational cue in defining proactive employees' work engagement.

"The level to which a job gives independence, freedom, and pleasure to schedule work, make decisions, and choose the techniques utilized to execute tasks" is how job autonomy is defined (Singh & James, 2016). Employees are open to perform their job activities based on individual decision and preferences when work is arranged in a manner that they have autonomy. Those who have a high amount of job autonomy are further expected to feel accountable for issues that develop while doing their duties and to recognize that they have sufficient influence over their employment outcomes (De Gieter et al., 2018).

Because jobs with more autonomy provide less limits on individuals' conduct, JA is more likely to act as a weaker factor, allowing individuality to steer performance directly. Given that PP stands for the individual predisposition to discover and act on chances for change, proactive individuals are capable to make use of autonomy as a way to handle professional requirements (De Gieter et al., 2018). (Bateman & Crant, 2017). "To be proactive is probable very significant in positions with autonomy," according to academics (Bakker, 2017).

To summarize, proactive workers with autonomous occupations will have synergistic outcomes in that they will be further engaged in their organization. As a result, job autonomy is likely to reinforce the beneficial relationship between PP and WE. As a result of this anticipation, we suggest the following hypothesis:

Hypothesis 2. The link between proactive personality (PP) and work engagement (WE) is moderated by job autonomy (JA), in a way that the correlation is stronger amongst individuals with high JA than individuals with low JA.

2.3. Moderated Mediation Model

This research shows that work engagement mediates the association between PP and intention to leave, and that JA moderates the link between PP and WE. These reasons, taken together, form a unified model in which JA heightens the motivational activities that underpin the PP and intention to leave link. To put it another way, the justifications for H1 & H2 (Hypotheses 1 and 2) merge together to justify the incorporation of moderation and mediation, resulting in a mediation moderated framework (Malhotra et al., 2014; James & Brett, 1984). In particular, proactive workers who do independent jobs are further expected to have prospects to perform in behaviors that are compatible with their proactivity, bolstering the mediating impact of WE in explaining the relationship between PP and intention to quit. The job demands–resources framework of WE underpins this assumption (Bakker & Albrecht, 2018; Larney et al., 2019). The approach believes that individual and professional resources are intertwined and relate to improve workplace engagement and outcomes. Personal resources, which are theoretically comparable to PP, refer to people's perceptions of their competence to successfully organize and influence their surroundings (Simon et al., 2015). One of the most common employment resources is job autonomy (Achmad et al., 2019). As the autonomy of proactive employees' duties grows, we expect their levels of job engagement to rise, and their willingness to depart from the organization to decrease. As a result of this anticipation, we suggest the following hypothesis:

Hypothesis 3. The mediated link between proactive personality (PP) and intention to quit through work engagement is moderated by Job autonomy (JA), in a way that the link is stronger amongst individuals with high job autonomy (JA) than individual with low (JA) job autonomy.

3. Method Research

3.1. Procedure for Data Collection and Data Characteristics

The study collected data from teaching hospitals in North-central Nigeria (Plateau, Nasarawa, Abuja, Niger, Benue, and Kwara). Teaching hospitals in Nigeria commonly encountered major employee turnover and voluntary withdrawal problems in the last five years (Nawaz et al., 2015). According to the Nigerian Medical Association (NMA), the average employee turnover ratio in the sector from 2016 to 2020 was 16.7% in teaching hospitals, and 15.4% in federal medical centers. As a result, it's important to look into the relationship between personal and job traits, as well as health workers' WE, and their intention to quit teaching hospitals in Nigeria.

A one-time field survey design was assumed. The research surveys were delivered to 1500 health workers using purposive sampling technique. There was a risk of data defect due to common method bias because the data was collected at a cross-sectional point based on health professionals' self-perception (Mackenzie & Podsakoff, 2012). We placed the measurement scales of the key constructs (for example, Independent variable, mediator, moderator, and the dependent construct) separated by different scales of other extraneous constructs in the survey

questionnaire, following the recommendation of past studies, to decrease any arbitrary inflation or deflation of relationships among variables (Mackenzie & Podsakoff, 2012; Podsakoff et al., 2012).

The process for gathering data is as follows. The present study's objective and theoretical/practical contributions were first presented to the teaching hospitals' HR managers. The questionnaire began with a cover page that briefly described the study's purpose, besides problems of privacy and voluntary involvement, before moving on to the scales of psychometric properties and demographic questions. A total of 420 health workers took part in the survey, with a response rate of 38.92 percent. The conditional mean imputation approach was used to fill in a few missing variables. There was no abnormal case identified using a multivariate outlier identification technique based on Mahalanobis D2.

The present study's sample was drawn from a teaching hospital in North-central Nigeria; as a result, many demographic factors were used as control variables to exclude any false connections between the key variables. Gender, tenure, and education, according to prior research, may have a major impact on work engagement (Methot et al., 2016; Rai et al., 2019) and desire to resign (Methot et al., 2016; Rai et al., 2019). (Fabi et al., 2015; Memon et al., 2017). In all primary analyses, gender (female = 1, male = 2), tenure in yrs. at the present establishment, and education in yrs. (for instant, 17 years for a secondary-school graduate, 24 years for a university graduate) were mostly controlled.

3.2. Measurement Scales

The primary factors were measured using four psychometric instruments. All assessments were based on a five-point Likert scale, with 1 indicating strong disagreement and 5 indicating strong agreement.

The Proactive Personality Scale, in its abbreviated form, was used to assess proactive personality (Bateman & Crant, 1993). Due to the high factor loading above (0.707), all six things were kept, and the mean of all the items was utilized in the main analysis. Three items from Morgeson and Humphrey (2006) were used to determine the level of job autonomy. The nine items of the work engagement Scale (Balducci et al., 2010) were used to assess employee engagement in their work. Finally, three items were used to assess intention to quit (Mobley et al., 1978). Table 1 shows the results of all item surveys alongside the standardized factor loading, average variance extracted (AVE), composite reliability (CR), and Cronbach's alpha as internal consistency reliability.

4. Result and Discussion

4.1. Measurement Model

The reliability, convergent validity, and discriminant validity of the study's items were all tested. All of the items used for this study are good indicators of the latent variables, according to the results. Also it was demonstrated that the measurement models meet all of the minimum requirements (Table 1). For factor loadings, a cut-off value of 0.708 significance (t-value >1.96 and p-value 0.05) was employed. All of the items in this analysis had loadings greater than 0.729. According to Hair, Ringle, and Sarstedt (2011 & 2013),

higher outer loading factors indicate greater indication reliability. In addition, when Dijkstra-rho Henseler's (rhoA) is used instead of Cronbach's alpha and Composite Reliability, a more precise evaluation of data consistency is obtained. The values here indicate the dependability of the objects loaded on each construct (Ringle et al., 2017). Furthermore, because Cronbach's Alpha has a lower bound value, causing genuine reliability to be underestimated, some researchers decided to adopt Composite Reliability (CR) (Peterson & Kim, 2013). In reality, CR can be used as an alternative to Cronbach's Alpha because of its somewhat greater value in contrast to that of the latter, with a relatively insignificant difference between them (Peterson & Kim, 2013). In this investigation, the CR values are greater than the recommended threshold value of 0.708. (Hair et al., 2013; Henseler, Ringle & Sinkovics, 2009; Wong, 2013). Meanwhile, all average variance extracted (AVE) values are greater than the 0.50 criterion. In terms of convergent validity, this backs up the concept measures (Henseler, 2017; Henseler, Hubona, & Ray, 2016).

Table 1. Scale items and construct evaluation

Construct	Item	λ	AVE	CR	A
Proactive personality			0.785	0.956	0.945
PP1	If I see something I don't like, I fix it	0.853			
PP2	If I see something I don't like, I fix it	0.890			
PP3	I love being a champion for my ideas, even against others' opposition.	0.865			
PP4	I am always looking for better ways to do things	0.903			
PP5	If I believe in an idea, no obstacle will prevent me from making it happen.	0.898			
Job autonomy			0.750	0.900	0.833
JA1	I have made my own decision about how to schedule my work	0.851			
JA2	I have made decisions about what methods I would use to complete my work.	0.866			
JA3	I have had a chance to use my personal initiative or judgment in carrying out my work	0.880			
Work engagement			0.752	0.965	0.958
EE1	At my work, I feel bursting with energy. (Vigor)	0.784			
EE2	At my job, I feel strong and vigorous. (Vigor)	0.826			
EE3	When I get up in the morning, I feel like going to work. (Vigor)	0.847			
EE4	I am enthusiastic about my job. (Dedication)	0.857			
EE5	My job inspires me. (Dedication)	0.899			
EE6	I am proud of the work that I do. (Dedication)	0.893			
EE7	I feel happy when I am working intensely. (Absorption)	0.900			

EE8	I am immersed in my work. (Absorption)	0.890
EE9	I get carried away when I am working. (Absorption)	0.899
Intention to quit		0.564 0.837 0.752
IQ1	I intend to look for a job outside of [company name] within the next year.	0.758
IQ2	I intend to remain with [company name]. (Reverse-coded)	0.707
IQ3	I often think about quitting my job at [company name].	0.829

Note: λ = standardized factor loading; AVE = average variance extracted; CR = composite reliability; α = Cronbach's alpha. All factor loadings are significant ($p < 0.001$). The values of Cronbach's alpha for three subdimensions of the UWES-9 are 0.88 (vigor), 0.81 (dedication), and 0.87 (absorption)

Table 2 Path Coefficient

	(Path Coefficient) F^2		R Square
	EE	IQ	
Employee engagement		0.052, (-0.367)	0.734
Job autonomy	0.067, (0.155)		
Proactive Behavior	1.63, (0.767)	0.01, (-0.162)	
Intention to quit			0.261

The study's discriminant validity was assessed using three methods: first, the Fornell-Larcker criterion, as proposed by Hair et al. (2013) as the standard method for analyzing this type of validity. The HTMT test, as demonstrated by Henseler, Ringle, and Sarstedt (2015), is the second technique, and the third method is to determine whether each indication outer loading on the appropriated construct is greater than cross-loadings with other constructions (Farrell, 2010; Obeid, Salleh & Mohd. Nor, 2017). In comparison to the use of other standard methodologies, the HTMT method was used at this stage as a tighter requirement. All variables meet the Fornell–Larcker criterion, as evidenced by the findings. The square root of each AVE, in particular, is greater than the correlations between constructs and reflective items (Hair et al., 2013; Henseler et al., 2016). Furthermore, the heterotrait–monotrait (HTMT) values in each example are smaller than the 0.85 criterion recommended by Hair et al. (2017) and Henseler et al (2015). Table 2 shows the results, which show that there is discriminant validity.

Table 3 Discriminant Validity

	Employee Engage	Job Autonomy	Proactive Behaviour	Intention to Quit
Employee Engage	0.867			
Job Autonomy	0.548	0.866		
Proactive Behaviour	0.846	0.512	0.886	
Intention to Quit	-0.504	-0.086	-0.472	0.751

Table 4 HTMT

	Employee Engage	Job Autonomy	Proactive Behaviour	Intention to Quit
Employee Engage				
Job Autonomy	0.61			
Proactive Behaviour	0.884	0.576		
Intention to Quit	0.554	0.171	0.52	

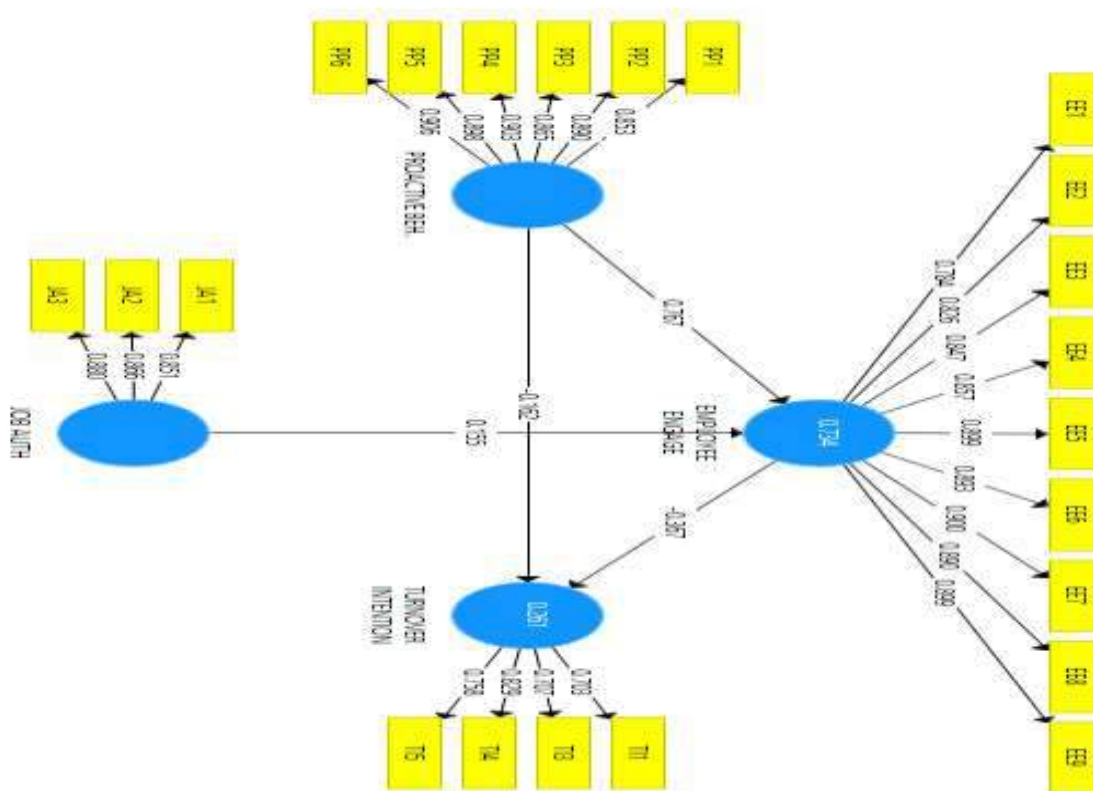


Figure 2 Measurement Model

Table 5 Path Coefficient

PATH	STD. BETA	STD ERROR	T Value s	P Value s	DECISIO N
EMPLOYEE ENGAGEMENT -> TURNOVER INTENTION	-0.387	0.093	4.17	0.000	SUPPOR TED
JOB AUTH -> EMPLOYEE ENGAGEMENT	0.315	0.04	7.788	0.000	SUPPOR TED
PROACTIVE BEH. -> EMPLOYEE ENGAGEMENT	0.756	0.027	27.53	0.000	SUPPOR TED
PROACTIVE BEH. -> TURNOVER INTENTION	-0.128	0.097	1.317	0.189	NOT SUPPOR TED
PROACTIVE*WORK ENGAGEMENT -> EMPLOYEE ENGAGEMENT	0.264	0.03	8.763	0.000	SUPPOR TED

Table 6 Path Coefficient

HYP	Path	STD. BETA	STD Error	T Value s	P Value s	Decision
H1	Proactive Behaviour. -> Employee Engage -> Intention to quit	-0.292	0.073	4.003	0.000	Supported
H2	Proactive*Work Engagement -> Employee Engage -> Intention to quit	-0.102	0.023	4.408	0.000	Supported
H3	Proactive*Work Engagement -> Employee Engagement	0.264	0.03	8.763	0.000	Supported

Following the evaluation of the measurement model, this study used the bootstrapping approach to investigate the link between exogenous and endogenous latent constructs. The significance results of the independent and dependent variables were displayed in Figure 3. All of the independent variables, such as proactive personality ($=.367$, $p.001$), employee engagement ($=.227$, $p.001$), and job autonomy ($=.291$, $p.001$), had significant and positive correlations with intention to resign, according to the findings (see Table 4). As a result, H1, H2, and H3 are all supported.

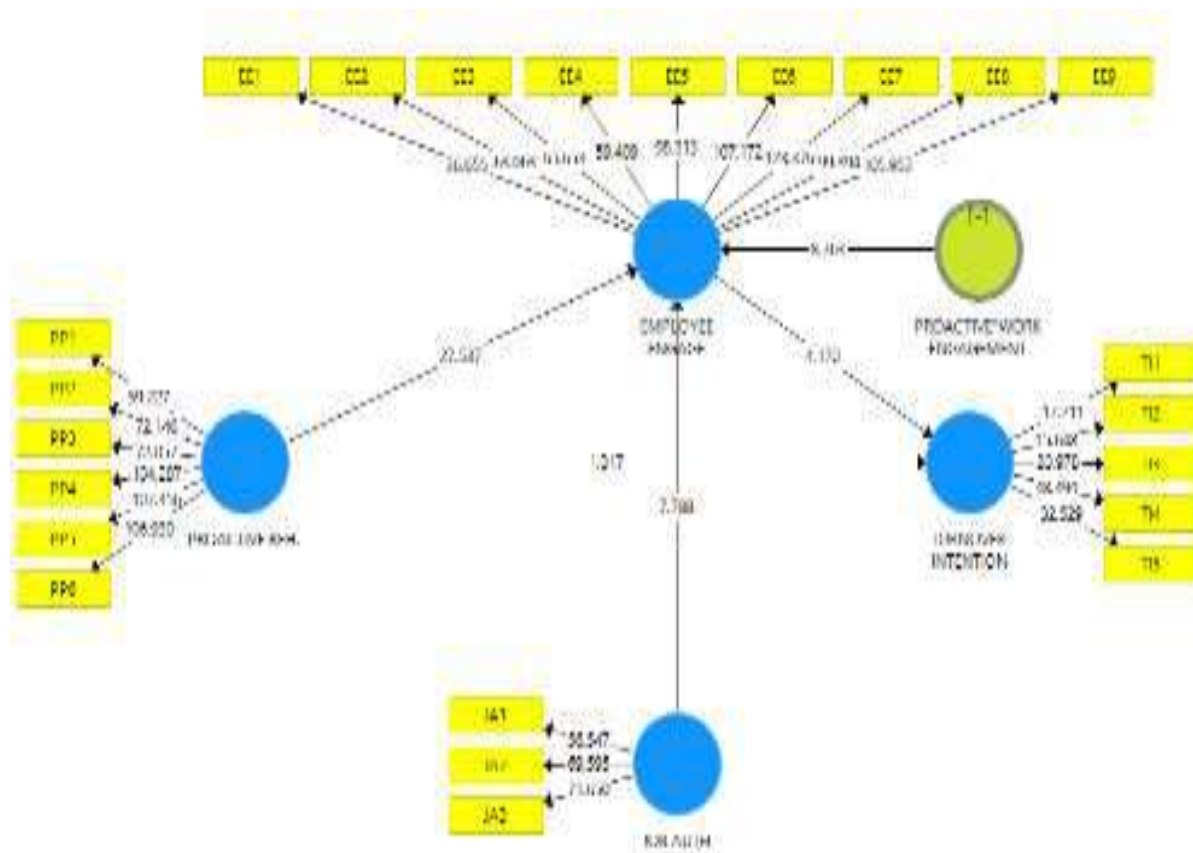


Figure 4 Structural Model

This study used a two-stage strategy using Smart PLS structural equation path modeling to analyze the moderating influence of job autonomy between proactive PP and intention to quit so as to investigate the moderator effect. The current study suggested that JA can regulate the link between PP and intention to quit, with more job autonomy resulting in a stronger relationship than lower job autonomy. Table 4 and Figure 4 demonstrate that $JA*EE (=0.156, p.001)$ and $POS*JS (=0.131, p.001)$ have substantial and favorable interaction effects on intention to quit. As a result, hypotheses H5 and H6 are supported.

The variations explained by the exogenous latent constructs in the measurement model were also investigated in this study. According to Chin (1998), the R^2 number should range from zero to one. Cohen (1988) suggested that R^2 values of 0.02, 0.13, and 0.26 be regarded as weak, moderate, and substantial, respectively. Based on Cohen's (1988) threshold value, the R^2 value in Figure 2 indicates that the endogenous latent construct may be described by the endogenous latent constructs with a large (.506 percent) variance.

The findings of the PLS bootstrapping to explore mediation, moderation, and moderated mediation are presented in Table 4. Work engagement, according to Hypothesis 1, was a mediator between PP and intention to quit. In Table 4, Figure 3 shows a significant negative main connection between PP and intention to quit ($=0.18, t = 2.28, p 0.05$). Figure 3 shows a substantial positive link between PP and work engagement ($= 0.48, t = 6.80, p 0.001$). Figure 3 shows that, when proactive personality was controlled, WE had a considerably negative

association with intention to quit ($=0.491$, $t = 6.292$, $p 0.001$), but proactive personality and intention to quit had no relationship ($= 0.06$, $t = 0.71$, $p > 0.05$). Established previous researchers such as Baron and Kenny's (1986) classical approach, this is a predictable display of full mediation.

To more thoroughly test the mediation outcome, confidence intervals (CI) of indirect impact were generated and bootstrapping. Table 5 summarizes the findings. Based on 5000 bootstrapped resampling, the indirect effect of work engagement was significant ($b = 0.38$, 95 percent bias-corrected CI = $[0.561, 0.242]$), whereas the direct effect was not ($b = 0.09$, 95 percent bias-corrected CI = $[0.162, 0.3391]$). The study based on 1000 repetitions of the simulated distribution revealed the same result ($b = 0.399$, 95 percent CI = $[0.553, 0.232]$). In conclusion, the role of WE as a complete mediator between PP and intention to quit has been properly established. As a result, Hypothesis 1 was shown to be true.

Continuous independent variables were mean-centered prior to testing moderation and moderated mediation to eliminate the possibility of multicollinearity (Saunders et al., 2009). The variance inflation factor (VIF) values in all of the regression models were less than 1.80, which is a reasonable level.

Hypothesis 2 proposed that the extent of JA moderates the link between PP and WE. The interaction term of PP and job autonomy was significant ($= 0.13$, $t = 2.01$, $p 0.051$), as shown in Figure 3 in Table 4. Furthermore, as shown in Table 4, the bootstrapping test showed a significant interaction effect ($b = 0.253$, 95% bias-corrected CI = $[0.00473, 0.502]$). The basic slope test (Stevens, 2009) revealed that when job autonomy was high (+1 SD), the positive association between PP and WE was substantially greater ($b = 0.651$, $t = 5.493$, $p 0.0012$). When JA was low (one standard deviation), the connection was weak ($b = 0.312$, $t = 2.331$, $p 0.051$). As a result, H2 was shown to be true. Figure 4 depicts the slope difference at one standard deviation of job autonomy.

Hypothesis 3 contends that the level of JA moderates the mediation effect between PP and desire to quit via WE. The extent of an indirect impact via mediator fluctuates dramatically varying on the degree of the moderator in moderated mediation. Under two conditions, it can be ascertained that there is a moderated mediation effect in the model of this study: (1) if the link between PP and WE (for example, mediator) is moderated by JA (for example, moderator), and (2) if the relationship between work engagement (for example, mediator) and intention to quit remains significant in the model including the interaction (i.e., moderator). By accepting Hypothesis 2, the first requirement was already met. Work engagement was strongly related to intention to quit in the second condition ($=0.491$, $t = 5.691$, $p 0.001$) (Figure 3 in Table 4). As a result, it is possible to conclude that there is a moderated mediation effect.

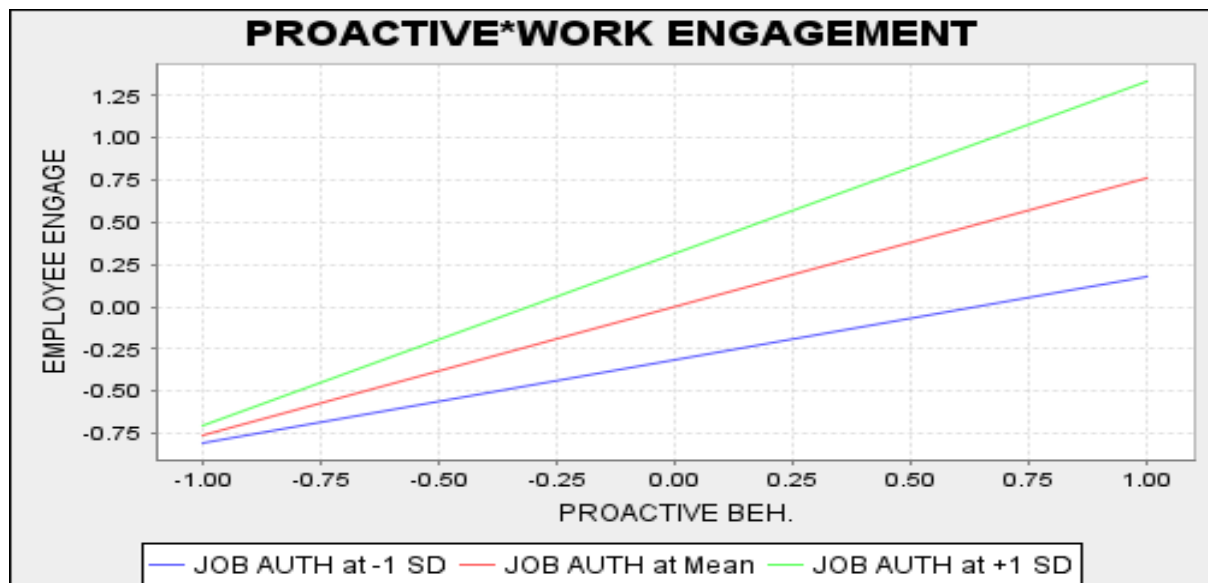


Figure 5 Moderation

4.2. Discussion

We believe that existing research on proactive employees' intentions to quit has two unresolved concerns. First, no theoretical framework explains how proactive personality affects quitting intentions. Second, the relationship's empirical outcomes have been inconsistent. The current study focuses on a research framework that integrates the motivational mediator and the appropriate moderator in the association between PP and intention to quit in order to fill these research gaps. This research aimed to see if WE mediates the relationship between PP and intention to quit, if JA moderates the relationship between PP and WE, and if JA moderates the mediated relationship between PP and intention to quit through WE. In addition, we discovered that WE act as intermediate function in relating PP with intention to quit utilizing survey data from 420 health workers working for a teaching hospital in Nigeria's north central region. In addition, job autonomy appears to play a role in explaining the favorable relationship between proactive personality and work engagement, according to this research. Conclusively, the findings of the current study revealed that job autonomy moderates the indirect relationship between PP and the intention to resign through WE.

4.2.1. Theoretical contributions and practical implications

Researchers generally believe that proactive individuals who are probable to become high achievers are critical for contemporary corporate organizations' survivability (Bergeron et al., 2013; Elsaied, 2019). They have, however, failed to rationally clarify and experimentally explain the relationship between PP, which signifies employee proactive tendencies, and intention to quit, which is used to forecast actual turnover. This study contributes to the relevant literature by attempting to resolve these challenges.

Work engagement, in particular, appears to act as a relationship between PP and intention to quit, according to this study. It is crucial to investigate the intermediary mechanism that mediates the link between PP and intention to quit in order to fully recognize the underlying

nature of the link (Kundu & Gahlawat, 2016). The researchers concentrated on WE because it is a motivational variable that is closer to intention to quit. We used the distal-proximal method, which states that proximal motivational states indirectly link to distal dispositional tendencies (Barrick & Mount, 2005). Work engagement has been presented as a precursor of behavioral intent or a result of employee personality in previous studies (Christian, Garza, & Slaughter, 2011; Saks, 2006). The current research emphasizes the significance of WE as a relationship in justifying the association between PP and intention to quit by going beyond previous research. Work involvement, in particular, appears to entirely moderate the connection between proactive personalities and intention to quit. This conclusion shows that individuals with proactive personalities are more interested in their jobs, which leads to a lower likelihood of quitting. It also implies that proactive employees who have the capacity of good behavior are more expected to value their employers.

Furthermore, we aimed to investigate the work setting that could hypothetically increase the proactive trait, based on trait activation theory (Tett & Burnett, 2003), which states that traits are exhibited as answers to pertinent situational signals. Indeed, the association between proactive dispositional propensity and employee motivational state is dependent on the self-directed employment situation, according to this study. As a result, this research supports the theory's validity while also expanding its applicability. . The findings of this study, on the other hand, are significant because they respond to a request for research into the amount to which situational variables boost or dampen the sign of PP (Bateman & Crant, 2017). The current paper highlights JA as a significant border circumstance to establish the boundary to which PP interacts with WE by unearthing that high degrees of JA seem to strengthen the favorable relationship between PP and WE. As a result, this research adds to the proactivity literature by identifying the best related element that might work in tandem with an individual's proactive personality.

Finally, using the job demands–resources model of work engagement (Hoole & Bonnema, 2015), we built a moderated mediation framework to justify for the relationship between PP and intention to quit (Rana et al., 2014). We also found that when proactive individuals complete independent activities, they are further expected to get engaged with their job, which reduces their desire to leave. This research adds to our knowledge of how PP affects intention to quit and when proactive employees' intention to quit declines. Furthermore, the study methodology of this research supports Blumberg and Pringle's (1982) claim that in order to explain employee behavior, researchers must investigate individual ability, opportunity, and motivation. In support of this theory, we discovered evidence that the behavioral intention (i.e., intention to leave) is controlled by the motivation (i.e., work engagement) that results from the combined strength of the ability (for example, proactive personality) and the opportunity (for example, opportunity to quit) (for example, job autonomy).

This research also has suggestions for effective organizational management. The implications for the staff, based on the findings of this study, include emphasizing the value of selecting proactive workers and measures to reduce proactive employee turnover. For today's commercial organizations, techniques to analyze candidates' proactivity may be beneficial and important. Given that proactive personality has a good relationship with job engagement and a negative link with intention to quit, it is beneficial to use the tools to discover proactive tendencies in applicants throughout the selection process. Following the recruitment of

proactive employees, organizations must focus on developing organizational practices, such as education and training, as well as organizational culture, such as organizational and supervisor support, in order to increase workers' levels of engagement at work (Yongxing et al., 2017). (Saks, 2019). The degree of job autonomy is particularly important when creating job duties and assigning them to employees. As a result, firms should allow employees to work under autonomous working conditions that allow them to realize the benefits of their proactivity, reducing turnover among proactive personnel.

5.2. Limitations and Future Research Directions

Although the reality that this work makes significant theoretical and practical advances, it also has a number of drawbacks that will need to be addressed in the future. Because we used cross-sectional data to evaluate our research model, the causality of our findings cannot be ensured. Though it is not expected that intention to quit has a direct impact on proactive personality and job autonomy, longitudinal data should be used to validate the research framework and make the findings of this study more appealing. Given that motivation triggers behavior, we concentrated on WE as a primary mediator in this study to elucidate the influence of PP on intention to quit. Other elements, beyond from motivation, must be explored to better comprehend the correlation between qualities and behaviors.

5. Conclusions

Establishments are pushed to attract employees with proactive traits, and the personnel are frequently asked to perform in a practical way, given the turbulent changes in the business environment. Attempts to keep these crucial individuals from departing are critical. The current paper adds to these attempts by revealing that proactive health workers are initially engaged in their job and then have low intentions to quit. Furthermore, when individuals work in autonomous working environments, they are further engaged and their intention to quit is lower. Therefore, this research recommends that to retain proactive personnel in Nigeria's university teaching hospitals, greater emphasis should be placed on WE, a motivation and health-related indicator, and JA, a typical job attribute (Najam et al., 2018; (Gadi & Kee, 2020b; Albadayneh & Alrawashdeh, 2017)

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The Hidden Demographics Barriers of the Economic Growth: A Psychometric Approach

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Abstract

This paper examined the hidden demographic barriers of economic growth. The study used a cross-sectional survey researches design. The primary data were collected by using a psychometric scale from 211 individuals who were randomly sampled from the Mwanza and Kagera regions in Tanzania. The data were linearly analysed by the weighted least squares (WLS) and Analysis weighted- automatic linear modelling (AW-ALM), and non-linearly analysed by Gaussian mixture model (GMM) and neural network analysis (NNA). The study found that the main hidden demographic barrier to economic growth is the negative subjective well-being of an individual's current age and education level. Moreover, the GMM revealed that there is no significant data or regional clusters or classes in the study population. Furthermore, NNA evidenced the most effective predictor of economic growth is age, followed by education. The study concluded that the most hidden demographic factors that hinder economic growth are negative perceptions of an individual on his/her current age and level of education, not the age maturity, and education level. Operationally or practically, the paper implicates several socio-economical policies, mostly the national aging policy (NAP), the National Education and Training policy (NETP), the National Employment Policy (NEP), and regulations /laws on national social security funds schemes at national, regional and global levels. Therefore, the paper recommended that government and other education stakeholders increase the policy commitment on the mathematics, science, and technology subjects to be compulsory for primary and secondary schools, and the extension of the retirement age from 60 years (voluntary) to 65 years (compulsory).

Keywords: Economic Growth, Hidden Demographic Barriers, Psychological Factors, Aging

JEL: J12, J16, D1, D9

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1. Introduction

The demographic changes involve several factors such as age structure, marital status, education profiles, household size (number of family members), and others. These changes have both direct and indirect (hidden) effects on economic growth. That is, the changes can affect direct or indirect the opportunity of the individual on economic activities. For example, the changing of age structure may affect the labor market. Moreover, the increase of population also significantly affects the workforce and the education system as the government may require more costs for the construction of schools and the provision of quality health services. On the other hand, unemployment would likely increase if the population is not associated with decent works or job creation. It is a common or traditional way of studies assessing the direct impact of demographic changes such as change of age structures that directly influence the labour market. The hidden effect of the individual's demography change on economic growth is likely overlooked. Most of the studies are limited on the physical or direct effect of the demographic changes on economic growth. Therefore, this study aimed to examine the hidden or indirect effect (barrier) of the demographic factors on economic growth. Specifically, the study examined the indirect effect (barriers) of the change of age structure, marital status, education profiles, household size (number of family members), and source of income on economic growth.

2. Empirical studies

Empirically, the demographic factors, particularly the population aging is claimed to impact economic growth (Mester, 2017; Stephan and David, 2007; Hu, Lei, and Zhao, 2020; Song, 2013). The common empirical measures that are proxies of population change (aging) are life expectancy, mortality, morbidity, and fertility. All these variables are defining the natural variations or changes of the population's physical attributes. The study of the demographics as a part of the economics started in the early writing of Malthus (1798) on the population growth (Mester, 2017).

Recently, most of the studies concluded that demographic change (usual population change) influences the underlying growth rate of the economy, structural productivity growth, living standard, saving rate, and investments (Song, 2013; Bloom and Williamson, 1998; Yang, Zheng, and Zhao, 2021; Preston and Donaldson, n.d; Nuta and Nuta, 2020). Moreover, there is a consensus that rapid population growth in poor countries under the condition of high fertility can negatively impact economic growth (Ahlburg and Cassen, 2008; Mester, 2017; Nuta and Nuta, 2020). Mester (2017) contended that demographic factors influence the supply of labour in the sense that, when the mortality rate declines, people live longer, the supply of labour increases. Therefore, the increase in life expectancy implies that individuals will need to work longer to save more for retirement. Eventually, the population aging leads to a downward trend in the labour force participation in the aggregate.

The changing of the age distribution of workers can affect not only labour force growth and participation but also the long-run natural rate of employment (Yang, Zheng, and Zhao, 2021; Mester, 2017; Vlandas, McArthur, and Ganslmeier, 2021). Furthermore, Mester (2017) evidenced that demographic factors affect aggregate consumption, saving, and investment decisions. That is, the increase in longevity means that people will need to save more over their working life to find a longer retirement period. Therefore, the demographic factors have

implications on the monetary policy (Mester, 2017). Several studies evidenced that changing the population from young to older affects the interest rate (Kellerman, Ferreira, and Koekemoer, 2021). Studies suggest that older people tend to hold more assets than the young and tends to be the creditors while drawing down their assets to fund their consumption during the retirements, and younger people tend to be the borrowers but face tighter credit constraints than older people because they hold fewer assets (Ogunjimi and Oladipupo, 2018; Pasichnyi and Nepytyaliuk, 2021; Hippolyte, Ekrame, and Dramane, 2020; Omoruyi and Mitchel, 2021). In connection to that, older people also tend to save less than younger people because the older people once reach retirement ages, they need to draw down their retirement. This also tends to change the interest rate in the economic system. Moreover, the rising share of older people will put significant pressure on fiscal and other government policies such as social security and protection, and pension fund schemes in a country (Mester, 2017).

Mester (2017) explained the outcome of some age-related behaviour of workers in the labour market. The older workers typically have a lower unemployment rate than other age groups, and they tend to change jobs less frequently. In other words, older workers tend to stay longer in their jobs than younger workers who are likely to change jobs and employers frequently. This phenomenon, allows the older workers to gain deeper experience, which has a positive impact on productivity growth. Therefore, young people now make up a smaller share of the labour force in many countries (Mester; 2017). That is, shrinking job opportunity among the young population stress the need for flexibility not only in the labour market but in the labour force to cope with the scenario that is bound to take place once the echo generation gets old (Omoruyi and Mitchel, 2021). This is because the demographic changes affect the size of the nation's total population, working-age population, and workforce (Hippolyte, Ekrame, and Dramane, 2020; Mester, 2017; Cincotta and Engelman, 1997).

Further studies on demographic factors evidenced that demographic factors such as population change plays a role in the observed variation in the labour income share and banking services including saving (Hippolyte, Ekrame, and Dramane, 2020; Kellerman, Ferreira, and Koekemoer, 2021). The aged population has a negative impact on economic growth while the children population and labour force population stimulate the growth of the economy in the short and long-run, therefore, they support the demographic dividend hypothesis (Ogunjimi and Oladipupo, 2018). On the other hand, the cross-country study by Yang, Zheng, and Zhao (2012) evidenced the inverted U-shaped relationship between population aging and economic growth. Moreover, Fent, Mahlberg, and Prskawetz (2008) related changes in a country's age structure and its impact on economic growth and productivity. They found that there is a positive impact of the age group 50-64 years on economic growth and a negative productivity effect of the share of older workers (50+).

A recent study by Widarni and Bawono (2021) associated the demographic change in the aspect of education development as one aspect of the demographic changes. They concluded that educational development is the key to the success of increasing human capital and technological development because education plays a role in improving the quality of human resources. The increase of human resources meant to increase knowledge, mastery of the technology, innovation, and ability to develop technology to encourage technology development.

Generally, the previous literature created critical questions such as why the aged population has a negative impact on economic growth, while the young population has a positive impact on economic growth. Why the older people tend to hold more assets than younger and older people also tend to save less compare to young people? Why do the older workers typically, have a lower unemployment rate than other age- groups, and they tend to change jobs less frequently? In other words, why the older workers tend to stay longer in their jobs than younger workers who are likely to change jobs and employers frequently? In summary, all these questions lead to one general question that “what are the psychological effects associated with the current age or/and other hidden demographic factors of the individual that influence the economic decision? To answer this general question, we need to develop a psychological scale (psychometric) of the demographic factors. Therefore, this study applied the psychological demographic scale developed by Bundala (2020) and Bundala, Ngaruko, and Lyanga (2021). This scale captures the subjective well-being of an individual’s current age, level and source of income, education level, number of family members, and marital status. This scale is more important as involves a broad range of demographic factors as recommended by Le Tan and Trang (2017) and French, (2014). Therefore, this study plays an important role as it worked on the methodological gap /weakness of the previous studies.

Based on that fact, this study aimed to explore the hidden demographic factors that hinder the economic growth in Tanzania. The economic growth in Tanzania is still unpredictable and growing unevenly across regions. This phenomenon necessitates a researcher to go further beyond the determination of economic-based determinants of economic growth; hence, examined the non-economic-based determinants of economic growth. This study involved the non-economic variables that are psychological demographic factors as suggested by several studies that influence economic growth (Stevenson and Wolfer, 2008; 2013; Roka, 2020; Bundala, et al. 2021; Diener and Seligman, 2004). The study took a study sample from the Kagera and Mwanza regions which are characterised by the higher economic performance disparities in the Lake Victoria economic zone (URT, 2019a; 2019b; 2019c). The Kagera region is performing worse than the Mwanza region, while they share a lot of economic opportunities such as regional trade, economic activities in Lake Victoria such as fishing, etc. Due to this fact, it is reasonable that the economic performance disparities are due to the disparities of psychological demographic factors (non-economic variables/factors) between the two regions. Consequently, this disparity of non-economic variables between the regions leads to uneven and unpredictable growth in a country.

Therefore, this study considered the non-economic variables which are psychological (hidden) /latent demographic factors which are defined as the subjective well-being of the individual’s demographic characteristics which were overlooked by the previous studies. Specifically, the study considers the five important demographic factors as suggested by Bundala (2020), Le Tan and Trang (2017), and French, (2014), which are age, marital status, number of family members (household size), education, and individual income. Thus, the study examined the economic influence of individual subjective well-being on his/her current age; level and source of income, number of family members, marital status, and education level. In fact, this study on psychological demographic factors is a vital project as it provides a model of economic growth at the micro-level (family level) of the economic production system.

3. Methodology

The cross-section survey research strategy was used in this study. The primary data were randomly sampled from 211 individuals in the Mwanza and Kagera regions. The self-checklist administered questionnaires were used to collect data as suggested to be the best tool that captures the psychological attributes of the individuals (Kothari, 2009; Kabir, 2016). The data were analysed by the weighted least squares (WLS) regression and analysis-weighted automatic linear modelling (AW-ALM) for linear modelling purposes. Moreover, the neural network analysis (NNA) and Gaussian Mixture Models (GMM) were applied for non-linear modelling purposes.

The WLS regression is an estimation technique that weights the observations proportional to the reciprocal of the error variance for that observation and so to overcome the issue of non-constant variance (Sulaimon, 2015). For regression with cross-section data, it is usually safe to assume the errors are uncorrelated, but often their variances are not constant across individuals (Sulaimon, 2015). This problem is known as the heteroscedasticity that is unequal scatters; the usual assumption of the constant error variance is referred to as homoscedasticity. In the ordinary least squares (OLS) coefficients provide the regression equation that minimise the sum of squares errors (SSE) = $\sum e_i^2$, but in a weighted least squares (WLS) regression and the estimated equation minimised by $\sum w_i e_i^2$ where w_i is a weight given to the i^{th} observation. Therefore, WLS regression is used in the presence of non-constant variance. If the variance of i^{th} observation is σ_i^2 , then the weight $w_i = \frac{1}{\sigma_i^2}$

Therefore,

$$\sum w_i e_i^2 = \sum \frac{1}{\sigma_i^2} \cdot e_i^2 = \sum \left(\frac{e_i}{\sigma_i} \right)^2$$

Then, the entire OLS model was divided by σ_i^2 or multiplied by w_i .

That is,

$$w_i [\ln \text{AGDP} = \beta_0 + \sum_{i=1}^n \beta_i (\text{Demo}_i)]$$

Where, β_0, β_i are constant and coefficients values of the vector of endogenous variable, Demo_i

The AW-ALM has been overcome the limitations of the traditional regression model which includes the inability of automating the identifying and handling of outlying cases (Yang, 2013). Moreover, the traditional regression model is limited to the stepwise method only with no capability of conducting all possible subsets regression (Yang, 2013). The use of AW-ALM enriches the methodology support by offering automatic variable selection and automatic data preparation (Yang, 2013).

A Gaussian Mixture Model (GMM) is a useful tool for modelling data that comes from one of the several groups that might be different from each other, but data points within the same

group can be well modelled by the Gaussian distribution (Reynolds, 1992). Therefore, this model is a useful tool or technique that can reveal the hidden demographic characteristics /factors across the regions. The mixture model is denoted,

$X = \{x_1, \dots, x_n\}$ a vector of size n , where $x_i \in R^\alpha$

Assume that each X_i is distributed according to a probability distribution function f :

$$f(x_i; \theta) = \sum_{k=1}^K \pi_k h(x_i; V_k)$$

Where, π_k is the mixture proportion of the group k ($\forall k \in \{1, \dots, K\}, 0 < \pi_k < 1$, and

$$\sum_{k=1}^K \pi_k = 1)$$

θ is represent the model parameters. The function $h(\cdot; V_k)$ is a probability distribution of dimension α with a parameter V_k . Therefore, for Gaussian mixture models, h is a Gaussian with mean μ_k and variance Σ_k and hence $V_k = (\mu_k, \Sigma_k)$.

To establish a mixture distribution of the vector variable $Z = \{Z_1, \dots, Z_n\}$ with $Z_i = \{Z_{i1}, \dots, Z_{iK}\}$ defined that;

$$f(Z) = \begin{cases} Z_{iK} = 1 & \text{If } X_i \text{ is assigned to the } K - \text{th componets} \\ Z_{ik} = 0 & \text{Otherwise} \end{cases}$$

The mixture distribution (unknown sub-population or clusters) of the population Z is obtained by assigning each mixture model X_i to component providing the highest posterior probability P_{ik} given by,

$$P_{ik} = P_k(x_i; \hat{\theta}) = \frac{\hat{\pi}_k h(x_i; \hat{V}_k)}{\sum_{j=1}^K \hat{\pi}_j h(x_i; \hat{V}_j)}$$

Now, to establish the clusters or fuzzy classification, Celeux and Govaert (1992) proposed the classification expectation-maximization (CEM) algorithm. Contrary to expectation-maximization (EM) and structural equation modelling (SEM), the CEM algorithm maximises the quantity, it is given as;

$$\sum_{i=1}^n \sum_{k=1}^k Z_{ik} \log[\pi_k h(x_i; V_k)]$$

Since the number of components (subpopulations or classes) of the mixture model is unknown, the Bayesian Information Criterion (BIC) introduced by Schwarz(1978) as recommended for optimal selection; is penalised by entropy term (Biernacki et al. 2000). The BIC criterion is expressed as,

$$\sum_{i=1}^n \sum_{k=1}^k \hat{Z}_{ik} \log \hat{P}_{ik}$$

To examine if there is a clear separation of the population (classes), Celeux and Soromengo (1996) proposed the Normalized Entropy Criterion that is an entropy-based criterion and measures the overlap of the mixture components (the size of the subpopulation). It is expressed as;

$$NEC_k = \frac{E_k}{L_k - L_1}$$

Where, E_k is the entropy of the mixture model with the k components and L_k is a complete log-likelihood (maximum likelihood estimation). This criterion is used as the diagnostic statistics for a given number of components (classes) K' , if $NEC_{k'} \leq 1$, there is a clear separation of the population, i.e., the existence of the clusters in the population.

A neural network is currently the preferred tool in predicting variables (Haykin, 1998; Ripley, 1996), hence it is a time to recognise the neural network as a potential tool for data analysis (Warner and Misra, 2017). One of the advantages of the neural network over other data analysis tools is the power of the determination of the functional relationship between the dependent and independent variables (Warner and Misra, 2017). In other words, the neural network does not impose a functional relationship between the independent and dependent variables. Instead, the functional relationship is determined by data in the process of finding values for the weights (Haykin,1998; Ripley,1996). Hence, the neural network can approximate any continuous function without a pre-relationship assumption or functional form (Warner and Misra, 2017). From this fact, it is evidenced that the neural network analysis was relevant to this study. It is related to the pre-assumed functional model and this modelling doesn't require the pre assumption hypothesis of the study.

The multilayer perceptron (MLP) approach under the sigmoid function $S(x) = 1/(1+e^{-x})$ in the hidden layer and the identity function $C(y) = y$ the output layer. Where x is the Demo indicators which are subjective well-being of an individual on his/her current age (Age), marital status (Mari), number of family members (Nfam), and income level (Incs) and education level (Edu). On the other hand, y represents the output from the hidden layer which

is the probability of getting the high economy (GDP Per capita =1) and getting the low economic growth (GDP Per capita = 0).

The internal consistency reliability was examined by using rho-A coefficients and found to range from 0.932 to 0.975, which is within the recommended values (Hair, Risher, Sarstedt, and Ringle, 2019). This test is recommended as the best measure than the common measures such as Cronbach's alpha and composite reliability (Cronbach, 1951; Joreskog, 1971; Dijkstra and Henseler, 2015). On the other hand, the construct validity of the questionnaires (convergent and discriminant) were examined by using an average variance extracted (AVE) of the latent's construct as recommended by Hair et al, (2019). The AVE was found to range from 0.863 to 0.925; it is within the recommended values of at least 0.50 (Hair et al. 2019). Moreover, Henseler, Ringle, and Sarstedt (2015) proposed the heterotrait-monotrait (HTMT) ratio of the correlation to measure the discriminant validity. The HTMT ratios were found to range from 0.277 to 0.674 which are within the recommended thresholds of either 0.85 or 0.90 for dissimilar and similar items of the construct respectively (Henseler et al. 2015).

The dependent variable is economic growth which is measured by GDP per capita (regional GDP per capita in million of Tanzanian Shilling). However, the annualised income per capita will be used as a proxy for regional GDP per capita in this study. This was done by exogenous latent construct model, GPD per capita (AGDP) = monthly income of individual i x 12 (number of months in a year). The monthly income is assumed to be constant over the year, due to the nature of economic activities being similar and having almost a constant monthly return.

The endogenous variable which is a construct of psychological demographic factors (Demo) was constructed from the 5-points Likert scales, with five-dimensional observed factors which are age, marital status (Mari), income (Incs), number of family members (Nfam), and the education level (Edu). The Demo indexing model was based on the number of instrument scales or number of items or questions on each variable. The general construct model used for the psychological index is-

$$\text{Demo}_i = \frac{(\sum_{i=1}^n \sum_{j=1}^m Q_i \cdot LS_i)}{(\sum_{i=1}^n Q_i \cdot LS_{max})}$$

Where n is the number of variables measured in a psychological factor; m is the number of questions that measure or is a proxy for variable; Q_i a question posed for variable i ; LS_i the score of an individual question on the Likert Scale, and LS_{max} is the maximum score of individual questions on the Likert Scale (Bundala, 2020; Bundala, Ngaruko, and Lyanga, 2021)

4. Results and Discussion

4.1. Result

4.1. Descriptive statistics

The descriptive statistics of the demographic information of the respondents and variables of the study were examined to reveal the general profile of the sample population. The majority

of the sample is in the age group of 18-40 years which composes about 74.4 percent of the total sample, and the remaining percentage is composed of the age group of 41-70 years. The gender distribution was female 35.5 percent and male about 64.5 percent. The marital statuses of the respondents are distributed as married 62.6 percent, 33.2 percent were single and the remaining percentage is included divorced and separated respondents. Moreover, the education level of the respondents distributed as primary and secondary school leavers were 55.9 percent and 35.1 percent respectively. The remaining percentage was covered by college and university levels. On the other hand, descriptive statistics for dependent and independent variables were provided (Table 1).

Table 1: The descriptive statistics for exogenous and endogenous variables

Variable	Obs	Mean	Std. Dev.	Min	Max
AGDP	211	1.627217	.7928693	.2832	4.992
Demo	211	.6264498	.1853113	.185	.985
Age	211	.6081517	.224098	.2	1
Mari	211	.6254502	.190341	.2	1
Nfam	211	.6140758	.2030845	.2	1
Incs	211	.6227962	.2060357	.2	1
Edu	211	.6004265	.2049932	.2	1

Source: Analysed field data (2021).

Table 1 shows the descriptive statistics of the variables used in the study. The mean values indicate that the Demo score is 0.6264 which is just above the threshold value of 0.60, which means the population is characterised with low psychological awareness of demographic factors. Moreover, the subjective well-being of an individual on his/her current age, marital status(Mari), number of family members (Nfam), level and source of income (Incs), and the education level(Edu) is significantly low, which range between 0.6004 (Edu) and 0.6254 (Mari).

4.2 Linear modelling of the psychological demographic factors

In modelling of the data was transformed to natural logarithm function (ln) to meet the assumption of the statistical inference. That is the assumption of the probability distribution of the data sampled from a population such as normality and homoscedasticity. Therefore, transformations that stabilize the variance of error terms (i.e. those that address heteroscedasticity) often also help make the error terms approximately normal.

The linear model of psychological demographic factors (Demo) for economic growth was established by using the weighted least squares (WLS) regression model and analysis-weighted automatic linear modelling (AW-ALM). The purpose of using these two data

analytic methods is to re-check the empirical robustness of the post model. This re-examining enhances the conclusion on the linearity assumption of the structural model. Therefore, the WLS-stepwise regression model was run on the Demo indicators and economic growth. The Demo indicators involved in the economic growth modelling were subjective well-being of an individual on his/her current age (lnAge), marital status (lnMari), number of family members (lnNfam), level and source of income (lnIncs), and level of education (lnEdu). Moreover, the dummy variables (Mwanza and Kagera regions) were introduced to measure the geographical specificity. It is assigned 1 score for living in the Mwanza and 0 scores for living in the Kagera region. The economic growth was measured by a natural logarithm of averaged Gross domestic product per capita (lnAGDP). The WLS-stepwise regression establishes three distinctive empirical models provided in the model summary (Table 2).

Table 2: The WLS-Stepwise regression model for economic growth

Model Summary^{d,e}										
Model	R	R ²	Adj. R ²	Std. Error	Change Statistics					Durbin-Watson
					R ² Change	F Change	df1	df2	Sig. F Change	
1	.564 ^a	.318	.314	1.3072154	.318	97.247	1	209	.000	
2	.750 ^b	.562	.558	1.0495456	.245	116.219	1	208	.000	
3	.756 ^c	.572	.566	1.0404272	.010	4.662	1	207	.032	1.608

a. Predictors (Constant), ln Age

b. Predictors (Constant), ln Age, Mwanza

c. Predictors (Constant), ln Age, Mwanza, ln Edu

d. Dependent Variable ln AGDP

e. Weighted Least Squares Regression - Weighted by 1/unstandardise predicated value of lnAGDP

Source: Analysed field data (2021).

Table 2 shows the model summary of the WLS-stepwise regression of Demo and economic growth. The table describes three models with their respective statistics inferences. In the first step (model 1), only the age variable (lnAge) was selected and it was significant at 0.01, with a constant value of 0.564 and the R² of 0.318. In the second step (model 2), two variables were selected which are the region dummy variable (Mwanza) and the age (lnAge). In this step the significance level of F changes is 0.000, the constant value increased to 0.750, and the R² equals 0.562. In the third step (model 3) more variables were included which are the age variable (lnAge), the Mwanza region dummy variable (Mwanza), and the education variable (lnEdu). The predictors' constant values increased to 0.756, with R² equal 0.572. At this step, an optimal model was achieved at a maximum predictor constant of 0.756 and R² of

0.572. Therefore, the optimal or determinant model is determined by three variables which are region (Mwanza), age and education variables.

The unit impact of each variable was examined by the estimation of the coefficient of each unit in the model. The coefficient analysis was done from the WLS stepwise regression model, where the optimal model was achieved at step 3, in which the model has only three variables that are age, Mwanza region, and education. This optimal model has a predictor constant value of 0.756 and is determined at 0.566 (R^2). Therefore, a stepwise coefficient analysis was done by involving all the predictors' variables in model 3, which are age, Mwanza region, and education (Table 3).

Table 3: Unit impact (coefficients) of the WLS stepwise regression model

		Coefficients ^{a,b}					
		Unstandardized Coefficients		Standardized Coefficients		95.0% Confidence Interval for B	
Model		B	Std. Error	Beta	t	Sig.	
1	(Constant)	.780	.045		17.148	.000	.690 .870
	ln Age	.717	.073	.564	9.861	.000	.574 .860
2	(Constant)	.530	.043		12.249	.000	.445 .615
	ln Age	.731	.058	.575	12.526	.000	.616 .846
	Mwanza	.492	.046	.495	10.780	.000	.402 .582
3	(Constant)	.549	.044		12.537	.000	.463 .635
	ln Age	.603	.083	.474	7.254	.000	.439 .766
	Mwanza	.519	.047	.521	11.061	.000	.426 .611
	ln Edu	.187	.087	.144	2.159	.032	.016 .358

a. Dependent Variable ln AGDPP

b. Weighted Least Squares Regression - Weighted by 1/ unstandardised predicted value of lnAGDP

Source: Analysed field data (2021).

Table 3 shows the WLS-stepwise regression model. The optimal model is model three with predictors of age, Mwanza region, and education. In step 3 (model 3) the age variable has a positive beta coefficient of 0.474, a t-value of 7.254, and a p-value of 0.000, with a confidence interval of 95 percent at a range of 0.439 to 0.766. Therefore, model 3 is optimal with economic growth determinants of age, Mwanza, and education. This is interpreted that the positive subjective well-being of an individual on age maturity (current age), and education level has a positive impact on economic growth as evidenced to have a positive beta coefficient (impact). On the other hand, the positive beta coefficient of the Mwanza dummy variable implicates that a state of living in the Mwanza region increases the economic opportunity of an individual.

On the other hand, the AW-ALM was done for re-checking of the finding of the WLS stepwise regression model. Referring to model 3 in Table 2, all the magnitude and its directions (state of positive or negative) of the beta coefficients of both linear modelling methods are equal (Table 4).

Table 4: Analysis weighted –automatic linear modelling regression coefficients

Coefficients							
Target: ln AGDP							
Model Term	Coefficient ▼	Std.Error	t	Sig.	95% Confidence Interval		Importance
					Lower	Upper	
Intercept	1.068	0.047	22.497	.000	0.974	1.161	
Region=Kagera	-0.519	0.047	-11.061	.000	-0.611	-0.426	0.681
Region=Mwanza	0 ^a						0.681
lnAge_transformed	0.603	0.083	7.254	.000	0.439	0.766	0.293
lnEdu_transformed	0.187	0.087	2.159	.032	0.016	0.358	0.026

^aThis coefficient is set to zero because it is redundant.

Source: Analysed field data (2021).

Table 4 shows the analysis weighted–automatic linear modelling (AW-ALM) regression model. The automatic linear modelling was weighted by a standard deviation. The optimal model was established by age, education, and region dummy variables that coincided with the WLS modelling approach. Therefore, psychological demographic determinants of economic growth are age, Mwanza region, and education which were analytically confirmed.

4.3: Non-Linear modelling of psychological demographic factors

The non-linear modelling was done by using the Gaussian Mixture models (GMM) and neural network analysis (NNA). The application of GMM aimed to reveal the hidden heterogeneity behaviour of the population on the psychological demographic factors. The selection of the

mixture models was done by using the BIC condition. The study evidenced the sample population can be clustered into two classes or subpopulations. That is, according to the BIC condition, the best mixture model is the V (Variable variance) with 2 component(s) (Table 5).

Table 5: The evolution of the BIC for Demo construct

Model/Number of classes	2	3	4	5
V(Variable variance)	104.8468	101.495	90.476	74.352
E(Variable Mean)	92.176	84.57754	89.379	78.675

Source: Analysed field data (2021).

Table 5 shows that the best mixture model under the BIC condition is determined by variances of the variables, at a BIC value of 104.8468 which is the highest value. The graphical presentation of the mixture models was presented (Figure 1).

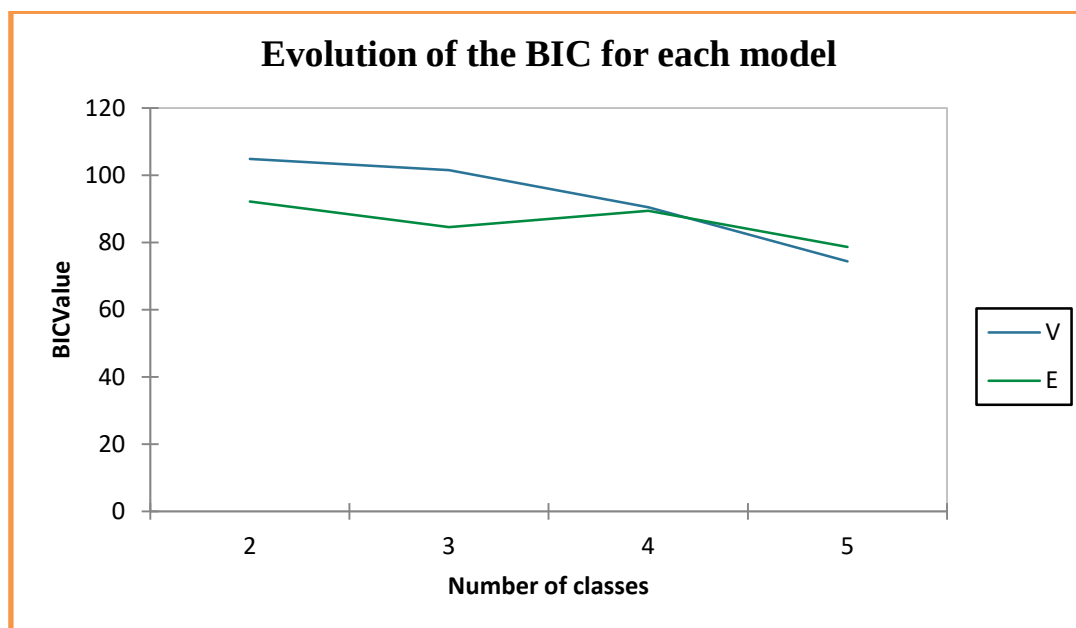


Figure 1: The graphic presentation of the mixture model under the BIC condition
Source: Analysed field Data (2021).

Figure 1 shows the best mixture model is the V (Variable variance) with 2 component(s). The EM algorithm converged in 331 iterations. The optimal number of classes occurs at the minimum choice. The algorithm should be run with a minimal number of classes fewer than 2.

The size (proportion) of the classes or clusters was established as 0.843 for class 1 and 0.157 for class 2. This means that class 1 is composed of 84.3 percent of the population sampled from the Mwanza and Kagera regions. The rest percentage (15.7 %) as belonging to class 2 (Table 6).

Table 6: The classes size, means, and variances values of the Demo

Class	1	2
Proportions	0.843	0.157
Mean (Demo)	0.577	0.889
Variance (Demo)	0.025	0.003

Source: Analysed field data (2021)

Table 6 shows the classes' size or proportion of the sample population that is determined by the two mixture models. The consequential question is what are the features that distinguish the two classes? The post-analysis reveals that class 1 has a Demo mean value of 0.577, and class 2 has a Demo mean value of 0.889. From this empirical fact, it is obvious that class 1 was characterised by the low psychological demographic factors (Demo), and class 2 was characterised by the respondents with high psychological demographic factors (Table 6).

Moreover, class 1 has a Demo variance of 0.025 and class 2 has a Demo variance of 0.003. In comparison, the individuals' psychological demographic factors in class 1 vary greatly than in class 2. Post-analysis also reveals that the class separation size of 0.843 which is equal to 172 respondents in class1 and 0.157 which is equal to 39 in class 2 (Table 6) indicates that there are no regional-based clusters since the sample population composes 211 individuals, 100 from Mwanza and 111 from Kagera region (Table 6).

Table 6: Selection criterion for the selected model and sum of weights

BIC	AIC	ICL	Log-likelihood	NEC	Entropy	DF
104.847	121.606	46.263	65.803	3.251	29.292	5.000
Results by class:						
Class	1	2				
Objects	172	39				
Sum of weights	172	39				

Source: Analysed field data (2021)

Table 6 describes the class objects, a sum of weights, and the selection criteria for the selected mixture models; the BIC condition was used to select the mixture model. Although at this value (104.847) of BIC, 2 mixture models were described; the NEC criterion is greater than 1 which indicates that there is no clustering structure in the data. The mixture models are classified by MAP of the Demo (Figure 2).

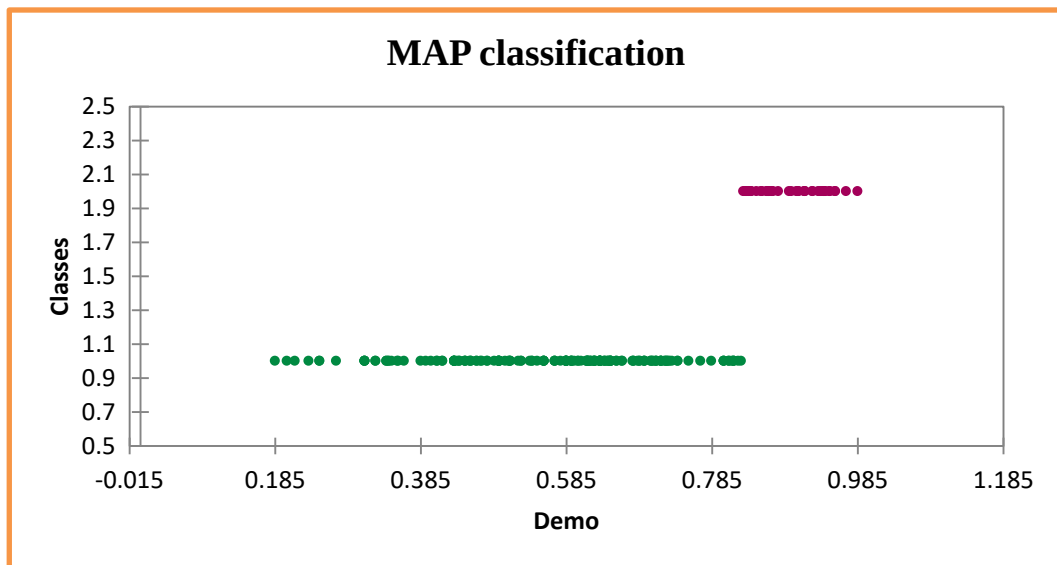


Figure 2 shows the MAP classification of the Demo in the Mwanza and Kagera regions. The largest class is class 1 which is denoted by a horizontal green line (bar), which starts just below 0.185 Demo score to just above 0.785 Demo score. On the other hand, class 2 is the smallest class which is denoted by a pink or dark-red colour line (bar) in a graph. Its Demo score starts from just below 0.785 Demo score to just above 0.985 Demo score. Therefore, the population of the Mwanza and Kagera regions has almost equally behaved in psychological demographic characteristics, as it is evidenced that about 84.3 percent of the sample population belongs to class 1. The fitted mixture models of Demo were provided to indicate the empirical distributions of the classes (Figure 3).

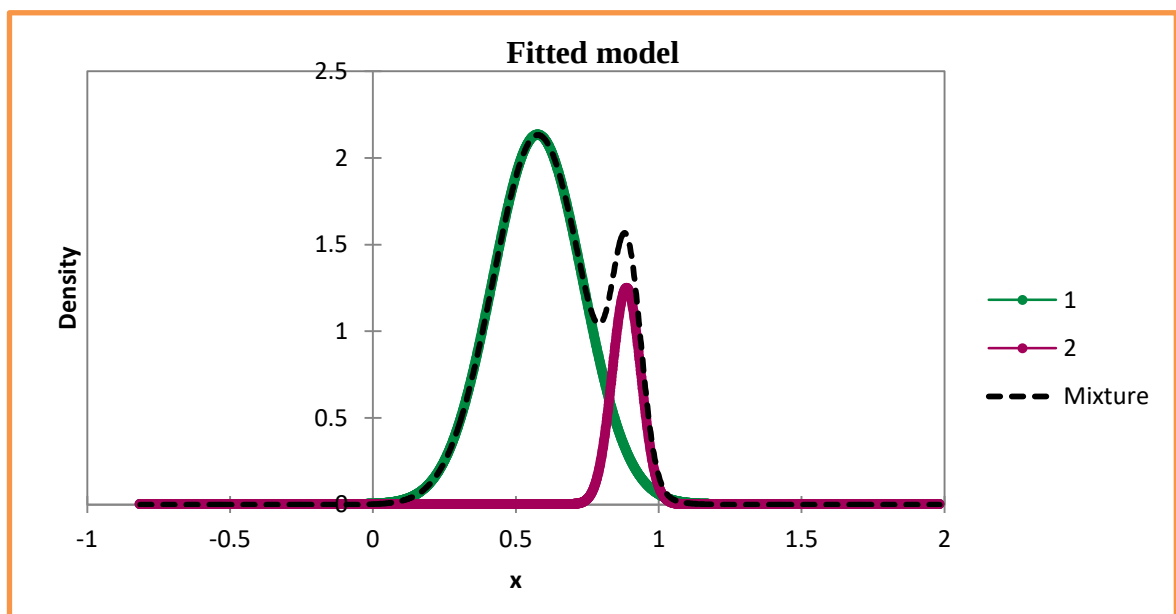


Figure 3: The fitted models of the mixture models (class 1 and class 2 models)

Source: Analysed data (2021).

Figure 3 shows the mixture models of the Demo in the Mwanza and Kagera regions. This figure describes the probability distribution of the MAP classification. The highest distribution with green colour is for class 1 that indicates that data were normally distributed. Moreover, the diagnostic plot of the mixture models was provided by the cumulative distribution function (Figure 4).

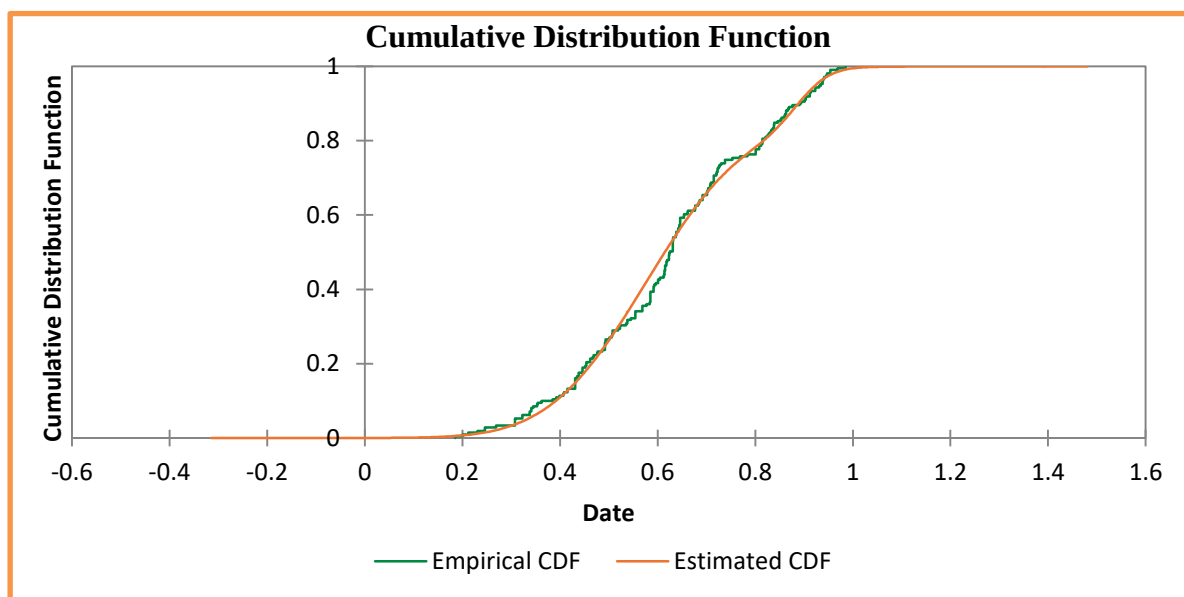


Figure 4 shows the overlaid empirical CDF and estimated CDF. The estimated CDF indicates the fits of the data on the theoretical assumption of data distribution. On the other hand, the empirical CDF indicates the fits of the sampled data from a study sample. The significant (close) overlay of both empirical and estimated CDF indicates that the data fit the theoretical assumption of the study. Therefore, as this figure indicates the close overlay of both empirical and estimated CDF, the data of this study are over fits the theoretical assumption that they were normally distributed.

Furthermore, the non-linear modelling of psychological demographic Factors (Demo) for economic growth was established by using the neural network analysis. The sigmoid activation function was applied in the hidden layer and the identity function was applied in the output model. The model summary was provided (Table 7)

Table 7: The neural network model summary for Demo indicators

Model Summary		
Training	Sum of Squares Error	38.165
	Relative Error	.502
	Stopping Rule Used	1 consecutive step(s) with no decrease in error ^a
	Training Time	00000.03
Testing	Sum of Squares Error	9.566
	Relative Error	.444

Dependent Variable ln AGDP

a. Error computations are based on the testing sample.

Source: Analysed field data (2021).

Table 7 shows the summary of neural network modelling of the Demo indicators and economic growth. In the training sample, the model has a sum of squares error (SSE) of 38.165 and a relative error of 0.502. The stopping rule used is 1 consecutive step(s) with no decrease in error, which means that errors are computed on the testing sample. The training time was 00000.03 minutes. The stopping rule is the rule that determines when to stop training in the neural analysis, this rule, means that the training process will stop if there is no decrease in estimation error in the model. In the testing sample, the SSE of the model is 9.566 which is considered minimal, indicating the model has a high predictive ability as its relative error in the testing sample was 0.444.

The network architecture of the neural network model was used to specify the structure of the connectionism (network) of neurons (perceptrons). The architecture of the model was established to reveal the relevance of each variable. The architecture has three parts/layers, input layer, hidden layer, and output layers (Figure 5). The input layer is the first layer that contains the predictors. The hidden layer contains unobservable nodes or units where the computational or mathematical function is done by application of activation functions and the output layer which contains the responses.

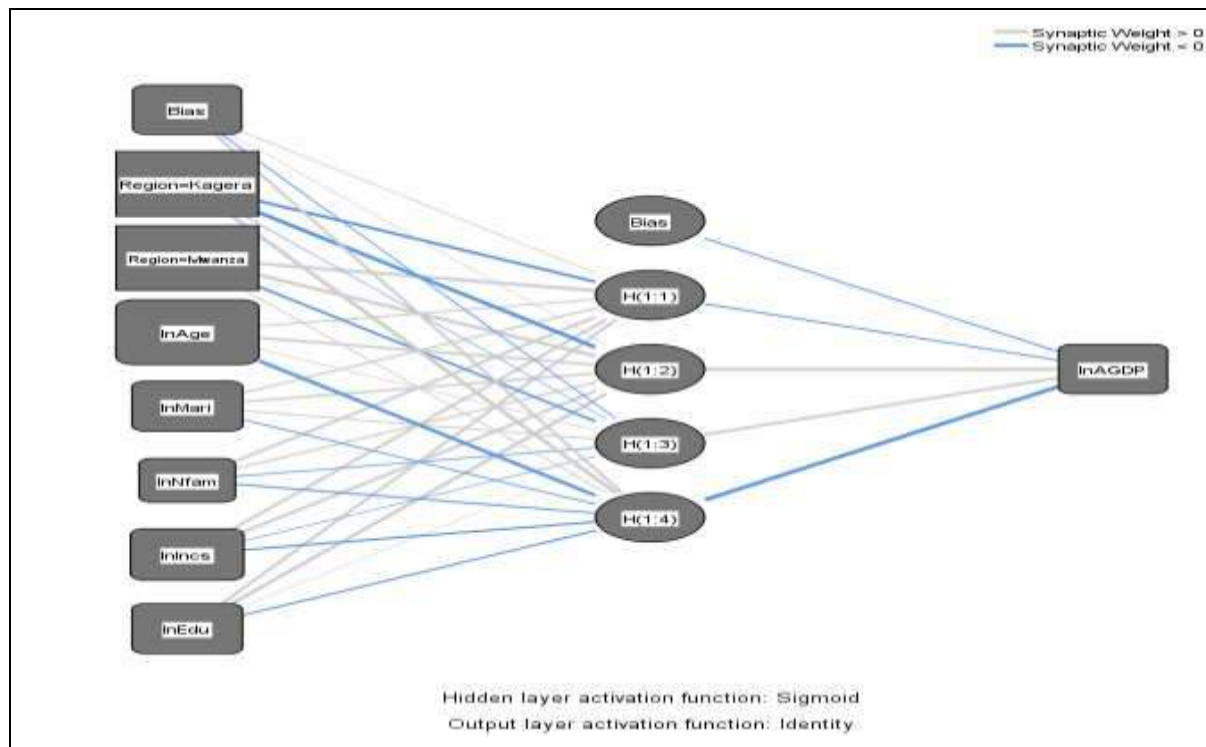
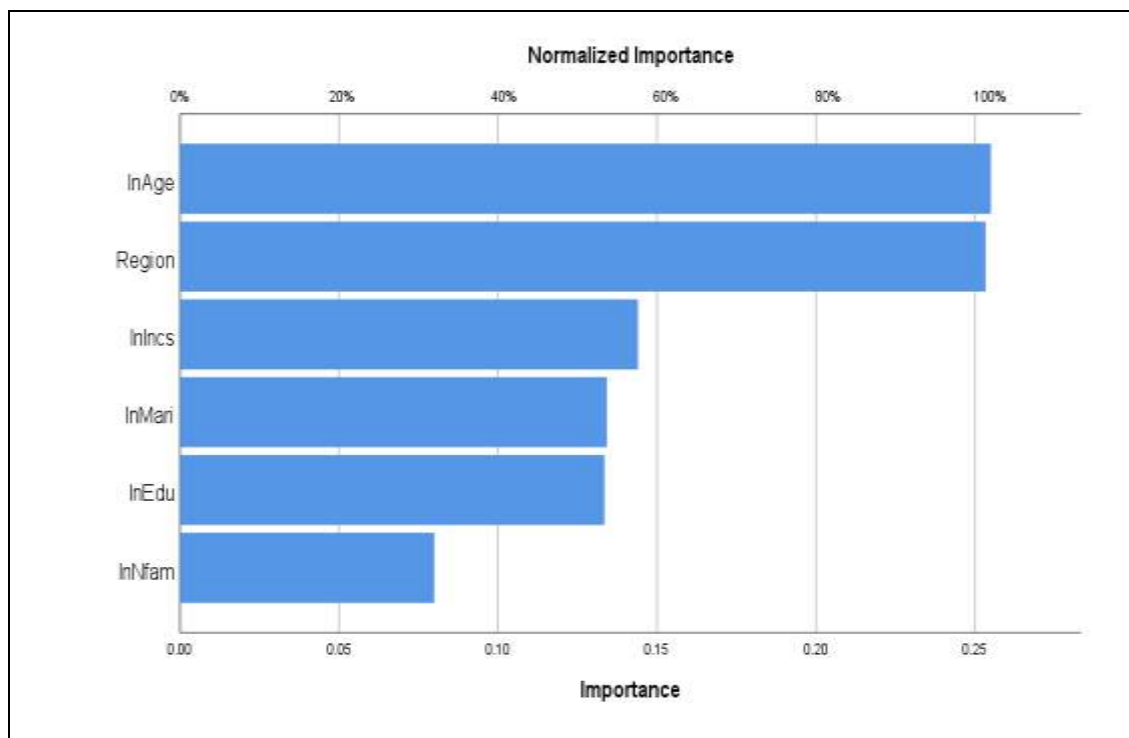


Figure 5: The Feed-forward network architecture with one hidden layer

Source: Analysed field data (2021).

Figure 5 shows the feed-forward network architecture with one hidden layer. It represents the non-linear structural model of Demo indicators and economic growth under the sigmoid activation function on the hidden layer and identity function on the output layer. In the hidden layer node 4 (H (1:4)), the combination of age (most important and positive), Kagera region (most important and positive), marital status, number of family members, income, and education (less important but negative) have an important positive impact on economic growth. The positive subjective well-being of an individual on age has an important and positive impact on economic growth. On the other hand, the hidden layer nodes 2 and 3 (H (1:2), H (1:3)) their predictors' combination has important negative effects on economic growth, and in node 1 (H (1:1)) the combination of the predictors has less important positive effects (insignificant impacts). Therefore, the hidden layer node 4 (H (1:4)) is the optimal model.

On the other hand, the neural network analysis provides the sensitivity of the predictors by examining the importance and its normalized values. The simple bar chart presents the importance of the predictors by placing the most important (sensitive) predictor on economic growth on the top, and the least important predictor placed at the bottom (Figure 6).



Source: Analyzed field data (2021).

Figure 6: The sensitivity analysis of the predictors in the neural network

Figure 6 shows the simple bar chart for the normalized importance of the predictors of the neural network model. The most two important predictors are the age variable (lnAge) and region dummy variables (Mwanza and Kagera regions), and the least important predictor is the number of family members (lnNfam).

4.2. Discussion of findings

The study aimed to examine the hidden demographic barriers of economic growth in Tanzania. The hidden demographic barriers are defined as the subjective well-being of the individual's current age, source and level of income, number of family members, marital status, and education level. Empirically, this study confirmed that only the subjective well-being of the individual's current age and education level significantly influences the economic growth in Tanzania. Several studies support this finding. Most of the recent studies contended the population that is capacitated in educations, particularly, secondary and tertiary education is advantaged to explore the new knowledge, skills, technology, and innovation, highly labour market efficiency, and entrepreneurs; therefore, they enhance the economic growth (Maneejuk and Yamaka, 2021; Marquez-Ramos and Mourelle, 2019; Gant, 2017; Aghion, Boustan, Hoxby and Vandenbussche, 2009; York, n.d). Specifically, basic education (both primary and secondary levels) is claimed to suffice for the simple production of goods and services and allows workers to use the available technology in the workplace. Moreover,

higher education is equipping the graduate with the potential capabilities to invest in new technology and help transform the country into a knowledge-based economy (Maneejuk and Yamaka, 2021). On the other hand, the migration of workers with higher education has a significant impact on strengthening the competitiveness and economic development of the country (Oliinyk, Bilan, Mishchuk, Akimov, Vasa, 2021).

The advantages of education are not limited only to economic issues, but it covers a broad range of life experiences of an individual. According to Ozturk (2001), education enriches people's understanding of themselves and the world. It improves the quality of their lives and leads to broad social benefits to individuals and society. In addition, education raises people's productivity and creativity and promotes entrepreneurship, and technological advances (Ozturk, 2001; Maneejuk and Yamaka, 2021; Marquez-Ramos and Mourelle, 2019). Also, better education might lead an individual to a better decision about health, marriage, and parenting style, therefore, education makes individuals more goal-oriented and less likely to engage in risky behaviour (Goczek, Witkowska, and Witkowski, 2021). Relying on these empirical facts, it is obvious that education does not directly impact economic growth; it impacts through mediation factors such as through the labour market, social, cultural, and political determination/ awareness of an individual. Therefore, there is a nonlinear relationship between education and economic growth (Maneejuk and Yamaka, 2021; Grant, 2017; Marquez-Ramos and Mourelle, 2019). Some empirical studies evidence that education plays the dual role of being a determining factor of economic growth as well as the force driving its nonlinear behaviour (Marquez-Ramos and Mourelle, 2019; Odit, Dookhan, and Fauzel, 2010; Widarni and Bawono, 2021). Moreover, the direction of the causality is from education to economic growth and government expenditure to education (Krokeyi and Niyekpemi, 2021; Marquez-Ramos and Mourelle, 2019; Cooray, 2009). It means the improvement of education is the preliminary requirement for economic growth. Therefore, this study confirms that an individual who perceives his/her education level as adequate and the most important in his/her life has a higher opportunity for economic growth, and it is vice versa.

On the other hand, this study empirically evidenced that the subjective well-being of an individual's current age has a positive impact on economic growth. The finding of this study is supported by several studies. The issues of aging as economic impact factors have been addressed by many researchers. Most studies on the economic and aging problem consensuses that an individual's physical capacity, preference, and needs are changing in line with age advancement. Hence, inequality of age structure is believed to affect the country's productivity level (Nagarajan, Teixeira and Silva, 2016; Bloom, Canning, and Fink, 2010; Wijaya, Tasente, Darma and Kasuma, 2021; Huang, Lin, and Lee, 2019). Bloom, Canning, and Fink (2010, 2008) detailed this age-based change of an individual. They explained that behaviour changes induced by changing expectations about the life cycle, for example, individuals' expectations of living longer than the previous generation, may induce them to remain in a work for longer and begin to draw down savings at a later age. In other words, behavioural responses to population aging can occur in the form of higher savings for retirement and greater labour force participation. One of the policy implications of the aging problem is to change the retirement incentives, so that people can fulfill their expressed desire to work longer in response to the expectation of greater longevity (Bloom et al., 2010;

Bundala, 2017). In a specific way, empirical studies confirmed that population at the age of 60 years and above decreases the economic growth rate of GDP per capita (Maestas, Mullen and Powell, 2016; Pham and Vo, 2019; Madsen, Daumerie and Hardee, 2010; Bloom et al., 2010; 2008; Alexia, Tomas, Sanderson and Sergei, 2004). Therefore, aging is negatively impacting economic growth (Bundala, 2017; Rahman, Ismail, and Ridzuan, 2020; Huang et al., 2019; Vlandas et al., 2021). Therefore, these empirical supports on this finding, it is empirically justified that an individual who thinks or perceives that his/her are current age gives more opportunity to invest in future, he/she is likely to perfume well in economic growth.

5. Conclusion

Based on the fact that the education and age subjective well-being of an individual has a significant positive impact on the economic growth; therefore, it is generally accepted that the most hidden demographic factors that hinder the economic growth are the negative perception of an individual on his/her current age and level of education. In other words, what are matters in economic growth is the subjective well-being of an individual's ages and education level. This is why are called the hidden (psychological) demographic factors! From this fact, an individual, a secondary school leaver who is happy (satisfactory) with his/her level of education (positive subjective well-being) has a positive significant impact on economic growth, and it is vice versa. This demonstrative phenomenon can be interpreted wrongly if only the physical features (age in years and education levels) were used to judge their income differences. One can conclude that higher education is useless or age maturity is nothing in fostering economic growth.

This study implicated several policies in Tanzania. The first national policy implicated by this study is the National Ageing Policy (NAP). The policy contended that older people who are at least 60 years old are among the poorest in society. Besides being skilled, knowledgeable, and experienced as a farmer, fishermen, and retired public servants, the majority of them go into retirement ill-prepared (URT, 2003). Therefore, the NAP set its economic-based objectives to allocate resources for older people's income generation activities and their welfare; and to initiate and sustain programs that provide older people with an opportunity to participate in economic development initiatives. Therefore, older people individually or in the group will be sensitised and mobilised in establishing income-generating activities, and the Local Government Authorities and Voluntary Agencies to incorporate older people's groups in income-generating activities (URT, 2003). Moreover, in line with the National Health Policy (NHP), older people were ensured to receive basic health services (URT, 2003; 2017). Concerning these policy objectives, this study found that people at the age of 60 years and above are characterised by the low motivation of economic activities, most of them consider themselves (perceived themselves) that they are less energetic and need more assistance from the government and community. They are psychologically affected by pre-retirement income or wage syndrome in accordance with the theory of permanent income (income generated from their wage employment or reliable source of income, e.g., farming and fishing). The post-retirement income which includes retirement benefits and other incomes provided by the national social security funds such as the National Social Security Fund (NSSF), Public

Service Pension Fund (PSPF), Governmental Employees Provident Fund (GEPF), Local Authorities Pensions Fund (LAPF) and Parastatal Pension Fund (PPF) after retirement not easily managed and handled because they do not follow a wage system. Therefore, most of this income perishes due to improper use by retirees or other related beneficiaries. Notably, this study evidenced that older people prefer to save rather than invest.

In addition, the economic opportunity of the elder people is limited as they are excluded in the labour market policy such as the National Employment Policy (URT, 2008). In general, older people or retired people suffer more from age-psychological-related problems rather than income-related problems. The NAP overlooked the psychological effects associated with age advancing. Therefore, it will be difficult to achieve the policy objective if the psychological aspect of an individual's age will not be addressed. Moreover, the policy declares that the reason for older people to be among the poorest in society is due to the fact that they are ill-prepared for their retirement. What are effective preparatory policy objectives? The NAP provides the preparatory policy objectives that the government in collaboration with stakeholders will sensitise the society and youth in particular on the stages and various old age-related problems. Moreover, the government in collaboration with stakeholders will educate and establish capacity-building programmes for the youth to prepare them for responsible old age and aging to be taught as a topic in the civics subject (URT, 2003). Therefore, this study implicates the way in how the government in collaboration with stakeholders sensitizes the society and youth on the retirement plans, ways of educating them, and establishing capacity-building programmes for the youth to prepare them for retirement. These sensitized and capacity-building programs should be involved the psychological demographic factors, particularly the subjective well-being of an individual at his/her current age, as this study found to have a significant influence on the post-retirement income.

Furthermore, this study recommended that to enhance the economic contributions of the elder people, the government should open more economic opportunities for them. And this will be stipulated in the national employment policy as now they are excluded. The role of elder people is shifted from economic role to social and political role where are seemed to be required. On the other hand, the retirement age should be restructured from 60 years old as voluntary retirement and 65 years old for compulsory retirements as empirical evidence shows the most people have a natural death at more than the theoretical life expectancy of 58.2 years and 60 years for men and women respectively.

The finding of this study also posed an implication on the National Education and Training Policy (NETP), and Information and Communication Technology (ICT) Policy for basic education in Tanzania. This study evidenced that education particularly quality higher education has a significant positive impact on economic growth. In line with the NETP, a country needs a quality education that will foster economic growth through innovation and technological advancement. One of the policy requirements is to increase the adequate number of people who are educated in science and technology to meet the national development needs. That is, the government should improve the education and training infrastructure of the Mathematics, Science, and Technology (MST) subjects at all levels of education and training (URT, 2014). Consequently, the policy emphasised the use of science and technology in the provision of education and training at all levels. Adversely, it is evidenced that the policy pays little consideration to the MST subjects as allows the form

three students to opt either to continue to study MST or not. This is not only a major policy weakness but also a “diverging” development mission/plan that cannot achieve the vision target that is the economic growth in Tanzania. This is because a country is technologically incapacity which is adverse to economic growth. It is estimated that about 30- 35 percents of the students enter form three opt for MST subjects (URT, 2014). Only mathematics and biology are compulsory science subjects that are lent by students from form one to four, with unsatisfactory performance (URT, 2014). Moreover, it is evidenced that the knowledge and skill of the school/college leavers are lower than that expected (URT, 2014).

In addition, the supplemental policy that enhances the use of ICT in basic education is the Information and Communication Technology (ICT) Policy. This policy is expected to increase the number and quality of teachers, through improved pre-service and in-service training and better provision of teaching and learning materials (URT, 2007). The use of ICT is also expected to enhance the acquisition and use of knowledge and skills for all learners, including those with special needs. ICT use will improve the efficiency and effectiveness of the management and administration of education, at all levels (URT, 2007). One of the hidden psychological barriers that evidenced/anticipated is the lack of awareness among decision-makers, development partners, and private sector investors on the importance of ICT for education as well as local and national development (URT, 2007). Therefore, this study recommends to the government and other education stakeholders to increase the policy commitment on the mathematics, science, and technology subjects to be compulsory for primary and secondary schools. Moreover, the implementation of the ICT policy should be preceded by a formal awareness campaign or programmes on the decision-makers, development partners, and private sectors to understand the importance of ICT for education and economic growth.

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Entrepreneurial Marketing, Corporate Reputation, Corporate Creativity and Competitive Advantage: A Research Framework and Proposition

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Abstract

This study explored the consequences of entrepreneurial marketing by creating empirical evidence grounded in dynamic capability and image theory. The study proposed a direct as well as an indirect relationship between entrepreneurial marketing and competitive advantage, recognizing corporate creativity as the boundary condition under which entrepreneurial marketing influences competitive advantage suggesting that corporate creativity is a moderator in the entrepreneurial marketing model. The study explained the theoretical and practical contributions of the model in our understanding of entrepreneurial marketing practices and the role of corporate reputation. Corporate creativity was also discussed especially from the perspective of entrepreneurial firms.

Keywords: Entrepreneurial Marketing, Corporate Reputation, Corporate Creativity, Competitive Advantage.

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1. Introduction

There has been a convergence of opinion by both academics and practitioners on the disparity in the marketing strategy employed by small firms and larger firms. Expanding on this idea, it is safe to say that the kind of marketing behaviour observed in an individual entrepreneurial firm deviates from what is common in main stream marketing (Sole, 2013; Gilmore, 2010). Some authors have worked on these differences (Gaddefors & Anderson, 2008; Sole, 2013) and concluded that the process of entrepreneurial marketing (EM) differs from the regular approaches to marketing (Collinson & Shaw, 2001). Entrepreneurial marketing can be perceived as a novel model that incorporates important features of marketing and entrepreneurship into a comprehensive concept where marketing becomes a process used by enterprises as well as acting entrepreneurially (Ferreira, Ferguson & Pitt, 2019; Collinson, et

al 2001). Some entrepreneurial marketing strategies have been identified as; guerrilla marketing, ambush marketing, buzz marketing and viral marketing (Rollins & Anitsal, 2014; Sadiku- Dushi, Dana, Ramadani, 2019). These types are judged very helpful for entrepreneurial firms because they are low cost and innovative forms of practicing marketing (Sadiku- Dushi et al, 2019).

Entrepreneurial firms operate in an environment characterized by high risk, and decreased ability to forecast (Olannye & Eromafaru, 2016). The operational landscape of this environment is often controlled by rapid changes, complex decision, and customers' high expectations, leaving the entrepreneurs with limited options (Hills Hultman & Miles, 2008). In addition, the current happenings present firms and entrepreneurs with limited option following the devastating effect of the global economic melt-down and recently the COVID 19 pandemic which ravaged the global economy, with businesses losing trillions of dollars. These resulted in the creation of a new normal which is reshaping marketing activities globally with customers taking the lead (Miles, & Jones 2020). In the new normal, Gross Domestic Product (GDP) was projected to decline by 2.1% and 2.5% in developed and developing countries respectively with income increasing by 1.9% (Malizewska, Muttou & Mensubrugge, 2020). These events have brought- forth new ways of tackling marketing activities and other consequences within. In the contemporary business environment, with growing dynamics, instability and rivalry, entrepreneurs and managers have to unlearn traditional marketing principles and replace them with innovative opinions and procedures, such as entrepreneurial marketing (Hills, Hultman, Kraus, & Schulte, 2010)

The concept of entrepreneurial marketing has been adjudged by scholars and practitioners as a key source of superior firm performance (Njeru & Kibera, 2019; Abdullahi, Mohammed, Syed & Ghazali, 2017). Though EM has been found to enhance business success regardless of size, there appears to be a consensus on its higher impact on small businesses (Jones & Rowley, 2011; Morris, et al, 2002). Hill, Hultman and Miles (2008) and Eggers, Niemand, Kraus and Breier, (2020) underscored the importance of examining marketing efforts used in small firms as opposed to predominantly researched large firms with much resources. In view of this, researchers have examined the antecedents and consequences of EM among SMEs (Fiore, Niehm, Hurst, Son & Sadachar, 2013). A cursory survey of existing literature reveals that entrepreneurial marketing has a positive impact on firms' performance (Becherer, Helms, & McDonald, 2012; Hacıoglu, Eren, Eren, & Celikkan, 2012; Fiore et al, 2013; Morrish & Deacon, 2012; Mugambi & Karugu, 2017; Sadiku- Dushi, Dana & Radamani, 2019). Evidence also indicated that entrepreneurial marketing practices have consequences for product/service innovation, market research and service quality which enable firms to gain competitive advantage (Jayawarna, Jones, Lam & Phua 2014).

Flowing from the preceding findings, this study proposes a model of entrepreneurial marketing focusing on the consequences in ensuring competitive advantage. We found the dynamic capability view (Teece, Pisano & Shuen, 1997) underpinning the study while the image theory (Beach & Mitchell, 1998) played supporting role. This study departs from the current debate by exploring the consequences of entrepreneurial marketing, thus presenting a parsimonious model on its impact on competitive advantage. Peterson (2020) had expressed concern that EM researchers have devoted scant attention to the link with external environmental conditions. He was not surprised that important explanations for EM have

remained underdeveloped as debate on EM as a strategic response to environmental change and turbulence is lost (Peterson, 2020). Thus, we theorize that corporate reputation, corporate creativity and competitive advantage interplay as consequences of entrepreneurial marketing.

A study of this nature is important in expanding the literature on entrepreneurial marketing in business firm especially in the context of small firms. The theoretical expositions would set an agenda on entrepreneurial marketing in the context of entrepreneurial firms, providing propositional arguments that would give a lucid exploration of the consequences of entrepreneurial marketing. Another significance of the study is the understanding of the role of corporate reputation and corporate creativity in the link between entrepreneurial marketing and competitive advantage. While corporate reputation serves as the mechanism, corporate creativity forms the boundary condition under which the relationship between the predictor and the outcomes becomes plausible (Baron & Kenny, 1986). Lastly, the conceptualized model is applicable to small firms that adopt entrepreneurial marketing practices rather than large business corporations, providing a more slightly different approach of the consequences of entrepreneurial marketing with other outcomes.

2. Literature Review

2.1. Theoretical Foundation

Underpinning this study is the dynamic capabilities view (Teece, Pisano & Shuen 1997). Dynamic capabilities is the organizational and strategic routines by which the firm achieves new resource configurations as markets emerge, collide, split, evolve and die in changing business environment (Teece, et al, 1997, p. 509). It is linked to firms' performance in that it changes the firm's bundle of resources, operations, routines and competencies (Kanyabi & Dew, 2012). In other words, dynamic capabilities reflect a path-breaking perspective for entrepreneurial marketing (Sole, 2014). In the context of this study entrepreneurial marketing, corporate reputation and corporate creativity are considered as intangible resources of a firm that enable it manage market information, company image and also deliver superior value for its customers (Rindova, Williams, & Petkova 2010; Kamasak, 2017).

In addition, image theory supports the underpinning theory in explaining the role of corporate reputation in the model. The theory was developed by Lee Roy Beach and Terence Mitchell in 1970. It has two complementary tracks which are for personnel and organizational decisions (Beach, & Mitchell, 1998). Images are representation of the decision maker's perception of some aspects of the organization such as organizational culture (belief, morals, ethics, values, norms) and organizational prestige. The primary goal of corporate firm is the maintenance of positive image (Massey, 2011) in relating with its key stakeholders. A firm's communication strategy with stakeholders is to encode a desirable message (Massey, 2015), to create a positive perception about the corporation (Van der, Marweis & Puth, 2016). When effective corporate image with the stakeholders is created, chances for success and competitiveness are enhanced (Mason, 2014; & Massey, 2011).

Within the framework of this theory, corporate image is one of the intangible assets that create an important strategic competitive advantage over its rivals because it is a resource that helps firms to differentiate it from others because it is rare, difficult to imitate, buy other organizations or firm without substitute (Barney, 1991). In addition, the theory places great emphasis on creating a positive image showing the level of organization, commitment to

quality, excellence and relationships with its various constituents ranging from employees, customers, government and other stakeholders. If this image of the firm is properly managed, it will protect the organization against competition from new competitors or current competitors offering new products and services (Okocha, Otika & Osuagwu, 2019).

In a sum, dynamic capabilities enable firms to reconfigure and recreate their responses to internal and external changes relating to their image, quality of goods and services offered and network. When these are done right through its EM strategies, it sparks positive corporate reputation due to favourable decisions made by customers and organizations towards the organization. In addition, dynamic capabilities are expressed in terms of creativity as such high corporate creativity which is an indicator of high dynamic capabilities strengthens EM activities while low creativity weakens the predictive strength of EM on CA.

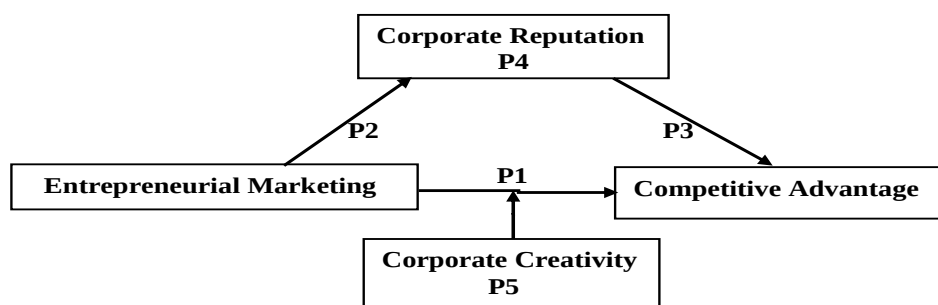


Figure 1 Research Framework

2.2. Entrepreneurial Marketing (EM)

Entrepreneurial marketing has come into view as an important field in both academic study and marketing practice over the past decades (Gilmore, McAuley, Gallagher & Carson, 2013; Ferreira, Ferguson & Pitt, 2019). The numerous similarities between entrepreneurship and marketing resulted in the emergence of this construct (Gilmore et al, 2013; Sole, 2013; Hill & Hultman, 2011; Morris, Scindehutte & La Forge, 2002). Earlier authors have argued that both entrepreneurship and marketing focus on the importance of identifying opportunities and operating in a constantly changing environment (Omura, Calantone & Schmidt, 1993; Ferreira et al, 2019). Omura et al, (1993) also identified further areas of clear overlap in marketing and entrepreneurial attributes (Bjerke & Hultman, 2002; Collinson & Shaw, 2001). The term has been used in various ways and often somewhat loosely used (Morris et al, 2002:4). Sole (2013) observed that its intriguing confusion arises because each item can be interpreted differently but are related.

Scholars have different conceptualizations for EM. For instance, Morris et al, (2002, p.5) define EM as the “proactive identification and exploitation of opportunities for acquiring and retaining profitable customers through innovative approaches to risk management, resources leveraging and value creation.” Whalen, Uslay, Pascal and Gilmore (2016, p. 3) define it as a combination of innovative, proactive, and risk-taking activities that create, communicate, and

deliver value to and by customers, entrepreneurs, marketers, their partners, and society at large.

However, EM is a term that is difficult to grasp (Kurgun, Bagiran, Ozren, & Maral, 2011). We can see this in Bjerke and Hultman (2002), who think EM is the marketing of small firms growing through entrepreneurship. The idea of restricting EM to small firms was recently challenged in the study conducted by Eggers, Niemand, Kraus and Breier, (2020); Kraus, Harms, and Fink (2010) noting that EM is an approach that can be used by firms of all sizes, ages and industry affiliations. Though the practice has been common especially in small firms, most entrepreneurially market- oriented firms find it useful (Collinson & Shaw, 2001). According to Hills and Hultman (2011), EM is a product of three elements: entrepreneurial analysis of information, conclusion, and marketing behaviour. Eggers, Niemand, Kraus and Breier, (2020), on the other hand, departed from this conceptualization and proved that EM is the function of three factors namely; 1) change-driving, 2) boot-strapping, and 3) risk-taking.

Change-driving refers to firm's behaviour that challenges and goes beyond the status-quo through pro-activeness, innovativeness and market driving. Bootstrapping, on the other hand, involves resource leverage and customer orientation, it is an aspect of EM that establishes the firm with cost efficient, customer-focused marketing programs. The interplay of change-driving and bootstrapping, what Eggers et al. (2020:7) describe as "radical, proactive, market-driving behaviours and a more conservative, resource-leveraging customer focus" makes EM a sought-after approach in all firms and at all stages. Risk-taking as a factor shows its inherency within the two factors. Though going beyond customer needs and wants as stipulated in EM may involve some level of risk, imagine the opposite which involves focusing on customers and cost-conscious behaviour which might involve firms missing out on growth opportunities or even be led into unprofitable directions (Eggers et al., 2020). How riskier would that be in a competitive business environment?

Basically, entrepreneurial marketing practices in the firm have been discussed under different concepts such as entrepreneurial orientation and market orientation (Al- Mamum, Mohiuddin, Fazal, & Ahmad, 2017), entrepreneurial marketing orientation (Jones & Rowley, 2011), entrepreneurial marketing process (Miles, Lewis, Hall Morrish, Gilmore & Kasouf, 2016). In the context of our study, entrepreneurial marketing is seen as an opportunity driven way of thoughts and actions concerning marketing behaviours (Morris et al, 2002) as a result understanding and responding to market styles, market positioning and customers' needs (Fiore, Niehm, Hurst, Son & Sadauchar, 2013).

2.3. Competitive Advantage

In recent years, the concept of competitive advantage has been a hot issue among management guilds, with many controversies raised. This perhaps is owed to the subjective interpretation of what it means for a firm to have advantage over another in absolute terms. Therefore, providing a precise definition of competitive advantage is a difficult task, seeing that it is defined in many different ways. For example, Porter (1985, p.2) defined it "as the comparative positional superiority in the market place that leads a firm to outperform its rivals." Sigalas – Pekka, Economou, and Georgopolous, (2013, p.322) described it as the degree to which a firm exploits its opportunities, neutralizes threats and reduces cost. In addition, Rothaermel (2013, p. 45) defined it as 'the way a firm formulates and implements a

strategy that leads to superior performance relative to other competitors in the same industry. In the context of this study, we adopt the definition of Rothaermel (2013), because it involves the firms adopting effective strategies that would help perform better than other firms. To achieve competitive advantage, a firm must pay attention to its external position as well as internal capabilities. Different scholars have identified different perspectives to competitive advantage which have been used by researchers to measure this concept. Table one summarises the different perspectives presented by some scholars.

Table 1: Perspectives to Competitive Advantage

Authors	Conceptualization
Porter (1985) Miles & Darroch (2006)	Cost advantage and differentiation Organizational resources, ability, Market superiority, pursue of opportunity.
Li, Nathan, Nathan & Rao (2006)	Cost, quality delivery, dependability, product innovation, and time to market
Li & Zhou (2010)	Institution advantage, cost advantage and differentiation
Bratic (2011)	Price, quality delivery, product innovation and time to market
Peng, Shoeder, & Shah (2011)	Cost priority, delivery priority, flexibility priority and Innovation
Mihalic & Buhalic (2013)	Image quality, Differentiation, contact, and price
Diab (2014)	Cost, flexibility, delivery and quality
Al-Najjar (2016)	Flexibility, creativity, cost and differentiation

2.4. Entrepreneurial Marketing and Competitive Advantage

Research has explored the consequences of EM which triggered interest among academics and practitioners (Fiore, et al, 2013). This is in view of its drive to create access and successfully exploit attractive economic opportunities by leveraging on the resources of the organization (Morrish, Miles & Deacon, 2010) resulting in driving the desire, needs and motives of the entrepreneurs. In other words, innovation and creativity in EM can trigger the creation of new products to satisfy the needs of customers and owners of businesses.

Empirical evidences (Altinay, Madanoglu, Vita, Arasil, & Ekinici, 2016) have identified entrepreneurial, marketing has been studied with different outcomes such as sales and market growth (performance (Sadiku- Dushi, Dana & Ramadani, 2019), corporate reputation (Orlando & Alexander, 2018), firm success (Becherer, et al, 2012), electronic customer relationship management (Harrigan, Ramsey, & Ibbotson, 2012), hybrid entrepreneurship (Ferreira, Ferguson & Pitt, 2019), coo petition (Crick 2017), commitment (Jansson, Nilsson, Modig & Hed- Hall, 2015), consumer engagement (Al- Mamum, Mohiuddin, Fazal & Ahmed, 2017) as consequences of EM. Buccieri, Javalgi, and Gross (2021). Mahrous,

Genedy, and Kalling (2020), Zeebaree, and Siron (2017) established that entrepreneurial marketing dimensions are positively related to competitive advantage and differentiation and low-cost strategy

Consistent with dynamic capabilities theory which focuses on how firms integrate, build and reconfigure their specific internal and external competence into a form that matches the turbulence in their business environment (Teece, Pisano, & Shuen, 1997), it is expected that firms with greater dynamic capabilities will perform better than those with less capability. Juxtaposing this with EM, which involves the interplay of change-driving, bootstrapping, and risk-taking, which Eggers et al. (2020:7) describe as “radical, proactive, market-driving behaviours and a more conservative, resource-leveraging customer focus”, a firm that possesses EM capabilities is expected to function effectively in a turbulent business environment, hence out-performing those with less EM capabilities. We therefore propose that:

Proposition 1: *The experience of entrepreneurial marketing by a firm to greater extent will lead to competitive advantage of the firm*

2.5. Entrepreneurial Marketing and Corporate Reputation

Corporate reputation refers to “a perceptual representation of a company’s past actions and future prospects that describe the organization’s overall appeal to all its key constituents when compared to other leading rivals” (Fombrun, 1996, p. 72). It is understood from different perspectives such as economic, strategic, marketing, organizational studies and marketing. Economic view refers to what the firm is, what it does, what it represents, its capability to exist and influence on economic agents (Fombrun et al, 2000; Carreras Alloza & Carreras, 2013). Strategic view is the source of differentiation which is difficult to imitate, because of its intangible nature and its potential for value creations, it is complex and cannot be easily replicated by competitors (Fombrun, 1996, and Waeraas, 2015). Marketing view focuses on brand equity such that positive relationship between client and the company is a function of the firm’s brand name (Carreras et al, 2013), where reputation is seen as perceptual asset with the power to attract loyal customers. Organizational view is the firm’s identity and culture that shapes business practices. It provides the basis for internal stakeholders, for the achievement of organizational objectives (Carreras, et al, 2013). In the context of this study, corporate reputation is seen from the marketing perspective, where EM is expected to create new brands and focus on ensuring equity and customer loyalty.

Empirical evidences confirm that EM associates with different behavioural outcomes, though dearth of empirical evidences exists in the relationship between entrepreneurial marketing and corporate reputation as intended in this study. In any case, Orlando and Alexandra (2018) and Sadiku- Dushi et al, (2019) inferred that entrepreneurial marketing has a direct link with performance outcomes such as reputation. Similarly, Grisseman, Plank, and Brunner-Sperdin (2013) concluded that customer orientation and innovativeness are some of the dimensions of EM that are positively associated with corporate reputation. In addition, environmental marketing has been found to be a significant predictor of corporate reputation (Mulyganegara, 2011; Williams, Buttle & Biggerman, 2012, Di Souza, Taghian, & Sullivan-Mort, 2013). Likewise, Ozkan, Suer, Keser and Kocakoc, (2019) found that that corporate

image and corporate reputation can be used as a common marketing benchmark to measure a firm's performance.

We argue using the Image theory, that images are representation of the decision maker's perception of some aspects of the organization such as organizational capabilities and organizational prestige. An organization's dynamic capability perceived or communicated through EM activities is expected to influence the internal and external stakeholders' worldview regarding reputation which could be positive or negative. Therefore, firms that are entrepreneurial and dynamic in their capabilities are expected to create good reputation for their companies and will respond favourably by producing products and services that will meet the needs of their customers positively in the environment it operates. In line with the forgone, we therefore propose that;

Proposition 2: *The experience of entrepreneurship marketing to greater extent will influence corporate reputation of entrepreneurial firms.*

2.6. Role of Corporate Reputation

The literature on the consequences of corporate reputation is rich and diverse. Its richness is founded on the claim that corporate reputation is linked to positive organizational outcomes such as word of mouth (Manohari, Mittal, & Maroush, 2020; Williams, Buttle, & Biggerman, 2012), customer loyalty (Bartikouski, Walsh, & Bealty, 2011; Akpi, Vem & Eshue, 2020) corporate social responsibility (Park, 2019) branding (Weng & Chen, 2017), commitment (Jansson, Nilsson, Modig & Hed, 2015), firm success (Bercherer et al 2012) as consequences of entrepreneurial marketing. Empirically, numbers of studies have established positive relationship between corporate reputation and competitive advantage. For instance, Miotto, Del- Castillo-Fato and Blanco-Gonzalez, (2020) advanced that legitimacy and firm reputation are critical intangible assets in order to ensure or sustain competitive advantage and therefore guarantee firm survival and growth. In addition,. Bruna and Nicolò, (2020) and Sheehan, and Stabell (2010) found that firm reputation impacts the firm's competitive position and concludes that reputation is a key driver of competitive advantage.

On the flipped-side, organizational factors have been found to influence corporate reputation. For instance, Aksak, Ferguson, & Duman, (2016) in a review discovered corporate social responsibility as a strong predictor of corporate reputation. Others which include, corporate branding, (Abralt & Kleyn, 2012), environmentally motivated actions (D'Souza, Taghian, & Sullivan-Mort, 2013), stakeholders' reputation (Ji, Li, North, & Liu, 2017), green supply chain (Quintana-García, Benavides-Chicón, & Marchante-Lara, 2020) are all found to influence organization's reputation. Similarly, Ozkan, Suer, Kaiser and Kocako (2019) revealed that corporate reputation and image mediate the relationship between service quality and customer satisfaction on customer loyalty. In addition, Saeidi, Sofian, Saeidi, Saeidi, and Saeidi, (2015) and Pham, and Tran (2020) established that reputation mediate the relationship between corporate social responsibility (CSR) and firm performance, likewise in, Arikan, Kantur, Maiden, and Telci (2016) advanced that corporate reputation fully mediates the relationship between CSR and multiple stakeholders outcomes such as organizational commitment, purchase intention and intention to seek employment. From the empirical evidence, the choice of corporate reputation as a mediator of this study is appropriate.

Consistent with the empirical evidences and the theoretical lenses of dynamic capability and image theory we contend that corporate reputation being an image created as a result of a firm's dynamic capability in EM influences firm's competitive advantage. Therefore, we make the following propositions:

Proposition 3: *The experience of corporate reputation of entrepreneurial firms to a greater extent will influence competitive advantage amongst firms*

Proposition 4: *The experience of corporate reputation by entrepreneurial firm mediates the relationship between entrepreneurial marketing and competitive advantage*

2.7. Role of Corporate Creativity (CC)

In addition to corporate reputation which serves as mechanism that explains the relationship between EM and CA, we found corporate creativity useful in determining the boundary condition under which the relationship is plausible in the proposed framework (Baron & Kenny 1986). Creativity is considered an important factor for building a successful enterprise in a turbulent and competitive business environment as characterise in the 21st century. It enables organizations to exploit and respond to market opportunities, leading to competitive advantage (Gontur, Makrop & Gadi, 2016).

The concept of creativity has majorly been studied at individual level. Recently, creativity debate has been extended to the organizational level (Ghosh 2015; Park, Cho, Park, & Shin, 2019; Darvishmotevali, Altinay, & Köseoglu, 2020). According to their argument, Creative organizations design, create structures, which coordinate creative activities and create conducive environment for internal and external collaborations among members. Creativity according to Woodman, Sawyer, and Griffin, (1993:293) is “the creation of a valuable, useful new product, service, idea, procedure, or process by individuals working together in a complex social system.” Organizational creativity is seen as the development of special features of the products, individuals, and through processes, or an enabling environment which stimulates the flourishing of creative activities (Koch, Wenzel, Senf, & Maibier, 2018). It has widely been reckoned with as antecedent to competitive advantage (Anderson, Potočník, & Zhou, 2014; De Vasconcellos, Garrido, & Parente, 2019).

In corporate world, creativity has been associated with positive firm's outcomes such as increased general effectiveness, increased market share, which drives new product development and harnessed competitive advantage of a firm (Dixit, Singh, Dhir & Dhir, 2021; Annan, & Adeola, 2017; Csikszentmihelyi & Sawyer, 2014). In addition, Zameer, Wang & Yasmeen, (2019), identified that green creativity directly has a positive role in reinforcing green competitive advantage. In addition, corporate creativity predicts level of organizational survival (Tripathi & Ghosh, 2020, return on investment and customer base (Ogbari, Isiavwe, Ajagbe & Oke, 2015), knowledge management (Dixt et al, 2021). Kathiravan, Bhagavathan, Palanisamy and Rajaseker, (2019) that knowledge spill-over and entrepreneurial creativity has a greater impact on firm's competitiveness in the market place.

Buttressing this argument using dynamic capability view emphasizes how firm's ability to integrate, build and configure internal and external capabilities to address rapidly changing environment that is characterized by new technologies, ideas, and innovation would influence

the competitiveness of the firm. Building on this premise, it is expected that corporate creativity may unlock the potentials of firm and will further strengthen entrepreneurial marketing link with competitive advantage. In accordance with the existing literature on organizational creativity and theoretical evidences, we propose that, corporate creativity interacts with EM in determining firm's level of competitive advantage.

Proposition 5: *CC moderates the relationship between EM and CA such that; high CC Strengthens the impact of EM, while low CC weakens the impact on competitive advantage.*

3. Research Method

A comprehensive check of literature allows the researchers to review the works of other researchers in the field of study and to stay away from repeating what other scholars had done. To re-examine the literature, we searched for studies on entrepreneurial marketing on competitive advantage of SMEs, mediating role of corporate reputation and moderating role of corporate creativity in Nigeria and other countries. The review of the literature involved researching articles to gain in depth knowledge of entrepreneurial marketing practices in SMEs, and the dynamic capability theory and image theory that we used as the conceptual framework of the study.

The studies chosen are the work of researchers in Nigeria and other parts of the world. The literature review includes 97 peer-reviewed journals, nine books, one conference paper, and one working paper. We reviewed a total number of 108 papers with 90% of the articles published in or after 2015. The databases that we used include the Emerald Management Journal, ABI-INFORM Complete Pro Quest, Science Direct, Directory of Open Access Journal, World Bank Publication, Institutional Based Research, and Google Scholar. A total of thirty five (35) empirical articles were identified consisting of thirty three (33) studies published in journals targeting those who explored the consequences of entrepreneurial marketing in SMEs. The database search included different combination of words such as entrepreneurial marketing, corporate reputation, corporate creativity, competitive advantage, firm performance, market orientation, entrepreneurial orientation and small and medium enterprises (SMEs), dynamic capability theory, and image theory. This was based on availability and accessibility of articles.

This section captures the study methodology and in line with the study objectives, a detailed literature review was adopted which was achieved in phases. A search was carried out using phrases such as marketing and entrepreneurial interface, entrepreneurial orientation, entrepreneurial firms, market orientation, entrepreneurial marketing orientation, entrepreneurial marketing, corporate reputation, corporate creativity, competitive advantage, entrepreneurial marketing and competitive advantage, entrepreneurial marketing and corporate reputation, corporate reputation and competitive advantage. This was based on availability and accessibility of articles.

Table 2: Studies Related to Entrepreneurial Marketing, Firm Reputation and Corporate Creativity

S/N O	Paper Titles & Authors	Source	Variable and their role	Sample size and Tools	Results
1	Innovation and differential of Emerging market international new ventures: the role of entrepreneurial marketing. Buccieri et al, (2021).	Journal of Strategic Marketing (Taylor and Francis)	Innovation and differentiation (independent and dependent variable) Entrepreneurial Marketing (mediator)	A sample of – innovative firms from India and data were empirical tested	The result indicates that entrepreneurial marketing shapes differentiation strategy (cost) that is competitive advantage
2	Antecedents of strategic thinking and its impact on competitive advantage by Dixit, Singh, Dhir& Dhir (2021)	Emerald	Strategic thinking and competitive advantage	220 professionals from various industries in India. Quantitative using Partial least square structural equation modelling methodology using Smart PLS software.	Creativity is established with strategic thinking, as well as a competitive advantage. Also, The study finds a significant relationship between strategic thinking and competitive advantage
3	Effects of entrepreneurial marketing on new ventures' exploitative and exploratory innovation: The moderating role of competitive intensity and firm size by Bachmann, Ohlies and Flatten (2021)	Elsevier	Entrepreneurial marketing, new venture exploitative and exploratory innovation. Competitive intensity and firm size.	146 German new ventures. Questionnaire was use to collect data	Under conditions of high competitive intensity, the effects of EM on exploratory innovation strengthen, while low levels of competitive intensity do not affect the relationship between EM and exploratory innovation. Our results also show that for larger firms, the positive effects of EM on exploitative innovation are weaker, while for smaller firms, those effects are stronger.

4	The link between environmental uncertainty, organizational agility, and organizational creativity in the hotel industry by Darvishmotevali Altinay&Köseoglu (2020)	Elsevier	Environmental uncertainty, organisational agility and organisational creativity	The sample size is 174 managers of hostels. Hypotheses were analyzed using AMOS	The findings show that organizational agility moderates the negative impacts of competitive and technological uncertainty on organizational creativity
5	The impact of characteristics of intra-organizational environment on entrepreneurial marketing intensity and performance in Egypt Mahrous et al (2020)	Journal of Entrepreneurship in Emerging Economies (Emerald)	Entrepreneurial Marketing (Independent Variable), performance and Competitive advantage (Dependent variables)	A conceptual paper	It was found that entrepreneurial marketing is positively related to organizational performance and competitive advantage
	Corporate reputation and social sustainability In the early stages of start-ups: A theoretical model to match stakeholders 'expectations through corporate social commitment by Bruna, and Nicolò. (2020)	Financial Letter Elsevier	Corporate reputation, social sustainability and corporate social commitment	Theoretical paper with mathematic modelling	Corporate Reputation, helps in the mitigation of the young-companies' vulnerability
6	Developing a scale for entrepreneurial marketing. Revealing its inner frame and prediction of performance of Firms in Australia. Eggers et al, (2020)	Journal of Business Research (Elsevier)	Entrepreneurial Marketing (Independent Variable) and Firm Performance (Dependent Variable)	A sample of 1155 Australian firms, online questionnaire. Random sampling technique was used. The tool for analysis was Partial Least Square (PLS)	Results show that EM consists of three correlating dimensions: 1) change-driving, 2) bootstrapping, and 3) risk-taking that have a positive effect on firm performance
7	Corporate Social	Journal	Corporate Social	Data collected from	It revealed that

	Responsibility Disclosure and Firm Performance. The mediating role of corporate reputation and moderating role of Chief Executive Officer (CEO). Pham & Tran, (2020)	of Business Research (Science Direct)	Responsibility Disclosure (Independent Variable), Firm performance (Dependent variable), corporate reputation (Mediating variable), and CEO (moderator)	833 fortune world most admired firms in 31 Countries from 2005 TO 2011	corporate reputation mediates the relationship between CSR and firm performance.
8	Effect of Entrepreneurial marketing and performance of SMEs. Sadiku-Dushi. (2019)	Journal of Business Research (Elsevier)	Entrepreneurial Marketing (Independent Variable) and SMEs Performance (Dependent Variable)	Questionnaire was used to collect data through drop and pick from 250 respondents.	The study revealed that EM dimensions of opportunity recognition, resource leveraging, value creation, customer intensity, and innovation focus are positively related to performance outcomes of reputation, efficiency profit and growth
9	Effect of Service quality and customer satisfaction and loyalty The mediating role of corporate reputation. Ozkan, Suer, Keser, & Kocak. (2019)	Journal of Bank Marketing (Emerald)	Service Quality, (Independent), Customer Satisfaction and Loyalty and Corporate reputation (Mediator)	Survey design was used and SEM was used for data analysis with 300 respondent measured on 5 point Likert scale	Discovered that corporate reputation mediates the relationship between service quality and customer satisfaction on customer loyalty
10	Corporate social responsibility as a determinant in the air line industry. Park (2019)	Journal of Retailing and Consumer Services (Elsevier)	Corporate Reputation (Independent variable) and customer loyalty	The study used convenient sampling technique which has a sample size of 2100 respondents.	Found out that corporate reputation has a significant impact on consumer attitude and customer loyalty
11	Reinforcing green competitive	Elsevier	Green competitive advantage, green	320 managers and 320 customers.	Green creativity directly have a

	advantage through green production, creativity and green brand image. Implication for cleaner production in China by Zameer, Wang & Yasmeen (2019)		production, creativity and green brand image	Convenience based structural equation modelling (CBSEM) and AMO	positive role in reinforcing green competitive advantage
12	Application of Whiteheadian Creativity to Corporate Creativity: A Five Cs Creativity Model by Park et al (2019)	Research gate	Creativity and corporate creativity	Conceptual Review	A five Cs creativity model, deriving 3Cs from creative imagination and 2Cs from the creative structure.
13	Influence of Entrepreneurial Creativity on Competitive Advantage in Automobile Engineering and Technologies Industries by Kathiravan et al (2019)	Research gate	Entrepreneurial creativity and competitive advantage	160 firms, the data was analysed using PLS	There is the influence of entrepreneurial creativity on competitive advantage in automobile industries
14	The effect of service quality and customer satisfaction on customer loyalty The mediation of perceived value of services, corporate image, and corporate reputation by Ozkan, Suer, Keser & Kocakoc (2019)	Emerald	service quality and customer satisfaction on customer loyalty: The mediation of perceived value of services, corporate image, and corporate reputation	163 males 121 females. Quantitative using SEM analysis	The findings of the survey indicate that corporate image and corporate reputation can be used as a common marketing benchmark to measure a bank's performance
15	Innovation and Creativity in Organizations: A	Research gate	Innovation and creativity in organisations	A Conceptual paper	Creativity and innovation in any organization are

	State-of-the-Science Review, Prospective Commentary, and Guiding Framework by Anderson, Potočnik and Zhou (2019)				vital to its successful performance
16	Organizational Creativity as an Attributional Process: The Case of Haute Cuisine by Kock, et al (2018)	Sage	Organisational creativity and attribution process	Interviews with Chefs, critics/experts Haute-cuisine restaurant Rutz in Berlin	The study demonstrates how the sequential performance of these entre-relating activities is consequential for the gradual transition of external evaluations of an organization's outcomes, from being considered 'different' to 'one of a kind', and thus the increasing attribution of organizational creativity over time.
17	Organizational creativity as a crucial resource for building international business competence by Vasconcellos, Garrido&Parente (2018)	Elsevier	Organisational	creativity and international business competence. The data was analysed using OLS regression method	The results partially support the hypothesis that organizational creativity is a building block for IBC
18	The impact of entrepreneurial marketing on innovative marketing performance in small- and medium-sized companies by	Taylor and Francis	Entrepreneurial marketing, innovative marketing performance	The sample size of this study is 195 small firms in - . Structural equation modeling (SEM) was used to analysed the data	The results show that value creation that includes creating value for customers through the products and services, and marketing activities and technology has

	Rezvani and Fathollahzadeh (2018)				the greatest impact on innovative performance
19	The impact of entrepreneurial orientation on competitive advantage moderated by Financing support in SMEs in Iraq. Zeebaree and Siron et al. (2017)	International Review of Management and Marketing (DOAJ)	Entrepreneurial Orientation (Independent Variable), Competitive Advantage (dependent variable), Financing Support (moderator)	The study adopted a quantitative approach using survey instrument. A sample size of 680 small firms in Iraq. Structural Equation Model (SEM) was used to examine the relationship among the variables.	It shows that entrepreneurial orientation dimensions of innovation and proactiveness significantly influence competitive advantage.
20	The role of market orientation, creativity and innovation in creating competitive advantages and creative industry performance by Sutapa, Mulyana and Wasitowati (2017)	Institutional based	Market orientation, creativity, innovation, competitive advantage and creative industry performance	130 owners of creative industries quantitative using PLS	Creativity has no significant effect on innovation
21	Corporate Social Responsibility and CSR fit as predictors of corporate reputation. A global perspective. Ozdora, Akak, Ferguson, & Atakan,(2016)	Public Relations Review (Elsevier)	Corporate Social Responsibility, CSR fit (Independent variable) and Corporate Reputation (mediating variable)	A conceptual analysis was carried out	The result of the conceptual analysis revealed most studies on CSR and reputation functions on practical implications without contributing to the theoretical framework
22	Assessing the relationship between entrepreneurial orientation, reputational resources and absorptive capacity: a	Institutional based	Entrepreneurial orientation, reputational resources and absorptive capacity	Survey data from 42 firms. Quantitative method using PLS	Process for exploitation of reputational resources and knowledge becomes an essential element for firms to adapt to changes in the competitive

	resource based approach by Orlando and Alexandra (2016)				environment
23	How does corporate social responsibility contribute to firm performance?; the mediating role of corporate reputation competitive advantage, reputation and customer satisfaction. Saeidi et al, (2015)	Journal of Business Research (Elsevier)	Corporate Social Responsibility (Independent) firm performance, customer satisfaction (Dependent), Competitive Advantage, and reputation. (mediators)	Data was analyzed using AMOS	The study revealed that reputation mediate the relationship between corporate social responsibility and firm performance.
24	Forecasting effect of creativity on entrepreneurial sustainability by Ogori, Isiakwe, Ajagbe and Oke (2015)	Institutional based	Creativity and entrepreneurial sustainability	288 Qualitative using SPSS 22	Creativity adaptation has a positive impact on return on investment and customer base.
	Developing Organizational Creativity and Innovation: Toward a model of self-leadership, employee creativity, creativity climate and Workplace Innovative Orientation By Ghosh (2015)	Emerald	Organisational Creativity and innovation: self-leadership. Employee creativity and workplace innovative orientation	36 organizational respondents comprising of managers, deputy managers, and assistant managers working in the research and development Self-leadership, creativity, and innovation. The tool use for the study is structural equation modelling analysis	Results revealed the significant relationships among self-leadership; employee creativity, creativity climate; and workplace innovative orientation
25	Reputation and legitimacy. A key factor for higher Education. Institutions sustained competitive advantage.	Journal of Business Research (Elsevier)	Reputation(Independent) and Competitive advantage (Dependent)	Data were collected using questionnaire with 509 respondents from different public universities in Spain	Found that reputation a critical intangible asset in order to ensure a sustainable competitive advantage and therefore guarantee

	Miotto (2020)				their firm survival and growth
26	Investigating the mediating role of corporate reputation on the relationship between corporate social responsibility and multiple stakeholders outcomes Arikan, Kantur, Maiden & Telci (2016)	Quality and Quantity (Springer)	Corporate Social Responsibility (Independent Variable)	9 companies were selected from manufacturing industries	The result showed that corporate mediates the relationship between CSR and organizational and performance outcomes.
27	Innovation and Corporate reputation and word of mouth in the banking sector in India. Manohar, Mittal and Marwash, (2020)	Benchmarking. An international Journal (Emerald)	Innovation (Independent Variable), Word of mouth (Dependent) and Corporate reputation (mediator)	The study adopted an integrated approach using qualitative and quantitative. With 23 participant and 300 respondents. PLS was used for data analysis	The study indicates that corporate reputation mediates the relationship between innovation and word of mouth
28	Deep level diversity and workgroup creativity: the role of creativity climate by Tripathi and Ghosh, (2020)		Effect of perceived “self-to-team” deep-level diversity on team’s creative output from a social Identity lens view	40 employees were males and 50 were females. ANOVA was used tool for data analysis	Results indicated that the deep-level homogeneous group perceived higher team creative output as compared to the deep-level heterogeneous group. Perceived team creativity climate was found to mediate the effect of team diversity on the team’s creative output. Further, it was observed that the quality of perceived creativity climate (positive and negative) moderated the relationship between diversity and the team’s creative

					output.
29	The facet antecedents and consequences of coo petition. An entrepreneurial perspective. Crick (2018)	Qualitative Market Research : An International Journal. (Emerald)	Entrepreneurial marketing, Coopetition, and Organizational performance.	The study used a semi structured interview of firms sampled 15 from New Zealand Wineries	Coo petition comprised of resources and capability sharing activities. These activities are driven by an industries wide cooperative mind set, and entrepreneurial marketing
30	Relating word-of-mouth to corporate reputation by Williams, Buttle and Biggemann (2012)	Institutional based	Word-of-mouth and corporate reputation	Three organisations Literature review	Customers dissatisfaction and negative word of mouth are thought to have strong downside consequence for corporate reputation
31	The Effect of Entrepreneurial Marketing on Outcome Goals in SMEs BY Becherer, Helms and McDonald	Institutional	Entrepreneurial Marketing on Outcome Goals in SMEs	1,800 owners/operators of small to medium-sized businesses (SMEs). Stepwise regression was used to analyzed the data	Results revealed entrepreneurial marketing impacts outcome variables, particularly value creation.
32	Culture and age as moderators in the corporate reputation and loyalty relationship Bartikouski et al, (2011)	Journal of Business Research (Elsevier)	Corporate Reputation(Independent variable), loyalty (Dependent variable)	Convenient sampling technique, questionnaires were adopted from previous study and were measured on 5 point- Likert scale.	Results suggest that consumer corporate reputation have a positive effect on affective and intentional loyalty
33	Relationship between market orientation, brand orientation and perceived benefits in the non-profit sector: a customer perceived paradigm by Mulyanegara (2011)	Taylor and Francis	Market orientation, brand orientation and perceived benefits	13 church organizations. Quantitative using PLS	Findings reveal that market orientation is significantly associated with both perceived brand orientation and perceived benefit

3.1. Proposed Measures

Entrepreneurial Marketing: Though different versions of entrepreneurial marketing measures have evolved over time (Becherer et al 2012; Fiore, et al, 2013; Jones & Rowley 2011). We found the scale development by Fiore et al, (2013) robust with Cronbach Alpha 0.8. It is a 12 items measurement for entrepreneurial marketing which has been used extensively in studies relating to small scale enterprises. It was measured on a 5 point Likert typed scale.

Corporate Reputation: A number of scales have been developed to measure corporate reputation (Fombrum, Gardberg & Saver, 2000, Helm, 2015; Feldman, Behamonde & Bellido, 2013). However, our study found that the scale development by Fombrum et al, (2000), reputation quotient, remains the most popular measure (Shamma, 2012) because it was one of the first measures for reputation, other measurement scales were developed from the corporate reputation quotient. Similarly, Wartick (2012) claims that the reputation quotient is a good measure, that makes it applicable to most stakeholder groups and many cultural contexts.

Corporate Creativity: In measuring corporate creativity a number of scales have been developed and validated (Tierney, Farmer & Graen, 1999). However, we adapt the scale developed by Tierney et al, (1999) using a sample of 5 items with a Cronbach, Alpha 0.88 for 5 items.

Competitive Advantage: A number of measures have been developed to measure competitive advantage (Chen, Lin & Chang 2009; Gilley, Greer & Rasheed, 2004; Argote & Ingram, 2000). We found Chen et al's, (2009) scale robust with Cronbach Alpha of 0.85. It is measured on 5 point Likert typed scale.

4. Result and Discussion

In an attempt to understand the usage of entrepreneurial marketing practices in business environment, this study proposed a parsimonious model of the entrepreneurial marketing, taking into cognizance of business environment in which firms operate. This study leverages on dynamic capability theory (Teece, et al, 1997), image theory (Beach et al, 1998) as the theoretical foundation, while CR, CC, and CA are proposed as the mechanism boundary condition and consequence of EM respectively. The proposed model provides an all summarizing approach that centers on the entirety of stakeholders' interactions in the business environment. This would be beneficial to future research regarding the consequences of entrepreneurial marketing in the future business environment which recent global trend seems to be uncertain about.

Theoretically, incorporating corporate reputation and corporate creativity into the model, entrepreneurial marketing model has underscored the importance of firm reputation and resources capability in the entrepreneurial marketing competitive advantage link. Understanding the entrepreneur's capabilities and firm's reputation and good marketing practices would increase likely corporate creativity in such manner that firms marketing behavior would enhance and clarify the multifaceted characteristic of entrepreneurial marketing as it relates to firm's outcomes.

The study also made contributions to the field of strategic marketing, especially in the context of entrepreneurial marketing. Poor performance of small firms poses serious challenge for entrepreneurs; this places firms at the disadvantaged side (Sadiku-Dushi et al, 2019). Thus, understanding the consequences of the phenomenon especially in this difficult period where most businesses are facing the scourge of Covid-19 pandemic coupled with already existing challenges is critical. Worse incidences of performance and collapse of these small firms would increasingly be reported if survival factors critical to firms' success are ignored. A model to comprehend this occurrence particularly from the viewpoint of small firms is germane.

5. Conclusion

The main limitation of this study is that the model of entrepreneurial marketing developed in this study is conclusion based on the fact obtained from the current debates in literature. Therefore, there is need to empirically test the model using collected data with the help of the suggested measures. We recommend that researchers validate this model across a number different contexts and industries. Secondly, inclusion of articles in the review is not scientifically determined but based on the authors' discretion and limitation to most data bases. It is possible some high impact journals are unavoidably inaccessible and would have influenced the perspectives of the authors on the consequences of EM as proposed in this study. We recognize that inclusion of more findings from different context in the future reviews, will result in capturing and highlighting critical constructs that explain the consequences of EM as it relates to diverse cultures and industries. Fourthly, Organizational climate (Shanker, Bhanugopan, Van der Heijden, & Farrell, 2017) has been found to impact on organizational outcome positively. We expect that where solidarity and shared vision is common among members of the organization, creativity will further be enhanced, thus the role of organizational climate that supports this attitude is worth exploring.

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E-Learning and Economic Well-Being of Graduates: Applying the Human Capital Earning Function to Distance Education

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Abstract

The study aims to evaluate the effectiveness of e-learning in raising the income level of graduates. Based on a sample of the distance education program students in the Bachelor of Business Administration. The study applies the net present value, and regression model to estimate the Human Capital Earnings Function presented by Mincer (1974). The results showed that the NPV of the expected cost and earnings for graduates that the program will cause an improvement of the standard of living of graduates. Moreover, the regression results indicate that the most important factors affecting the expected wages are those objective factors such as experience and job stability, as they are superior to subjective factors such as marital status and age, the technical expertise comes between these two groups. The study recommends more use of modern technologies in the field of distance education, for all societies without restrictions of time or place, in order to achieve the spread of knowledge, to raise the efficiency and income of workers in the economy. Provide the opportunity for those who were unable to continue their university education, due to socioeconomic conditions.

Keywords: E-learning, Distance Education, Human Capital Earnings Function, Economic Well-Being

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1. Introduction

Economists have noted the long relationship between workers' education level and their wages (Vinovskis, 1970). The relationship has been formalized in many recent studies on the rate of return to education and the contribution of education to worker productivity. Empirical studies

generally indicate that an increased level of education of an individual is associated with higher productivity. The study by Fleisher et al., (2011) showed that an additional year of schooling raises marginal product by 30.1%. Thus, it will improve opportunities in the labor market; this explains the high wages of educated workers. Therefore, it can be said that learning is the key to success and growth in an individual's life.

The Information and Communication Technology ICT revolution lead to a significant reduction in barriers to information access and communication between people, institutions, and countries (Khan, & Williams, 2006), Also the emergence of new types of learning and teaching, further entrench the concept of individual or self-education. Where the learner continues his learning according to his capacity, ability, speed of learning, and according to his previous experiences and skills. E-learning is considered one of the advanced forms of distance learning, especially computer-based education. e-learning has built on the extensive use of advanced information and communication technologies to deliver learning and instruction (Navimipour & Zareie, 2015), E-learning gives a flexible and easy environment to the students less cost, convenient time and place to study. User perception and readiness play an important role in e-learning effectiveness in both developing and developed countries (Naresh & Reddy, 2015).

Within the framework of societies to benefit from the knowledge economy, there have recently wide changes in university education, especially to provide different groups of students with new skills and qualifications that enable them to compete in the labor market. Therefore, the educational process has undergone an in-depth review so that information technology is part of the structure of the education strategies, and this explains the widespread concepts of e-learning, online education, and the virtual university.

Recently, wide changes have taken place in education, especially in light of what the world is witnessing these days from the Coronavirus COVID-19 pandemic and the imposition of lockdown and social distancing in most countries of the world, the pandemic changed the lives of millions of people around the world (Alzyadat & Asfoura, 2021). The labor market began, through its need for new skills and qualifications, to impose new trends and specializations that meet the needs of the economy. Therefore, the educational process has undergone a review to keep pace with modern requirements and available technologies, such as e-learning and direct education that depends on the Internet. This is to employ modern technologies in the field of e-learning in university education, for all their categories and segments without restrictions of time or place. What drives the growing trend towards e-learning are the benefits it provides. Which should be known exactly where these benefits lie. In addition, this type of education witnesses the increasing demand of all segments of society for e-learning. The characteristics of this type of education in terms of its flexibility, economic effectiveness, and its elimination of place and time barriers contribute to enhancing the demand of all segments of society for e-learning services. In light of the increase in the demand for this type of education. E-learning can be an opportunity to encourage the information and communication technology policy in universities. That can favor their organizational adaptation to digital requirements in terms of better performance, to offer students to continue education with a better match with the production

needs in the knowledge economy (Vilaseca & Castillo, 2008). Nowadays the system of education faces the task of building a flexible system able to quickly adapt to the learning of specialists in the dynamically changing world, with a high level of quality. Information and communication technologies based on which there is a process of creation of the systems of remote learning capabilities to provide flexibility and high quality of learning can play an important role in the creation of such system (Bataev, 2017).

E-learning can be seen as the umbrella for many activities and applications as computer-based education. Using the web and virtual classroom, but its scope is narrower than the term distance education, which may include in addition to that education by correspondence education that depends on regular mail channels. E-learning, whether remotely or in the important semester, is the use of technology of all kinds in the delivery of information to the learner in the shortest time, with the least effort and the greatest benefit. Moreover, the remote study is a derivative part of the electronic study. In both cases, the learner receives the information from a place far from the teacher. In other words, e-learning depends mainly on computers and networks to transfer knowledge and skills. Its applications include web-based learning, computer-based learning, virtual classrooms, and digital collaboration. Lesson content is provided online, in audio, video, and CD-ROM.

According to the method of providing the educational service, there is a synchronous course and an asynchronous course. In the first case, all participants enter the network at an agreed specific time and communicate in a live broadcast, this system is also called distance education, this service requires high-quality communication and networking. As for asynchronous education, it does not require that all individuals be present on the network at the same time, but each of them can choose the time that is suitable.

E-learning in its modern applications is not necessarily separate from traditional teaching in the classroom. Many programs in major universities contain components received inside the lecture hall and others received by the student remotely, where the student is obligated to come personally to the university for a certain period to receive the courses. Then the student returns to his country and completes the program through e-learning techniques, under the guidance and supervision of the faculty. That is, e-learning is an expansion of the concept of the teaching and learning process to transcend the traditional classroom boundaries and launch a rich multi-sourced environment, in which educational technologies have a fundamental role in the educational process.

2. Literature Review

The neoclassical growth model proposed by Robert Solow (Solow 1957), asserted that the impact of education and human capital could be studied through their effect on technological progress. According to this theory, such that technology improves, the efficiency and productivity of labor. Meanwhile, improvement in technology can be seen in terms of human capital (education and skills development) (Khan, & Williams, 2006). The traditional theory of

Human capital investment developed by Becker (1962) and Mincer (1974) views education and training as the major sources of human capital accumulation, that, have a direct and positive effect on individuals' lifetime earnings (Nasir & Nazli 2010). From the economic point of view, and the empirical studies, an increase in the level of education of an individual is associated with an increase in his productivity, thus improved opportunities in the labor market, this explains the high wages of more educated workers. Education has an important effect on wages but it is not clear whether this is because education raises productivity or because education is simply a signal of ability (Chevalier et al., 2004). The labor factor is the basis of the factor of production in the production function. Hence, the importance of investing in the human capital in an integrated and comprehensive manner, supporting it with a broad and dynamic training and education industry that keeps pace with the latest sciences and methods. Depending on its course in this direction on the concept of education and training. some studies use the internal rate of return to education to assess whether an educational expenditure should be expanded or contracted (Heckman et al., 2008). Education remains a profitable investment for individuals. On average, another year of education produces a rate of return to education in excess of 5–8 % a year (Patrinos, 2016). The study by Nasir and Nazli (2010) found that the additional year of education raises the individual's monthly income by 7.3%,

Expanding scientific and technical knowledge that raises labor productivity and production inputs. Where the systematic application of scientific knowledge to produce commodities led to a significant increase in the value of education, technical education, and training as the growth of knowledge became embodied in the production factors (Becker, 2009). Education is seen as an investment in the stock of human skills or the formation of human capital (Mincer, 1975). A country's stock of skills is fundamental to the potential for economic growth in a highly competitive international environment. Human capital is a key determinant of income inequality, and it is more important than ever as wages for skills rise (Burgess, 2016). Education can affect wages rates or wages per unit of time period operate (Mincer, 1975).

E-learning accelerates economic growth and per capita income, where E-learning is accelerating the convergence of human capital suitable for a modern market economy. Given the low costs. E-learning increases the options for students to learn and acquire skills that are relatively expensive in the economy (Kejak, & Ortmann, 2000). Olakulehin, (2008) found distance education as a fundamental means for human capital development in Nigeria The variance in the total productivity factors productivity TFP across industries refers reflects the efficient use of the available resources Alzyadat, et al (2021). which reinforces the hypothesis that there are complementarities between technical and organizational change and skilled labor inputs to explain productivity gains at the industry level. (Castillo-Merino, & Sjöberg, 2008). Studies have shown that these developments have led to an improvement in the productivity and efficiency of various business enterprises (Alzyadat, & Almuslamani, 2021). E-learning has the potential to make the acquisition of human capital cheaper and easier. Also, ensuring -high quality education within the reach of employees also has the potential to help alleviate poverty by empowering the socially disadvantaged and the less fortunate in society including low-income groups, the disabled, the sick, and women affected by cultural and religious bias. (Khan, &

Williams, 2006). The evidence suggests e-learning companies are making inroads because of cost savings, an estimated one-half to two-thirds of the costs that employers would have to incur were they to send their employees to traditional education and training courses (Kejak, & Ortmann, 2000). one factor that e-learning is less expensive is the opportunity costs of going to school full-time and/or travel-related and time costs (Kejak, & Ortmann, 2000).. Distance education is the tool that will enable benefit is not just education but the even distribution of educational benefits among a country's socioeconomic groups, in both rural and urban areas. Digital technologies have been able to meet educational requirements by providing a digital infrastructure that can be expanded anywhere in the world. The presence of this infrastructure with the appropriate software tools means the completion of the tools for carrying out the educational process, as the Internet is seen as a mediator who provides the study material to anyone, anywhere, and at any time. That is why advanced universities in the world are obligated to network university facilities internally and provide Internet connection service from the classroom, laboratories, libraries, and even university residences as well. The continuous decrease in the costs of owning and operating the webserver, along with the continuous improvement in specifications, means providing the opportunity for medium and less advanced universities to launch their own websites to provide educational services to their students. On the other hand, Web technologies in education are available to everyone and are constantly evolving. These technologies allow the learning process to be facilitated effectively.

The incentives for e-learning and its applications come from both the demand and supply sides. On the demand side, population growth is extending the education market to individuals desiring all levels of education. so, the increasing demand will open the way for e-learning applications. many individuals want to enroll in university education but are unable to do so due to Work pressure family obligations, or physical disability. this leads to the investment of time in education without additional costs. The knowledge revolution has produced explosive growth in the amount of information that we deal with in our life. individuals seek to pursue new developments in their field of interest through continuous education. With the spread of modern knowledge-intensive devices in various production units, workers find themselves needs to take advantage of e-learning to develop the skills of searching for information in the available sources and critical thinking to evaluate that information, as well as the skills of communicating with others to exchange information in the circumstances of the flood of information in which we live. On the supply side, the information technology sector development during the past two decades helped in promoting economic development. The increase in applications for admission to universities is leading to pressure to expand existing facilities and build new facilities to accommodate students and educational services. Therefore, the universities seek to search for new channels that are less expensive.

3. Research Method

This study tries to estimate the expected return for students from enrolling in an e-learning program that awards a bachelor's in business administration. By using the econometric model,

this return is represented in the increase in the wages due to obtaining a university qualification or obtaining a new job with this qualification. The study also aims to identify the most important factors in determining the expected return after the end of the program.

3.1. Study population and sample

The study population consists of male and female students who study in a business administration program in distance education at a Saudi university. At the beginning of each semester, students attend only three lectures in each course, then the program is completed remotely through electronic channels that allow the student and teacher to communicate and continuously participate, where the faculty member uploads the course description and a full copy of the lectures with a full explanation of the educational content supported by what suits the educational objectives of Multimedia. It also uploads self-evaluation tests electronically to make the student able to evaluate his understanding of the study units separately and the course as a whole unit. There is also a virtual classroom service that allows communicating with the instructor in a live broadcast at predetermined dates. The program is classified within the Blended Learning systems, where students attend intensive introductory lectures with faculty members and then complete the program via electronic means. The main source of data is a questionnaire designed to identify the different characteristics of the student population and the expected change in income after the completion of the bachelor's program. The questionnaire was distributed to all male and female students at all academic levels during the first semester exam period. Table 1 summarizes the numbers of completed questionnaires and some other indicators.

Table 1. Preliminary indicators from male and female students' data

Item	Male	Female	Total
The number of students registered in the program	2430	1690	4120
Sample Size	1099	706	1805
Number of Determined the Expected Salary Increase	916	222	1138
The average expected increase in salary per month after completing the program	2082.6	4141.7	2484.3
Average age	31	25	30

3.2. Measuring the Effectiveness of E-learning

Measuring the effectiveness of e-learning in raising the level of income for students, the study used the net present value (NPV) of the students' investment in the Bachelor of Business Administration program by calculating each of the costs and benefits. The study also relied on a regression model based on the Mincer earnings equation developed by Becker (1964) and

Mincer (1974) which remains an accurate benchmark for estimating wage determination equations (Lemieux, 2006). Where the multiple regression model formula links the expected wage as a dependent variable, the number of years of education, experience, and personal characteristics of the individual as independent variables. The model was developed to achieve the objectives of the study by excluding the number of years of education. Moreover, the use of variables: (gender, marital status, employer, number of years of experience, job stability, economic role in the family). Also added to the model indicators related to e-learning, which are those related to computer and internet skills.

3.3. The Net Present Value (NPV)

The NVP is one of the criteria for judging the investment decision in a particular project. to measure the present value of payments to be realized in the future (Cecchetti & Schoenholtz, 2011). to estimate the net present value of a student's investment in the Bachelor of Business Administration program. Both costs and benefits are calculated. On the costs side, the tuition fees and other costs incurred by the individual to complete the program are calculated, including the opportunity cost of the time he devoted to studying instead of earning more income. The direct benefits are the expected net increase in income because of raising the level of education. These costs and benefits are calculated on an annual basis and are included in the NPV.

Assumptions underlying the NPV calculation in this study, that the student finishes his studies according to the plan within four years without delay. The highest income, whether through promotion or employment, is achieved in the year following graduation; the new salary continues without increasing the length of the estimated period, the average age of the student indicated in the table is when starting the program. All individuals retire at the age of sixty years from the available data monthly, the expected increase in the salary is calculated annually, and it is assumed that it will be achieved at the end of the year. Regarding program costs, the assumption is that the student costs are the tuition fees only, because other types of costs are secondary, such as transportation to attend lectures or introductory meetings). There is one cost-of-funds rate which is the basis for discounting all the annual flows. Calculate the net present value the formula used to calculate NPV is:

$$NPV = \sum \frac{B_t - C_t}{(1 + r)^t}$$

Where NPV = Net Present Value. B-t = annual expected benefits and does not start until graduation. Ct = annual costs associated with the learning activity during the program. r = discount rate. On the issue of maintaining the increase in income, there is an assumption that is a decline in the importance of the university degree within five years of graduation. The assumption is based on the expiration of the certificate, which means that the value of the professional or academic certificate ends after a few years due to the explosion of information and the increasing importance of continuous learning and the accumulation of experiences. This Linked to another assumption, which is that the employee's persistence and obtaining an increase

in income are related to productivity, and the ability to convert acquired knowledge into achievements to achieve job objectives efficiently. With regard to the discount rate, the definition of this rate has been adopted as the expected annual return on a safe investment from risk and this has multiple applications. It may be the average return expected for depositing an amount of money with the bank for a year or an average annual return on investment in the stock market in the risk-free stock. There may be controversy over the distinction between the discount rate for study costs and the discount rate for estimating the present value of the expected returns after the program ends, but for simplicity, we assume that it is one.

3.4. Regression Model

To determine the factors affecting the expected wage after graduation. There are many factors that affect wages; these factors are distributed among the demand and supply sides of the labor market, in addition to the fact that the regulatory, institutional and legal framework largely governs this market. This model focuses on factors related to the supply side, i.e. the characteristics of the job seekers and the employees themselves. Perhaps the most prominent contributions in this field are the model presented by Mincer, where he put forward a multiple regression model formula linking wage as a dependent variable, the number of years of education, experience, and personal characteristics of the individual as independent variables (Mincer, 1974). Excluding the number of years of education because the study population is among those with intermediate qualifications seeking to obtain a bachelor's degree in business administration, meaning that they have approximately the same number of school years, therefore the parameter of this variable will be not significant. In addition, indicators related to e-learning were added to the estimating formula, which is those related to computer skills.

The regression equation takes the following form:

$$\ln W = \alpha + \beta_1 G + \beta_2 A + \beta_3 S + \beta_4 M + \beta_5 X + \beta_6 T + \beta_7 E + \beta_8 C + U$$

Where W: Income (the expected wages after graduation) which is the dependent variable in the model. Since most of the students in the selected program are employed, a question was asked about the expected increase in wages after graduation. G: gender (male or female), A: age, S: Social status, M: Employer (military or civilian), X: Number of years of work experience, T: Job stability (permanent or temporary job). E: The economic role in the family is the breadwinner or not, C: Experience in computers and the Internet. The parameter α is the intersectional parameter, β denotes the percentage change in income as a result of a one-unit change in the corresponding independent variable (Vilaseca & Castillo, 2008). U is the stochastic variable that assimilates the change in the dependent variable that is not explained by the independent variables included in the regression model.

4. Results and Discussion

The sample size is 1805 (all male and female students who responded to the questionnaire. After excluding all cases with missing data, including those who omitted to mention the expected salary after graduation, thus the number of liquidated cases reached 965 only. Perhaps the most striking thing is the large disparity in the ages of students, ranging between 18 and 50 years old. In addition, some students have a long experience in their current job of up to 28 years.

Table 2 Descriptive Statistics

The variable	N	Minimum	Maximum	Mean	Std. Deviation
W	1138	7.31	10.82	8.8908	.45482
G	1805	.00	1.00	.3911	.48814
A	1805	18.00	50.00	28.1590	6.16367
S	1805	.00	1.00	.5795	.49378
M	1805	.00	1.00	.1058	.30769
X	1805	.00	28.00	5.1684	5.78422
T	1155	.00	1.00	.8511	.35616
E	1804	.00	1.00	.6020	.48962
C	1804	.00	30.00	19.8104	5.91046
Valid N (listwise)	965				

The NPV of the expected cost and revenue after the end of the program is more than 93 thousand riyals for the male student and 208 thousand riyals for the female student, meaning that from an economic point of view and assuming that the expected increase in income lasts only 5 years, this program is a reason. Practically to improve the standard of living for graduations. If we assume that the employment system is the traditional rigid system that does not require continuous learning or seriously updating knowledge or skills, then the impact of the bachelor's degree extends to the end of the student's career. Whereas the average age of a male student is 31 years and a female student is 25 years old, the number of years of work after completing the bachelor's program reaches 29 years for a male student and 35 years for a female student on average. By recalculating the NPV, it is about 580 thousand riyals for the student and about 1.5 million riyals for the female student on average

The R coefficient indicates a relatively strong positive correlation between the observed and estimated values (0.615). R Square coefficient indicates that about 38% of the change in the dependent variable (wage) is due to the explanatory variables included in the model, they are mainly related to the characteristics of individuals, i.e. the supply side of the labor market. The unexplained 62% is due to factors on the demand side as well as the structural, regulatory and legal constraints that govern the labor market.

Table 3. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	W > 0 (Selected)			
1	.615 ^a	.378	.372	.33126

a. Predictors: (Constant), G, A, S, M, X, T, E, C

The variance analysis shows that the dependent variable is explained by the model's significance, as compared to the unexplained variance. The model passed the F-test where the assumption that all the model parameters were zero at a significance level of less than 1% was rejected.

Table 4. ANOVA

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	63.772	9	7.086	64.574	.000 ^c
Residual	104.793	955	.110		
Total	168.565	964			

The results of the regression estimate in the Table 5 indicate that the gender factor G: for female students, the total expected income will be approximately 22% less, while other factors remain the same. Although the expected increase in income will be greater compared to male students, the total expected income of female students remains lower than that of male students in the mentioned ratio. age is one of the factors contributing to determining the expected income after graduation, every year of increase in the age of the graduate increases the probability of increasing his income by 0.6%. The coefficient of marital status (S) is significant, which indicates that the married has a chance to increase his income by about 9% more compared to the single student.

The coefficient of Workplace (M) is significant; thus, the military has a 14.2% greater chance of achieving higher incomes compared to the non-military. The number of years of experience (X), the results show that each year of additional experience of the student corresponds to an increase in income of about 3%. Job stability (T) is a very influential factor, as those with permanent jobs have a wage increase up to 21% compared to those with temporary jobs. The parameter estimate for the economic role in the family (E), is not statistically significant, this indicates that being a breadwinner or non-breadwinner does not affect the expected level of income after completing university studies. The estimated parameter for Computers and Internet Experience (C) states that the greater the experience of dealing with computer applications and the Internet, the greater the individual's chance of obtaining a higher income.

Comparison of the relative importance of the variables in the Table 5 shows that the most important variable experiences, followed by job stability, gender, workplace, and experience in the field of computers and the Internet, then marital status, and finally the age. It is generally observed from these indicators that objective aspects such as experience and job stability

outperform subjective factors such as marital status and age, and technical expertise comes in between.

Table 5. Regression results

	Unstandardized Coefficients		Standardized Coefficients	t statistics	Sig.
	B	Std. Error	Beta		
(Constant)	8.189	.113		72.669	.000
G	-.216	.044	-.137	-4.874	.000
A	.006	.004	.078	1.715	.087
S	.087	.029	.094	3.013	.003
M	.142	.030	.126	4.690	.000
X	.027	.003	.343	7.929	.000
T	.208	.035	.173	5.950	.000
E	-.066	.050	-.037	-1.315	.189
C	.011	.003	.142	3.048	.002

5. Conclusion

The study applies NPV to estimate the effectiveness of e-learning in raising the level of income for students. The results show that the current value of the cost flows and the expected increase in income after graduation reaches - on average - 580 thousand riyals for the male student and 1.5 million riyals for the female student, assuming the continuation of the increase to the end of the career. That is, from the economic point of view, the program is a practical reason to improve the standard of living for its participants. As for the factors affecting the amount of expected wage after graduation, the study shows that the expected income for female students is approximately 22% less. The age factor contributes to a limited extent in determining the expected income after graduation, as an increase in the age of the graduate increases the probability of increasing his income by 0.6%. The marital status plays an important role in determining the expected income after graduation, as married people have the opportunity to increase their income by about 9% more compared to single people. The results of the model estimation also indicated that the expected income was affected by the number of years of experience, every year of additional experience of the student leads to an increase in income by about 3%. The results also indicate that job stability is a very influential factor, as those with permanent jobs up to 21% more salary increase than those with temporary jobs. The results indicate that the workplace has an important role in determining the expected income after graduation, as military personnel has a 14.2% greater chance of achieving higher incomes compared to non-military. As for the indicators related to e-learning, it was found that the more experience dealing with computer applications and the Internet, the greater the individual's chance of obtaining a higher income. With regard to the relative importance of these variables, it is noted that aspects such as experience and job stability are superior to personal factors such as

marital status and age, and technical expertise comes in an intermediate place between them. The study recommends that individuals should be encouraged to take advantage of modern technologies in the field of e-learning and distance education in universities and scientific institutes to obtain an education without being bound by time or place, in order to achieve the spread of science and knowledge. to raise the efficiency of work in all sectors, especially with the availability of an economic incentive represented in increasing income After obtaining the university degree through e-learning channels. The study recommends that social conditions or age should not be considered an obstacle to benefiting from these university programs and obtaining a suitable income after graduation.

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Impact of Online Learning of Economics in Lebanon on Acquiring Essential Skills in Light of the COVID-19 Pandemic

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Abstract

The sudden and recent outbreak of the Covid-19 had its impact on the way of life around the entire world; it challenged the education systems around the globe and forced schools and universities to switch to online education overnight. Several schools and universities that were formerly hesitant to change their traditional pedagogical approach had no choice but to entirely switch to online education. This study examines the impact of online learning of Economics on acquiring essential skills in light of the Coronavirus outbreak. The researchers used a descriptive-analytical approach and constructed a five-point Likert style questionnaire as a study tool. The questionnaire was distributed to a sample chosen from the population of Economics teachers in Lebanese schools. The sample consisted of 153 teachers all of which responded and their responses were valid for testing and analysis. The study reached some important findings mainly that through online learning of Economics, learners are not acquiring all of the 21st-Century skills, and the researchers had some recommendations as a result.

Keywords: E-learning, 21st-Century Skills, Covid-19

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1. Introduction

Throughout history, the globe has always witnessed pandemics, plagues, and influenza epidemics, all of which have negatively impacted a great part of the world on both the economic and social levels. Currently, the world is under the impact of an outbreak of a respiratory illness which is a result of a novel Coronavirus (COVID-19). According to World Health Organization (WHO, Jan. 2021), this outbreak has initiated in the Chinese city of Wuhan and has expanded rapidly in 2020, causing a fast deterioration in the global economy (Organization for Economic Cooperation and Development, OECD, 2020a). COVID-19 has made an instantaneous negative impact on various industrial and non-industrial businesses;

however, some sectors like entertainment, transportation, retail sales, schooling, and tourism were more affected than others.

The practice of remote activities, such as education and work, has become one of the main methods that countries have resorted to in order to face the repercussions of the spread of Coronavirus. The great technological progress in the field of communication has made it possible to manage a complete educational cycle without the need for instructors and learners to be in a narrow span of space (Department of Education and Training, Melbourne, 2020), and at the same time allow taking precautionary measures against the spread of Coronavirus.

There is no doubt that the education sector is one of the most affected by the health crisis that has imposed the search for means and solutions to fill the educational void, compensate for the educational deficiency, and bridge the knowledge gap that learners suffer from at various educational levels (OECD, 2020b). Technological progress has had a great impact on the entire educational process since education, with its traditional methods of transferring knowledge, was no longer able to fulfill the requirements of that process and attract large numbers of individuals in all its stages. Therefore, societies began to search for new formats of education that depend on the learner himself (self-learning), lifelong learning (UNESCO, 2020), as well as what we are at today, online education.

Online education is one of the most important concepts and modern technologies for education at all levels. It is worth noting that e-learning does not mean teaching the curricula and storing them on CDs, but the essence of online education is the interactive pattern, which means the existence of an interaction between learners and their instructors and among learners themselves (Bossér & Lindahl, 2019). There is always an instructor who communicates with learners, explains for them, answers their questions gives them assignments, and conducts tests. Accordingly, online education is every modern educational method that is built on a technical basis using modern technological and educational aids and strategies to ensure interaction between the instructor and the learner to ensure that the latter acquires knowledge (Arley-Fonseca & Brizuela-Gutiérrez, 2020).

In light of the current and exceptional circumstances that Lebanon is going through, ever since the outbreak of the October 17, 2019 protests until the outbreak of the Coronavirus pandemic, online education methods have been adopted at all educational levels (Mouchantaf, 2020). The main goal was to preserve the health and safety of citizens, to invest time, and not to miss any opportunity to educate learners. However, all that was without a unified vision and clear conditions for this type of education method. In spite of the positive returns that online education achieves, it faces several challenges (Abourjeili & Harb, 2020), especially in developing countries that do not have the adequate technological infrastructure necessary to perform online education or those that suffer from economic issues.

Implementing the online education mechanism in Lebanon faces several obstacles. The main issue is that the culture of a great number of teachers' at all educational levels is still traditional (Lebanon Education Sector, 2021). Also, the majority of educational institutions in Lebanon do not have sufficient technological infrastructure to ensure the quality and productivity of education (Abourjeili & Harb, 2020). In addition, the communication network infrastructure in Lebanon does not cover all regions of the country and the quality of the Internet is poor compared to what is available in most neighboring countries at least, noting that the subscription fee for this service is considered among the highest in the world (International Telecommunication Union, 2015). In addition, there is a great number of families who cannot afford an electronic device for each learner in the family due to the

current economic and financial situation that Lebanon is facing (Save the Children International, 2021).

Before the outbreak of the novel Coronavirus, e-learning in Lebanon was not implemented at any of the schools, only a few higher education institutes used online platforms (Save the Children International, 2021). After the Covid-19 outbreak in Lebanon, the ministry of education in collaboration with the Educational Center for Research and Development (CRDP) started teaching sessions for students via the national Television. Nevertheless, it didn't get the aspired results, which lead to adopting online education using various platforms such as Microsoft Teams, Zoom, Google Classroom, Moodle, Blackboard, in addition to others. This unplanned leap into online education had many hindrances and resulted in a lot of problems for school administrations, teachers, students, and parents especially that, nowadays, education.

Based on the above, the researcher conducted the study at hand to assess the impact of online learning of Economics on acquiring essential skills that comply with the 21st-Century skills in light of the COVID-19 pandemic.

2. Literature Review

E-learning is something that has long been an issue of debate and controversy over the need to integrate it into the educational process even long before the Coronavirus pandemic; however, it became an alternative and an urgent necessity to continue education in conditions that impose physical distancing (Islam et al., 2015). Koumi (2006) believes that e-learning came as a result of technological developments, especially after the educational process was directly affected by the automation of industry and the development of "artificial intelligence" technology and "the Internet of things", as well as the information technology revolution that entered the classroom and became an integral part of it.

Due to the spread of the Coronavirus, educational institutions have suddenly found themselves forced to switch to online learning to ensure the continuity of the teaching and learning process, in addition to using the Internet, smartphones, and computers to communicate remotely with students (Yulia, 2020). The increase in the number of teachers and students who use computers, the Internet, and smartphones in the learning process is due to the characteristics of e-learning and its positive effects. The study of both Edwards and Fritz (1997) revealed that e-learning is enjoyable and interesting, effectively achieves the desired educational results, and improves students' acquisition of concepts. Ravaglia et al. (1995) conducted a study on the effect of using computers in teaching both mathematics and science in a program for gifted education at Stanford University in the United States of America. The study concluded that using computers in education increases effectiveness in learning.

Ferriman (2014) found that there exist many benefits and features for e-learning which traditional teaching methods don't have. One of these benefits is the reduction of costs as it saves the costs of creating new classrooms to conduct educational courses and seminars, and saves electricity, water, and other materials used in the school, in addition to the reduction of transportation costs. Another feature is that all learners of all age groups can benefit from the meetings and courses offered on the Internet, and gain new skills and experiences away from the restrictions of traditional schools. It also enhances the investment of time and increases

learning since useless interactions between students decrease by reducing chatting and excessive questions that waste time, so the amount of what the student learns increases without the many disruptions or obstacles of the traditional teaching methods. Ferriman also depicted that e-learning is environmentally friendly, as there is no use of materials that may harm the environment when disposing of them.

However, Hetsevich (2017) believes that despite the many benefits of e-learning, it has some drawbacks. The study depicted its high reliance on technology; although e-learning is available to all individuals, many of them may not have smartphones, computers, or even a network. Also, because e-learning is self-directed, some people may find it difficult to motivate themselves to learn and resist playing and organizing the learning process. The study concluded that isolation and loneliness among e-learners rise because of the students' interaction with computers and smartphones instead of directly communicating and interacting with each other and with their teachers.

The effects of e-learning platforms on students' performance were studied on a large scale, where the amount and diversity of resources available to students increase their performance, especially when this diversity is compatible with the diversity of educational evaluation strategies (Gvaramadze, 2012; Jethro, et al., 2012). Another research (Halverson et al., 2012) aimed at exploring whether students' use of online resources affects their performance. The results showed that the amount and variety of resources students used enhanced their learning. However, the results indicate that the method of assessing prior learning outcomes and students' already acquired skills reduced this effect.

The School Education Gateway (an official website of the European Union) conducted a survey on online and distance learning (June 6, 2020) that attracted 4859 respondents from various countries across Europe, of which 86% were teachers or school heads. The results of the survey showed that, for about 70% of the respondents, it was their first-time experience with online education. The results also showed that the experience in online education gave 38.5% of them the freedom to experiment with teaching practice, and for 33.5% of them, it was a flexible experience. It also showed that 65% think online education comprises a wide range of tools, platforms, materials, and resources. However, according to 49% of the students and 34% of the teachers who responded, access to technology such as computers, software, stable Internet connection, etc., was a challenge, and 43% reported high workload and stress due to working online from home.

In a study about the effect of Coronavirus on education in China, Xiao and Li (2020) claimed that teachers cannot effectively supervise and lead the online class. Also, student assessment is not as effective as in-person education; it was classified as imprecise. Surma & Kirschner (2020) report that this problem is restricted by the lack of training for all parties of the teaching and learning process.

According to a report issued by the Lebanon Education Sector (2021), Lebanon is under the effect of interconnected social and economic problems that are impacting every aspect of life, risking students' education and futures because of the forced closure for long periods since October 2019, affecting a lot of students and keeping so many out of school. In a connected report, the UNICEF (June 2021) pointed out the inadequate access to e-learning tools (computer, tablet, smartphone, etc.), and highlighted the fact that students in Lebanon have had no meaningful learning for two academic years because of insufficient experience in e-learning or the proper infrastructure to support it. It is worth mentioning that there exists a long-term problem with the electricity supply due to the economic and monetary crisis that Lebanon is facing (some regions don't get electricity for numerous consecutive days) in

addition to the very high cost of getting electricity from private generators. Also, there is another related issue that is equally significant for e-learning, the Internet. It is considered among the highest in price among neighboring countries, and recently, it has been extremely unreliable.

The literature as demonstrated above discusses two positions related to e-learning: one views it as advantageous while the other views it as disadvantageous. However, none of the studies cited in the previous literature tackled the impact of e-learning on the skills that learners should acquire through the educational process. In the study at hand, the researchers assess the impact of online learning of Economics on acquiring essential skills that comply with the 21st-Century skills in light of the COVID-19 pandemic. This study is the first to be conducted about the topic in Lebanon as far as the researchers know.

2.1. Conceptual Framework

The education sector constitutes the cornerstone for the advancement of societies, which required investment in knowledge and scientific research, especially with the emergence of globalization and the growth of new industries. Thus, investment in the education process – in both the academic and professional domains – is a human investment. That is, “making an educated person” with the characteristics of the era that require moving away from the existing inactivity and indoctrination and moving to the vitality of learning based on discovery, investigation, analysis, and conclusion to deal with problems and their solution. Any form of education is, and should always be, centered on the learners, and this demands the diversification of knowledge sources and their forms, and employing the latest technology in this field. Among the many forms of education is a newly used type that was enforced all over the globe after the coronavirus outbreak, e-learning.

2.2. E-learning

There has been a wide-ranging discussion about a common definition of the term e-learning. The letter ‘e’ in e-learning refers to the word “electronic”; thus, it includes all educational activities carried out by individuals or groups working online or offline, synchronously or asynchronously via computers, smartphones, or other electronic devices. The Internet has become a fundamental way of making resources for research and learning accessible for both instructors and learners to share and obtain information. E-learning Technology-based includes the use of the Internet and other essential technologies to generate teaching materials, educate learners, as well as to organize courses in the institute (Fry, 2001).

E-learning as a concept covers a set of applications, methods, and processes of learning. Thus, it is not easy to find a generally acknowledged definition of the term e-learning (Rossi, 2009). Oblinger and Hawkins (2005) and Dublin (2003) claim that there is not even one definition of the term. Nonetheless, Holmes and Gardner (2006) commented on these discrepancies by stating that there may be as many definitions of the term e-learning as there exist academic papers on the topic.

According to Chitra and Raj (2018), e-learning is the planned use of information and network-communication technology in teaching and learning. Online learning, virtual learning, distributed learning, networked, and web-based learning are also used to describe this style of teaching and learning. According to the Organization for Economic Cooperation and

Development (OECD, 2005), e-learning is defined as the use of information and communication technology in diverse educational processes to support and enhance learning in higher education institutions it includes the use of information and communication technology as a supplement to the traditional classroom, online learning or a combination of the two modes.

Based on the above, the researcher concludes that e-learning is a concept that refers to the use of modern electronic means in the field of education, through which it is possible to store, collect and communicate information related to the various academic subjects in order to achieve the required efficiency of the education system.

2.3 Advantages and Disadvantages of E-learning

According to Firmansyah et al. (2021), Axmedova & Kenjayeva (2021), Yuhanna et al. (2020) and Alshamrani (2019) e-learning has some advantages as well as disadvantages, as follows:

- The advantages of e-learning include:

1. Ease and speed of communication between the teacher and the student even outside the official working hours, as there are many immediate means of remote communication.
2. The different teaching methods and their suitability for students; there are students who suffer from difficulty in concentration, distraction, and the inability to organize ideas. E-learning allows the teacher to focus on important ideas and take into account order and arrangement in the explanation process so that the lecture is coordinated in an easy and comprehensible manner.
3. The availability of educational material throughout the day and all days of the week help many students to arrange their study time and enable them to carry out other work besides studying, so whoever wants to work or enroll in courses or a gym can organize his/her time in a way that does not interfere with studying.
4. The e-learning system is not dependent on the actual attendance of the student, as the student can study in any place that he/she prefers and is not restricted to studying at the university among students or in the library.

- The disadvantages of e-learning include:

1. The need for infrastructure, in terms of availability of computers, high-speed Internet connection, and the cost of its application is very high.
2. E-learning weakens students' motivation to learn, due to spending a lot of time in front of the computer screen and websites.
3. It is difficult to evaluate and develop standards of e-learning since it reduces the level of creativity and innovation when answering the exams, where the learner has to reply using the same answer fed into the program, and there is no room for discussing the answer or understanding it differently.
4. The need for specialists to manage e-learning systems, as it is not a simple system and needs experience and intelligence in implementation and application, so there is a need for a qualified staff capable of managing this technical system.
5. The presence of a large number of current teachers who are unable to use digital technology in a way that enables them to deal with it and teach through it.

The Organization for Economic Cooperation and Development (OECD) has contributed to the wider range of education goals through the Definition and Selection of Competencies in the 1990s and the associated Program for International Student Assessment that was initiated in 1997, (also known as the 21st-Century skills) and more recently with the OECD 2030 Learning Framework that identifies an expanded set of competencies that can contribute to the individual and group well-being (OECD, 2020c). This framework consists of a learning compass that includes “Essential Knowledge, Skills, Attitudes and Values for the year 2030 that will not only cover literacy and numeracy, but also data, digital literacy, physical and mental health, and social and emotional skills.”

At the beginning of the twenty-first century, organizations and economic entities posed an important question: “What competencies should citizens acquire to meet the needs of the new century?” Several frameworks for twenty-first-century competencies have published to answer this question. Many of these competencies have been adopted as educational or correctional objectives to nurture talent and skills. Organizations or economic entities have used different terms to describe the goals they pursue. These competencies are classified into three groups: learning, literacy, and life skills.

2.4 Skills for the 21st-Century

Training for thinking skills and the tools that enable people to understand the world around them has become a primary goal of education in the twenty-first century. The interest in teaching these skills has reached such a remarkable level that it is quite noticeable in the educational literature, conferences, plans for developing educational materials, and teacher training and preparation programs.

The 21st-Century Skills are 12 abilities, as shown below, that students today need to succeed in their careers as the world is currently fast-changing.

The twelve 21st-Century skills are:

1. Critical thinking: As cited in the “Foundation for Critical Thinking”, the National Council for Excellence in Critical Thinking (1987), it is an intellectually disciplined process of conceptualizing, applying, analyzing, synthesizing, and/or evaluating information gathered from or resulting from observation, experience, reasoning, inference, or communication, as evidence for belief and action.
2. Creativity: Richard Howe defines creative thinking as being a way of turning someone into a problem solver and giving that individual a “toolbox” for dealing with problems. Creativity is a person’s ability to create something that appropriately qualified people would consider original and valuable (Wyse, 2018).
3. Collaboration: Lai (2011) define it as shared involvement of participants in a harmonized effort to find a solution for a problem.
4. Communication: It is a requirement for any organization to maintain profitability. It is crucial for students to learn how to effectively transfer ideas between the different types of personality. This has the potential to eliminate confusion in the workplace, making students valuable parts of their teams, departments, and companies (Griffin & Care, 2015).

5. Information literacy: The Association of Colleges and Research Libraries (ACRL, 2015) defines information literacy as “a set of integrated capabilities that include the reflexive discovery of information, understanding how information is produced and evaluated, using the information to create new knowledge and ethically participating in learning societies.”
6. Media literacy: Yanarates (2020) defines media literacy as the set of perspectives through which we expose ourselves to the media and explain the meaning of the messages we come across.
7. Technology literacy: Technology literacy corresponds to digital literacy in that when an individual is proficient in using computers and/or other digital devices to access the Internet. Technology literacy allows one to use the Internet to discover, review, evaluate, create, and use information across various digital platforms (Siegle, 2004).
8. Flexibility: Cognitive flexibility is a higher-order thinking skill and an aspect of executive functions. It is about immediate consideration of multiple points of view and the ability to make changes in one's thoughts or beliefs (Barak & Levenberg, 2016).
9. Leadership: Leadership is a multidimensional and integrated vision of leadership based on relationships. Through joint goals and expectations, leadership offers new ways of being, knowing, and acting, while respecting the developmental nature of human life (Rost, 1991).
10. Initiative: People should learn initiative, that is self-starting, in order to fully succeed since it comes naturally to very few people. Initiative, which is one of the most difficult skills to learn, means that the learner must work on projects outside the working hours (Bialik & Fadel, 2015).
11. Productivity: Productivity is the ability to create a product using these skills: setting and achieving goals, prioritizing needs, managing time, working ethically, and collaborating with colleagues and customers. It is called efficiency as relative to business, which means getting more done in less time (Kivunja, 2014)
12. Social skills: The Indeed Editorial Team (2020) considers that social skills are used to communicate with others on a daily basis in a variety of ways including verbal and nonverbal, written and visual. Social skills are also referred to as interpersonal relationships. Social skills are essential for building personal and professional relationships.

These skills are intended to help learners keep up with today's modern markets. Each skill is unique in how it helps learners, but they can jointly help the new generation grow as they are basic in the age of the Internet. The researchers are studying the impact of online learning of Economics on acquiring essential skills that comply with the 21st-Century skills in light of the COVID-19 pandemic, which are classified into 3 groups: learning, literacy, and life skills.

2.5. Research Problem and Hypotheses

Recently, the trend of education is toward achieving essential skills that comply with 21st-Century skills. In the past two years, the globe has been experiencing the outbreak of a serious pandemic (COVID-19), which forced schools to close and turn to online education. The main issue that this study tackles is whether or not online learners of economics are acquiring 21st-Century skills. This being the case, the researchers have the following questions in mind:

The first main question: Do economics teachers acquire the essential skills through online education?

The second main question: Are online learners of economics acquiring 21st-Century skills?

From the above question, the following sub-questions arise:

- Are online learners of economics acquiring learning skills?
- Are online learners of economics acquiring literacy skills?
- Are online learners of economics acquiring life skills?

The third main question: Are there any hindrances to applying online learning at schools?

Based on the above questions, the researchers have the following hypotheses:

H₁: Economics teachers acquire the essential skills through online education.

H₂: Online learners of economics are not acquiring 21st-Century skills.

From the hypothesis H₂, the following 3 sub-hypotheses arise:

H_{2,1}: Online learners of economics are not acquiring learning skills.

H_{2,2}: Online learners of economics are not acquiring literacy skills.

H_{2,3}: Online learners of economics are not acquiring life skills.

H₃: There are hindrances to applying online learning at schools.

3. Research Methods

The researchers adopted the descriptive-analytical approach, utilizing an empirical study. The researchers constructed a five-point Likert style questionnaire of 29 items to be distributed to a population of teachers working at private and public schools in Lebanon. A large sample of teachers was selected using convenient methods. The researchers use multivariate data analysis to come up with results based on which, some recommendations can be set forth to develop online in the educational process in light of the Coronavirus outbreak.

3.1 Population and Sample Selection

The population of the research consists of all economics teachers of secondary schools in Lebanon. The researchers chose a sample of 153 economics teachers from the population and distributed the questionnaire among them, all of which responded and were valid for testing and analysis. The demographic data of the sample is shown below:

Table 1. The Sample's Distribution according to Demographic Data

Variable	Category	Frequency	Percentage
Education	Bachelor	54	35.3
	Masters	89	58.2
	Ph.D.	10	6.5
Total		153	100.0
Years of experience	0-5 years	9	5.9
	5-10 years	20	13.1
	More than 10 years	124	81.0
Total		153	100.0

It is evident from Table (1) that 35.3% of the sample have bachelor's degrees, 58.2% have master's degrees and 6.5% have Ph.Ds. It is also evident that the majority of the sample (81%) have more than 10 years of experience in teaching economics, which means that the majority of the sample have professional and reliable responses for the items of the questionnaire about the subject matter of the study at hand.

3.2 Instrumentation

Based on the previous studies, in addition to the researchers' personal experience, the researchers constructed a five-point Likert Style questionnaire with 29 items. The scale of the five-point Likert style is as follows in Table (2):

Table 2. The Scale of the five-point Likert style

Answer	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
Degree	5	4	3	2	1

4.3 Validity and Reliability

Findings of the current study show that Cronbach's Alpha for all the items of the questionnaire is as shown in the table below:

Table 3. Cronbach's Alpha Coefficient

Reliability Statistics	
Cronbach's Alpha	N of Items
0.757	29

Table (3) shows that Cronbach's alpha is $0.757 > 0.7$, which indicates that items of the questionnaire are reliable.

4. Result and Discussion

4.1.Data Analysis

Since the quintet Likert Scale was used in designing the tool of the study, the research adopts the standard illustrated in Table (4) which follows to judge the inclination of each item when using the quintet Likert Scale depending mainly on the mean value and relative weight to determine the extent of consent to the items and domains of the questionnaire.

Table 4. Scale Used in the Study according to the Mean and Relative Weight

	Approval Level				
	Very low	Low	Medium	High	Very high
Mean	< 1.8	1.8 - 2.59	2.6 - 3.39	3.4 - 4.19	> 4.2
Relative Weight	< 36%	36% - 51.9%	52% - 67.9%	68% - 83.9%	> 84

4.2.Testing and Discussing the Hypothesis

To test the hypothesis, the researchers calculated the mean, standard deviation, relative weight, and importance level of each item of the questionnaire relative to the study. Also, the

One-Sample t-Test was used to determine the relevance of the responses to the value (3) which reflects neutrality. The results are shown below:

Hypothesis 1: Economics teachers acquire the essential skills through online education.

Table 5. Statistical analysis of the first domain (Online Learning)

Items	Mean	S.D	Rel. Wt.	T-Test	P-value	Imp. Level
1. Online sessions can be managed and organized easily.	2.69	1.084	53.8%	-3.506	0.001	Medium
2. Delivering online sessions can save time.	2.73	1.070	54.6%	-3.098	0.002	Medium
3. Online education allows teachers enough time to answer and discuss learners' questions.	2.73	1.154	54.6%	-2.942	0.004	Medium
4. Online education helps teachers acquire new teaching strategies.	4.08	0.654	81.6%	20.390	0.000	High
5. Online education helps teachers use new teaching aids.	4.12	0.499	82.4%	27.692	0.000	High
6. Online education helps teachers use active learning techniques.	3.99	0.716	79.8%	17.044	0.000	High
7. Online education allows teachers to deliver sessions in attractive and interesting ways.	3.90	0.696	78%	16.041	0.000	High
Total	3.462	0.528	69.2%	10.814	0.000	

The above table shows the following:

1. The item which states "Online sessions can be managed and organized easily" has a relative weight of 53.8%, and the mean is 2.69, which is less than the neutral value of 3. Also, the value of the calculated "T" test is -3.506, which is less than the value of tabulated "T" at the significance 0.05. Consequently, online sessions can't be managed and organized easily".

The researchers believe that the result was as such since economics teachers may not be well-trained in managing and organizing an online class as teaching online came suddenly as a result of the coronavirus pandemic. Moreover, some students don't have enough responsibility to take the online sessions seriously, so they don't control their behavior. In addition, the unreliable electricity and Internet in Lebanon play a role in disrupting the sessions' progress.

2. The item which states "Delivering online sessions can save time" has a relative weight of 54.6%, and the mean is 2.73, which is less than the neutral value of 3. Also, the value of the calculated "T" test is -3.098, which is less than the value of tabulated "T" at the significance 0.05. Consequently, delivering online sessions can't save time".

The researchers believe that the result was as such since economics teachers would prepare their lessons using PowerPoint presentations or PDFs, and search for visual aids (pictures and/or videos) which takes a lot of the teachers' time. In addition, they would type their lessons and exercises for practice.

3. The item which states “online education allows teachers enough time to answer and discuss learners’ questions” has a relative weight of 54.6%, and the mean is 2.73, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -2.942, which is less than the value of tabulated “T” at the significance 0.05. Consequently, online education doesn’t allow teachers enough time to answer and discuss learners’ questions”.

The researchers believe that the result was as such since online sessions are relatively short since most of the programs used in Lebanese schools for online education give only 40 minutes for the session, 5 of which would be for students to join the session. That would leave teachers with 35 minutes per session, and given the bad connection and electric supply, more valuable minutes would be spent on repeating for late students, let alone those who couldn’t be online for one reason or another.

4. The item which states “online education helps teachers acquire new teaching strategies” has a relative weight of 81.6%, and the mean is 4.08, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 20.390, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, online education helps teachers acquire new teaching strategies”.

The researchers believe that the result came as such since teachers would like their students to benefit most from the online sessions, so they try their best to search for good strategies that would get their students to grasp the ideas in the session.

5. The item which states “online education helps teachers use new teaching aids” has a relative weight of 82.4%, and the mean is 4.12, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 27.692, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education helps teachers acquire new teaching strategies”.

The researchers believe that having to work on their computers, teachers have a lot of resources they might need to make their session a success. Thus, they can find online useful things (such as photos, videos, lesson plans, etc.) posted by other teachers from all over the world related to the materials they teach. Also, they are able to see what other teachers use to make learners understand the explanation and acquire the objectives of the sessions.

6. The item which states “online education helps teachers use active learning techniques” has a relative weight of 79.8%, and the mean is 3.99, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 17.044, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education helps teachers use active learning techniques”.

The researchers think that teachers have more time to spend over the computers since they are preparing an online session, so they would find convenient active learning techniques for their sessions, such as picture prompt, choral response, instructor storytelling, pass the pointer, empty outlines, etc.

7. The item which states “online education allows teachers deliver sessions in attractive and interesting ways” has a relative weight of 78%, and the mean is 3.90, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 16.041, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase

of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education allows teachers deliver sessions in attractive and interesting ways”.

The researchers believe that teachers are using resources from the Internet (such as photos, videos, PowerPoint presentations, etc.) so that their sessions would attract the learners’ attention.

It is clear from the above table that the overall mean of the sample responses for the first domain (Teachers’ acquisition of skills) is 3.462 which is greater than the neutral value (3), indicating the sample agreement that economics teachers acquire the essential skills through online education. The standard deviation is 0.528 and the relative weight is 69.2%. Also, the value of the calculated T-Test is 10.814. The P-value for the hypothesis is equal to 0.000 which is less than the significance level 0.05; therefore, the first hypothesis which states “**economics teachers acquire the essential skills through online education**” is accepted.

Hypothesis 2: Online learners are not acquiring 21st-Century skills.

Hypothesis 2.1: Online learners are not acquiring the essential learning skills.

Table 6. Statistical analysis of the second domain (21st-Century Skills/Learning Skills)

Items	Mean	S.D	Rel. Wt.	T-Test	P-value	Imp. Level
1. Online education allows learners to acquire the skill of problem-solving.	3.83	0.864	76.6%	11.878	0.000	High
2. Online education allows learners to generate new ideas.	2.09	0.955	41.8%	-11.763	0.000	Low
3. Online education allows learners to acquire the skill of communicating with others and listening to them.	2.86	0.854	57.2%	-2.083	0.039	Medium
4. Online education allows learners to acquire the skill of working with others.	1.86	0.663	37.2%	-21.336	0.000	Low
Total	2.658	0.518	53.2%	-8.149	0.000	

1. The item which states “online education allows learners to acquire the skill of problem-solving” has a relative weight of 76.6%, and the mean is 3.83, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 11.878, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education allows learners to acquire the skill of problem-solving”.

The researchers think that students would want to search online for a solution for some problems they might face and hinder understanding their lessons.

2. The item which states “online education allows learners to generate new ideas” has a relative weight of 41.8%, and the mean is 2.09, which is less than the neutral value of 3.

Also, the value of the calculated “T” test is -11.763, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to generate new ideas”.

The researchers believe that some students would be dependent on others to answer the teachers’ questions that require getting new ideas related to the lesson being discussed. Also, due to the unreliable Internet connection and electricity, teachers might not have enough time to enrich the sessions with activities and/or strategies that can enhance students to generate new ideas. Rather, teachers might have the new, desired ideas ready for their students beforehand.

3. The item which states “online education allows learners to acquire the skill of communicating with others and listening to them” has a relative weight of 57.2%, and the mean is 2.86, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -2.083, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to acquire the skill of communicating with others and listening to them”.

The researchers believe that this might be because students talk simultaneously because of the bad Internet connection or might not know that others are talking. In addition, this is directly consequential to class management.

4. The item which states “online education allows learners to acquire the skill of working with others” has a relative weight of 37.2%, and the mean is 1.86, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -21.336, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to acquire the skill of working with others”.

The researchers believe that during online sessions since students are separated (each one is at his/her home), this prevents them from working together during the session.

It is clear from the above table that the overall mean of the sample responses for the second domain (21st-Century Skills/Learning Skills) is 2.658 which is less than the neutral value (3), indicating the sample disagreement that online learners are acquiring the essential learning skills. The standard deviation is 0.518 and the relative weight is 53.2%. Also, the value of the calculated T-Test is -8.149.

The P-value for the hypothesis is equal to 0.000 which is less than the significance level 0.05; therefore, the sub-hypothesis that states “**online learners are not acquiring the essential learning skills**” is accepted.

Hypothesis 2.2: Online learners are not acquiring the essential literacy skills.

Table 7. Statistical analysis of the second domain (21st-Century Skills/Literacy Skills)

Items	Mean	S.D	Rel. Wt.	T-Test	P-value	Imp. Level
1. Online education encourages learners to master types of information (facts, figures, statistics, data).	1.86	0.663	37.2%	-21.336	0.000	Low
2. Online education allows learners to understand various forms of information with an ability to make sense of what is presented.	2.09	0.955	41.8%	-11.763	0.000	Low
3. Online education helps learners master	4.08	0.591	81.6%	22.578	0.000	High

using various forms of communication devices (computers, smartphones, tabs, etc.).

Total	2.675	0.474	53.5%	-8.464	0.000
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1. The item which states “online education encourages learners to master types of information (facts, figures, statistics, data)” has a relative weight of 37.2%, and the mean is 1.86, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -21.336, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not encourage learners to master types of information (facts, figures, statistics, data)”.

The researchers believe that students make mistakes frequently when it comes to numbers and statistics while they are in class at school, so it is inevitable for them to make mistakes about numbers and statistics when the session is online for the many reasons mentioned before. Also, learners would need to be guided through understanding figures and some facts step by step, which, according to the sample, is difficult.

2. The item which states “online education encourages learners to understand various forms of information with an ability to make sense of what is presented” has a relative weight of 41.8%, and the mean is 2.09, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -11.763, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not encourage learners to understand various forms of information with an ability to make sense of what is presented”.

Based on their experience, the researchers believe that a lot of students get confused when faced with new ideas and concepts, which they are unable to comprehend by themselves.

3. The item which states “online education helps learners master using various forms of communication devices (computers, smartphones, tabs, etc.)” has a relative weight of 81.6%, and the mean is 4.08, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 22.578, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education helps learners master using various forms of communication devices (computers, smartphones, tabs, etc.)”.

The researchers think that this is apparently true since students need one of these devices to work in online sessions so learners would acquire knowledge about the devices they are using.

It is clear from the above table that the overall mean of the sample responses for the second domain (21st-Century Skills/ Literacy Skills) is 2.675 which is less than the neutral value (3), indicating the sample disagreement that online learners are acquiring the essential literacy skills. The standard deviation is 0.474 and the relative weight is 53.5%. Also, the value of the calculated T-Test is -8.464.

The P-value for the hypothesis is equal to 0.000 which is less than the significance level 0.05; therefore, the sub-hypothesis that states “**online learners are not acquiring the essential literacy skills**” is accepted.

Hypothesis 2.3: Online learners are not acquiring the essential life skills.

Table 8. Statistical analysis of the second domain (21st-Century Skills/Life Skills)

Items	Mean	S.D	Rel. Wt.	T-Test	P-value	Imp. Level
1. Online education encourages learners to adapt to situations and become flexible, open-minded and self-confident.	3.73	0.954	74.6%	9.402	0.000	High
2. Online education helps learners become more influential and use others' strengths to achieve common goals.	2.15	0.916	43%	-11.473	0.000	Low
3. Online education promotes enhancing learners' potentials.	3.57	1.117	71.4%	6.299	0.000	High
4. Online education helps learners set their own goals.	1.96	0.595	39.2%	-21.613	0.000	Low
5. Online education allows learners to monitor the extent of their comprehensiveness and their education needs.	2.73	1.118	54.6%	-2.965	0.004	Medium
6. Online education allows learners to become self-accountable.	2.35	1.091	47%	-7.336	0.000	Low
7. Online education allows learners to make the best use of their time.	3.33	0.896	66.6%	4.602	0.000	Medium
8. Online education allows learners to accomplish their tasks on time.	2.05	0.764	41%	-15.453	0.000	Low
Total	2.733	0.458	54.6%	-7.185	0.000	

1. The item which states “online education encourages learners to adapt to situations and become flexible, open-minded and self-confident” has a relative weight of 74.6%, and the mean is 3.73, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 9.402, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education encourages learners to adapt to situations and become flexible, open-minded and self-confident”.

The researchers believe that having to learn online, students are working alone and find themselves compelled to be patient and listen to others and discuss with them to acquire the objectives of the lesson. Consequently, they become more flexible and open-minded.

2. The item which states “online education helps learners become more influential and use others' strengths to achieve common goals” has a relative weight of 43%, and the mean is 2.15, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -11.473, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not help learners become more influential and use others' strengths to achieve common goals”.
3. The item which states “online education promotes enhancing learners' potentials” has a relative weight of 71.4%, and the mean is 3.57, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 6.299, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical

significance to the neutral level in the average responses of the members of the sample; consequently, “online education promotes enhancing learners’ potentials”.

The researchers think that students learning online have to rely on themselves since they are on their own most of the time and have to work harder to acquire the objectives of the lessons they are attending. Thus, their potentials appear to become more evident.

4. The item which states “online education helps learners set their own goals” has a relative weight of 39.2%, and the mean is 1.96, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -21.613, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not help learners set their own goals”.

The researchers believe that only a few students, the good ones, would develop this skill as they are keen on their education. Others might not be so concerned about studying.

5. The item which states “online education allows learners to monitor the extent of their comprehensiveness and their education needs” has a relative weight of 54.6%, and the mean is 2.73, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -2.965, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to monitor the extent of their comprehensiveness and their education needs”.

The researchers believe that the results may have come as such since the learners do not have the books related to the material they are studying online; they take whatever material the teachers supply. As such learners would not be able to determine their educational needs.

6. The item which states “online education allows learners to become self-accountable” has a relative weight of 47%, and the mean is 2.35, which is less than the neutral value of 3. Also, the value of the calculated “T” test is -7.336, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to become self-accountable”.

The researchers believe that this may be because students would not feel guilty about missing their online sessions because of the unreliable Internet connection or power failure as they would be able to see a recording of the session.

7. The item which states “online education allows learners to make the best use of their time” has a relative weight of 66.6%, and the mean is 3.33, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 4.602, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “online education allows learners to make the best use of their time”.

The researchers think that it is logical that online learners must organize their time to do the required tasks and have some time for themselves to refresh.

8. The item which states “online education allows learners to accomplish their tasks on time” has a relative weight of 41%, and the mean is 2.05, which is less than the neutral value 3.

Also, the value of the calculated “T” test is -15.453, which is less than the value of tabulated “T” at the significance 0.05. Consequently, “online education does not allow learners to accomplish their tasks on time”.

The researchers believe that some students might have complaints about the load they have from online learning which would leave them behind on certain tasks. Also, some students may get too immersed in their free time that they would not have enough time to finish their required tasks in due time.

It is clear from the above table that the overall mean of the sample responses for the second domain (21st-Century Skills/ Life Skills) is 2.733 which is less than the neutral value (3), indicating the sample disagreement that online learners are acquiring the essential life skills. The standard deviation is 0.458 and the relative weight is 54.6%. Also, the value of the calculated T-Test is -7.185.

The P-value for the hypothesis is equal to 0.000 which is less than the significance level 0.05; therefore, the sub-hypothesis which states “**online learners are not acquiring the essential life skills**” is accepted.

Hypothesis 3: There are hindrances to applying online learning at schools.

Table 9. Statistical analysis of the third domain (Challenges that may hinder online learning)

Items	Mean	S.D	Rel. Wt.	T-Test	P-value	Imp. Level
1. The speed of the internet connection is inadequate and the session is constantly disrupted.	4.21	0.783	84.2%	19.089	0.000	Very High
2. The electricity is not reliable.	4.29	0.742	85.8%	21.563	0.000	Very High
3. Accessing the educational material is not easy.	3.95	0.872	79%	13.443	0.000	High
4. Sending and receiving educational material is not easy.	3.58	1.104	71.6%	6.442	0.000	High
5. Some learners do not have access to proper communication devices (computer, tab, smartphone).	3.76	1.076	75.2%	8.714	0.000	High
6. There are always some absent learners during online sessions.	4.29	0.511	85.8%	31.296	0.000	Very High
7. The available online learning evaluation methods (multiple choice, true or false, short answers, etc.) do not accurately measure learners' acquisition of skills and competences.	4.36	0.624	87.2%	26.938	0.000	Very High
Total	4.062	0.545	81.2%	24.075	0.000	

1. The item which states “the speed of the internet connection is inadequate and the session is constantly disrupted” has a relative weight of 84.2%, and the mean is 4.21, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 19.089, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “the speed of the internet connection is inadequate and the session is constantly disrupted”.

The researchers think that it is well-known that the Internet connection in Lebanon is slow; moreover, it became yet slower due to the current financial and economic crisis

Lebanon is facing since the ministry of communication is having difficulty in getting the necessary equipment to maintain this sector.

2. The item which states “the electricity is not reliable” has a relative weight of 85.8%, and the mean is 4.29, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 21.563, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “the electricity is not reliable”.

Before the current financial and economic crisis in Lebanon, there was a constant shortage of power (an average of 12 hours a day). Nowadays, it came down to only about 3-4 hours a day, and one can never know when it would be on or when it would go off.

3. The item which states “accessing the educational material is not easy” has a relative weight of 79%, and the mean is 3.95, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 13.443, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “accessing the educational material is not easy”.

Based on their experience, the researchers believe that the Lebanese curriculum is very old (it was last updated twenty-one years ago) and isn’t compatible with online education.

4. The item which states “sending and receiving educational material is not easy” has a relative weight of 71.6%, and the mean is 3.58, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 6.442, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “sending and receiving educational material is not easy”.

The researchers think that due to the power shortage and the slow Internet connection in Lebanon, it takes a lot of time to send or receive educational material since it includes videos, pictures, PowerPoint presentations, etc.

5. The item which states “some learners do not have access to proper communication devices (computer, tab, smartphone)” has a relative weight of 75.2%, and the mean is 3.76, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 8.714, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “some learners do not have access to proper communication devices (computer, tab, smartphone)”.

The researchers believe that due to the current financial and economic crisis in Lebanon, some students do not have a device to log in to their online sessions, and others share the device with a sibling or more (each would log in every other day).

6. The item which states “there are always some absent learners during online sessions” has a relative weight of 84.2%, and the mean is 4.21, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 19.089, which is greater than the value of

tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “there are always some absent learners during online sessions”.

The researchers believe that due to the aforementioned problems of electricity shortage, slow Internet connection, and lack of communication devices, there are always some absent learners during online sessions.

7. The item which states “the available online learning evaluation methods (multiple choice, true or false, short answers, etc.) do not accurately measure learners’ acquisition of skills and competences” has a relative weight of 87.2%, and the mean is 4.36, which is greater than the neutral value of 3. Also, the value of the calculated “T” test is 26.938, which is greater than the value of tabulated “T” at the significance 0.05. This means that there is an increase of statistical significance to the neutral level in the average responses of the members of the sample; consequently, “the available online learning evaluation methods (multiple choice, true or false, short answers, etc.) do not accurately measure learners’ acquisition of skills and competences”.

The researchers think that since the Lebanese curriculum is old, the traditional method of evaluation is still used. Multiple choice, true or false, short answers, etc. need a new approach in updating the eroding Lebanese curriculum. Although many schools are now using concepts and techniques and document analysis approaches, these do not reflect the actual students’ evaluation due to the power shortage and/or slow Internet connection since learners might take advantage of the situation and cheat with other learners.

It is clear from the above table that the overall mean of the sample responses for the third domain (Challenges that may hinder online learning) is 4.062 which is greater than the neutral value (3), indicating the sample agreement that there are hindrances to applying online learning at schools. The standard deviation is 0.545 and the relative weight is 81.2%. Also, the value of the calculated T-Test is 24.075.

The P-value for the hypothesis is equal to 0.000 which is less than the significance level 0.05; therefore, the sub-hypothesis that states “**there are hindrances to applying online learning at schools**” is accepted.

5. Conclusions

The study showed that teachers have acquired new skills through online education such as new teaching strategies and active learning techniques that help them deliver sessions in attractive and interesting ways, which disagrees with Lebanon Education Sector (2021) in that teachers at all educational levels are traditional. The study also rendered important findings about the impact of online learning of Economics on acquiring essential skills that comply with the 21st-Century skills in light of the COVID-19 pandemic from the Economics teachers’ point of view. The results showed that online learners are not acquiring the essential learning skills that comply with the 21st-Century skills except for problem-solving skill. They also showed that online learners are not acquiring the essential literacy skills that comply with the 21st-Century skills except for the skills of using various forms of communication devices (computers, smartphones, tabs, etc.). In addition, the results showed that online learners are not acquiring the essential life skills that comply with the 21st-Century skills except for very few of them. Moreover, the results showed that there are hindrances to applying online learning at schools in Lebanon. These include the low speed of the internet connection which disrupts the online sessions and makes sending or receiving educational material difficult,

which agrees with Abourjeili & Harb (2020) and International Telecommunication Union (2015). Another type of hindrance is that the electricity is not reliable. Because of the power failure, there are always some absent learners during online sessions and when electricity is off, so is the internet connection. In addition, some learners do not have access to proper communication devices (computer, tab, smartphone), which agrees with both Hetsevlch (2017) and the UNICIF (2021). The final and important hindrance according to the Economics teachers is that the available online learning evaluation methods do not accurately measure learners' acquisition of skills and competences, which agrees with Xiao and Li (2020).

Based on the above results, the researchers have some recommendations. There is no doubt that the Lebanese national curriculum is old and not suitable for online education since it was last updated in the year 2000. To apply an online approach, the eroding curriculum should be modified for online use. Thus, it would currently be better to adopt blended learning without having to totally rely on e-learning taking the health and economic conditions into consideration. Moreover, parallel with blended learning, the CRDP should conduct continuous training sessions and supply electronic resources for teachers to be able to prepare, manage and lead successful and fruitful online sessions. In addition, the Ministry of Education and Higher Education should also supply teachers with guidance and see that their needs are fulfilled so that their only focus would be the learners. Needless to say, if the government did not take actual measures to improve the electric supply and the Internet connection, the online education as a whole would not be efficient. Future suggested research may include assessing the impact of online education on undergraduate students' acquiring essential skills for their life and careers. In addition, further research may be conducted to compare the impact of online education on acquiring skills between students of the public sector and students of the private sector.

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