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Dergi Yazışma Adresi / Correspondence Address

BC Grup A.Ş.
Mustafa Kemal Mah. 2134.Sok.
Dereli Apt. No: 15 / 2
Çankaya / ANKARA

Tel: +90 (312) 235 15 44
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Walking tourism management based on tourists' needs for indoor and outdoor activities in the function of sustainable local economic development

Danka Milojkovic
Ph.D. Economics, University of Singidunum, Belgrade, Republic of Serbia
ORCID ID:0000-0002-4434-9576
Email: dmilojkovic@singidunum.ac.rs

Milena Nikolic
Ph.D. Economics, University of Singidunum, Belgrade, Republic of Serbia
ORCID ID:0000-0002-8665-0738
Email: milena.nikolic@singidunum.ac.rs

Hristina Milojkovic
Student, University of Singidunum, Belgrade, Republic of Serbia
ORCID ID: 0000-0003-4150-3301
Email: hristina.milojkovic.21@singimail.rs

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Abstract

Since the medical system is poorly prepared to use walking as a therapy for keeping mental well-being and taking into consideration people's needs for activities, the advantages of nature and active holidays on the mountain, rural and non-polluted urban areas are a basis for the development of strategies of the walking tourism management. The purpose of the research is to observe the possibility of managing walking tourism based on the needs of tourists for daily indoor and outdoor activities to achieve sustainable local economic development in the area of the tourist destination. The research was conducted using a descriptive method by the questionnaire-based survey. Results indicated that the management of walking tourism should take into account the differences that exist concerning indoor and outdoor activities between tourists of gender, age, marital status, number of children, education, work status, and annual personal investment for tourist travel and vacation. In the last decade, an increase in the number of walking strategies in the cities of highly developed countries has been identified, as well as the incorporation of this strategy into development policies and plans. For efficient and effective management of walking tourism, authors recommend embedding walking tourism in the sustainable local economic development strategy that will contribute to the creation of enabling business environment for the development of all types of tourism destinations through the "demand-driven" tourism offer based on sustainable using natural resources, local infrastructure, and building the capacities of the workforce.

1. Introduction

The global covid pandemic is an excellent indicator that it is necessary to approach the management and development of walking tourism strategically. Walking contributes to the overall well-being of people but also to sustainable local economic development. The purpose of this paper is to analyse the needs of tourists for indoor and outdoor activities from the aspect of demographic and socio-economic characteristics, to point out the possibilities of managing walking tourism and the need for walking tourism to be part of the development policies and plans of the tourist destination.

The strategy for sustainable local economic development with integrated walking tourism contributes to the creation of a more suitable business environment for the development of local tourism and more services suitable for the use of natural resources and local infrastructure, as well as the creation of a qualified workforce. Cultural and historical heritage integrated with walking tourism represents the potential for economic development, while the promotion of these values represents the development trend of the tourism sector.

The research paper consists of five chapters including the introduction and conclusion. The literature review and development hypothesis, research methodology, and findings and discussion are presented in the second, third, and fourth chapters respectively.

2. Literature Review and Development Hypothesis

Walking has many healths, social, and psychological benefits, as well as building a stronger community based on social scientists' findings that indicate the trend of decreasing the crime rate and improving the local economy by increasing the number of people on the streets, and helping relieves everyday stresses (A Harvard medical school. Special health report, 2023). Also, walking, as a low-carbon-footprint activity, has a sustainable benefit (Molgo & Etfi, 2021). "Especially in the post-COVID crisis period, when a medical system is poorly prepared to use movement as an act which helps with mental wellbeing" (Milojković, et al., 2021, p. 30), the benefits of walking become even more important.

Walking in tourism, as a low-cost form of tourism (UNWTO, 2018), is one of the ways to visit a destination and walking is always integrated with other activities such as recreation, natural and cultural activities, as well as wellness or gastronomy (Molgo & Etfi, 2021). The average benefit-cost ratio for walking and cycling projects is 13:1 showing on a benefit of 13 pounds is realized for one pound of investment (Essex Country Council, 2021). Low-cost tourism is connected with sustainable development (Włodarczyk & Cudny, 2022). In designing walkable places destination managers should take into consideration both destination as a whole and each attraction (Hall & Ram, 2019). Londoño and Medina (2018, p. 688) noted that "the walking routes play a growing role in the marketing, image, and visibility of the destinations". "Walking tourists are substantially different from those groups who are walking for leisure" (Kim & Hall, 2021, p. 5). Due to user experience in online social media and timely and correct tourism data stored in online crowdsource social media, tourists will be able to visit unfamiliar destinations without a lack of previous knowledge (Mor & Dalyot, 2020). Sharipov and Günseli Demirkol (2018) observed walkability as a local authorities' managerial tool for improving the quality of public spaces. As per Ram and Hall (2018, p. 283) "relationship between tourism and walkability also be given recognition in the research literature and in tourism, transport and urban policy-making". To meet the needs of tourists, walking tourism management is useful to make differences between 'casual' and 'serious' walkers, as well as to take into consideration confidence as a partially intangible concept manifests in walkers and walking behaviour, and have a significant influence on the differentiation of individuals and the walks they choose (Davies, 2013). "The tourism product is developed, funded, managed and marketed by both private and public sector entities such as government ministries, tourism authorities, hotels and Destination Marketing Organizations (hereinafter DMOs), all having their own ways of dealing with the product, own limitations and resource-based challenges" (Arikan & Ünsever, 2014, p. 1). The role of a DMO is to realize management processes in a tourist destination which enable destination stakeholders to build tourist experiences and to handle the positive and negative impacts (Reinhold & Beritelli, 2022). DMOs support tourists as well and can be responsible for the geographic area from the local to the national level (Reinhold & Beritelli, 2022). As per Tasci and Ko (2015) novelty, arousal, and escape were the most common need for travel, while social affiliation and self-actualization were at the low level of need for travel. Dodds & Holmes (2022) noted that demographics and travel characteristics contribute to the prediction of sustainable travel behaviour but daily behaviour is still the key criterion of sustainable travel for both business and leisure domestically or abroad. Besides the basic prerequisites for walking such as security, shade, and connectivity, communal and personal needs are important for tourists walking (Ram & Hall, 2018). Since populations such as the less healthy and the unemployed or retired are more affected by environmental characteristics, the promotion of overall physical activity is an important area of inquiry and policy (Forsyth, et al., 2009). The rapid industrial and economic development in many emerging industrialized countries impacted the limited outdoor activity of children from urban areas affecting their interactions with the natural environment and overall physical inactivity as the fourth leading risk factor for global mortality (Fang, et al., 2017). The research of Hanna, et al. (2019, p. 1) stated that “outdoor adventure activities as a form of sustainable tourism have potential implications for our understanding of, and engagement with, sustainability, mental health and wellbeing”. Indoor activities "have been out of view of many measurement techniques” (Quercia, et al., 2018, p. 17). “People in well-to-do communities did allocate their time in a more diverse way” (Quercia, et al., 2018, p. 17). Sustainable economic development is a process of collaboration between academia, the public, and the private sector, supported by financial organizations and media “in their joint effort to create better conditions for economic development and increase employment” (Milojković, 2016, p. 5). “The educational system has a fundamental role in sustainable development and building a society based on knowledge” (Cimpoiesa & Resitcab, 2022, p. 1). Due to the facts that “the policy of the green economy has become increasingly influential in government policy and decision making over the past few years” (Aytekina & Kayab, 2022, p. 95), and “walking tourism often strengthens local communities and is widely regarded as a sustainable activity with low impact on the environment” (Molgo & Etfi, 2021, 1. Product description), the strategical approach to walking tourism development is preferred solution as in a case of the Country Waterford in Ireland and its walking strategy initiated to protect the wonderful array of landscapes from proximity to several large urban centres and significant points of tourist access to the region and to the state (Waterford County Council, 2005/2006). While the walking strategy for Winchester is focused on walking as „the most normal form of transport for short journeys in the town“ developed by the public sector and “local organisations interested in residents’ quality of life, the environment, economic vitality, and the attractiveness of the city” (Walking Strategy for Winchester, 2014, p. 3), the Essex waking strategy looks at walking as an easy, safe and normal part of everyday life developed to “inform and influence many other plans, policies and strategies” (Essex Country Council, 2021, p. 7).

To determine the processes of walking tourism management in the function of sustainable local economic development, a basic hypothesis was that direct the processes of walking tourism management to the most frequent tourists’ activities related to reading, computers, and restaurants (H1). The following working hypotheses were set: sport as a daily life activity is more important for males than for females (H2); there are differences in most daily life activities of tourists according to age, marital status, number of children, education, work status, and annual personal investment for tourist travel and vacation (H3); nature lovers and supporters of a healthy and active life are meaningful for the walking tourism management (H4); the urban walking tour is most popular among walking tours (H5); association or commercial company is the most common way of organizing a walking tour (H6); tourists prefer shorter walks in the countryside or mountain a few times a year (H7).

3. Research Methodology

For data collection, the authors developed the questionnaire with closed-ended multiple-choice questions based on the case of the ‘Va’ Sentiero’ project (Simeoni & De Crescenzo, 2019). The questionnaire was distributed to the general public using academic and social networks. The 467 questionnaires were collected from March 20th to May 2nd, 2022, and used for the research. The data were processed by SPSS software (version 16). The Mann-Whitney test and the Kruskal-Wallis H test were used for the precise indication of statistically significant differences according to demographic and socioeconomic variables.

4. Findings and Discussion

The sample consisted of 467 respondents, 310 (66.4%) were females and 157 (33.6%) were males the following age structures: ≤25 years – 82 (17.6%), 26-35 years – 54 (11.6%), 36-45 years – 119 (25.5%), 46-55 years – 128 (27.4%) and ≥56 years – 84 (18.0%). Respondents had the following marital status: single – 125 (26.8%), cohabitation – 61 (13.1%), married – 238 (51.0%), divorced – 29 (6.2%), and widow/widower – 14 (3.0%). The majority of respondents 182 (39.0%) were childless followed by respondents 142 (30.4%) with two children, 100 (21.4%) one child, 41 (8.8%) three children, and 2 (0.4%) four and more children. According to education, respondents 310 (66.4%) with university education dominated followed by respondents 92 (19.7%) with secondary education, 60 (12.8%) with college, and 5 (1.0%) with primary and non-formal education. Based on work status, numerous respondents 280 (69.9%) were employed, 101 (21.6%) unemployed, 30 (6.4%) retired, and 10 (2.1%) other. Respondents 180 (38.5%) were ready to annually invest in tourist trips and vacations less than 500 euros, 159 (34.0%) from 500 to 1,000 euros, and 128 (27.4%) more than 1,000 euros.

The research results of indoor and outdoor activities of respondents in their daily life are shown in Figure 1.

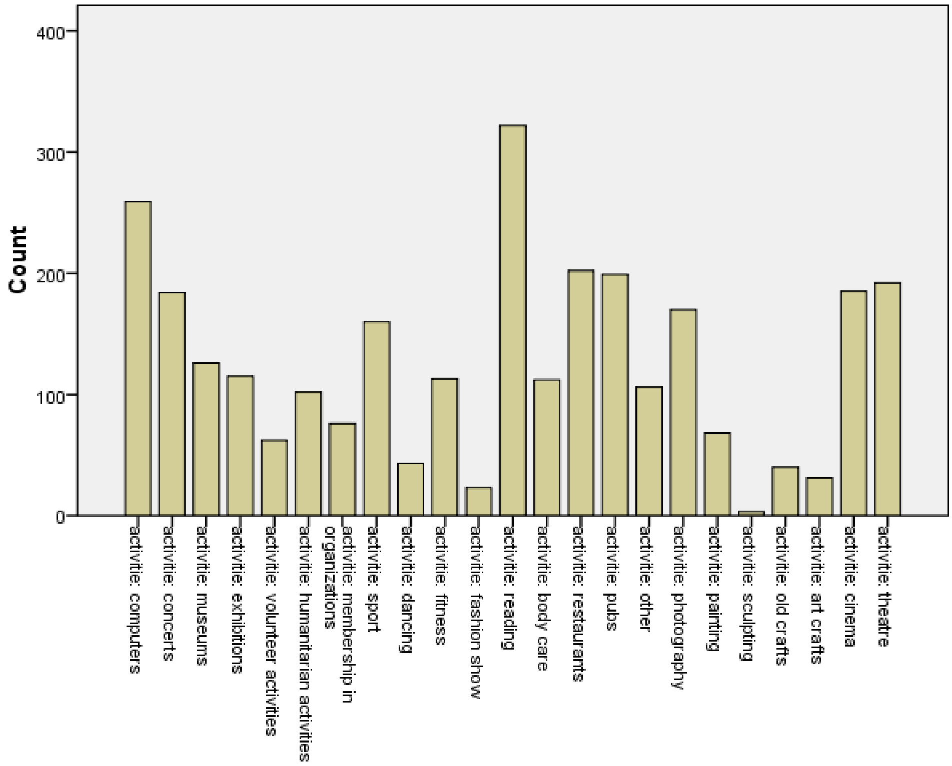

Figure 1. The most common activities of respondents in their daily life

Source: Authors' calculations

The most frequent activity was **"**reading" (A12) supported by 322 (69.0%) respondents followed by activities: "computers" (A1) and "restaurants" (A14) supported by 259 (55.5%) and 202 (43.3%) respondents respectively. In addition, the following activities were chosen by the respondents: "pubs" (A15) 199 (42.6%), "theatre" (A23) 192 (41.4%), "cinema" (A22) 185 (39.6%), "concerts" (A2) 184 (39.4%), "photography" (A17) 170 (36.4%), "sport (A8) 160 (34.3%), "museums" (A3) 126 (27.0%), "exhibitions" (A4) 115 (24.6%), "fitness" (A10) 113 (24.2%), "body care" (A13) 112 (24%), "other" (A16) 106 (22.7%), "humanitarian activities" (A6) 102 (21.8%), "membership in organizations" (A7) 76 (16.3%), "painting" (A18) 68 (14.6%), "volunteer activities" (A5) 62 (13.3%), "dancing" (A9) 43 (9.2%), "old crafts" (A20) 40 (8.6%), "art crafts" (A21) 31 (6.6%), "fashion show" (A11) 23 (4.9%), and "sculpting" (A19) 3 (0.6%) respondents. The results of descriptive statistics confirmed hypothesis H1 that the processes of walking tourism management should be directed at the most frequent tourists' activities such as reading, computers, and restaurants.

The research determined whether there are differences in the daily life activities between women and men when it comes to the processes of walking tourism management and its direction based on tourists' indoor and outdoor activities (Table 1).

Table 1. The results of the Mann-Whitney test statistics by gender

	A1	A12	A17	A18	A19	A20
Mann-Whitney U	20849,500	19606,000	22898,500	23433,500	24333,000	23296,500
Wilcoxon W	69054,500	32009,000	35301,500	35836,500	36736,000	35699,500
Z	-2,939	-4,283	-1,251	-1,071	-,010	-1,555
Asymp. Sig.	,003	,000	,211	,284	,992	,120
	A21	**A22**	**A23**	**A2**	**A3**	**A4**
Mann-Whitney U	24003,000	22421,500	20938,000	19931,500	21449,000	23013,000
Wilcoxon W	36406,000	34824,500	33341,000	32334,500	33852,000	35416,000
Z	-,559	-1,639	-2,893	-3,776	-2,725	-1,286
Asymp. Sig.	,576	,101	,004	,000	,006	,198
	A5	**A6**	**A7**	**A8**	**A9**	
Mann-Whitney U	23437,500	22165,500	23062,500	15413,000	23761,500	
Wilcoxon W	35840,500	34568,500	71267,500	63618,000	36164,500	
Z	-1,108	-2,200	-1,445	-7,878	-,831	
Asymp. Sig.	,268	,028	,149	,000	,406	
	A10	**A11**	**A13**	**A14**	**A15**	**A16**
Mann-Whitney U	22936,500	24272,500	18345,000	22679,500	24078,500	23316,000
Wilcoxon W	35339,500	72477,500	30748,000	70884,500	72283,500	71521,000
Z	-1,368	-,121	-5,879	-1,400	-,217	-1,019
Asymp. Sig.	,171	,904	,000	,161	,828	,308

Source: Authors’ calculations

Results of the Mann-Whitney U test and Cohen's criteria for interpreting differences (Cohen, 1988) indicated small statistically significant differences for the following activities: A1 between males (Md=1, n=157) and females (Md=1, n=310), U=20849,500, z = -2,939, p = 0,003, r = 0,136; A12 between males (Md=1, n=157) and females (Md=1, n=310), U=19606,000, z = -4,283, p = 0,000 r = 0,198; A23 between males (Md=0, n=157) and females (Md=0, n=310), U=20938,000, z = -2,896, p = 0,004 r = 0,134; A2 between males (Md=0, n=157) and females (Md=0, n=310), U=20938,000, z = -2,896, p = 0,004 r = 0,134; and A13 between males (Md=0, n=157) and females (Md=0, n=310), U=18345,000, z = -5,879, p = 0,000 r = 0.272, and the medium significant difference regarding the activity: A8 between males (Md=1, n=157) and females (Md=0, n=310), U=15413,000, z = -7,878, p = 0,000 r = 0.365.

The results of the non-parametric technique Mann-Whitney U test indicated existing small statistically significant differences in the daily life activities between male and female populations regarding the activities related to computers, reading, theatre, concerts, and body care that influence the direction of walking tourism management, and the medium significant difference related to sport confirming the hypothesis H2. The mentioned activities are more important for males than for females. Based on these results, in the process of walking tourism management, it is necessary to pay attention to the differences that exist between the female and male populations and create strategies according to the needs of the user groups. Activities of the management of walking tourism should be designed to satisfy the needs of people who are interested in reading, computers, and restaurants, as well as the sports-oriented male population.

The research activities showed the existence of significant differences in daily life activities by the grouping variables: age, marital status, number of children, education, work status, and annual personal investment for tourist travel and vacation (Table 2).

Table 2. Kruskal – Wallis test results

Daily life activities by the grouping variable: age

	A1	A12	A17	A18	A19	A20	A21	A22	A23	A2	A3	A4
Chi-Square	5,778	23,854	1,188	15,394	4,768	4,874	,970	18,579	15,856	4,767	16,209	15,348
df	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	,216	,000	,880	,004	,312	,300	,914	,001	,003	,312	,003	,004
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	4,150	13,583	19,427	18,759	14,143	31,056	9,623	13,691	6,746	32,650	6,164	
df	4	4	4	4	4	4	4	4	4	4	4	
Asymp. Sig.	,386	,009	,001	,001	,007	,000	,047	,008	,150	,000	,187	

Daily life activities by the grouping variable: marital status

	A1	A12	A17	A18	A19	A20	A21	A22	A23	A2	A3	A4
Chi-Square	6,592	20,504	6,633	7,060	2,899	7,053	3,667	6,169	4,561	3,726	2,547	3,195
df	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	,159	,000	,157	,133	,575	,133	,453	,187	,335	,444	,636	,526
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	3,287	3,387	20,113	14,855	3,767	21,887	11,380	5,030	9,807	10,270	1,673	
df	4	4	4	4	4	4	4	4	4	4	4	
Asymp. Sig.	,511	,495	,000	,005	,438	,000	,023	,284	,044	,036	,796	

Daily life activities by the grouping variable: number of children

	A1	A12	A17	A18	A19	A20	A21	A22	A23	A2	A3	A4
Chi-Square	2,632	12,962	6,357	5,329	2,760	9,119	,524	5,552	4,483	9,899	2,953	4,069
df	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	,621	,011	,174	,255	,599	,058	,971	,235	,345	,042	,566	,397
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	7,410	10,903	13,898	13,506	7,914	17,528	7,875	3,494	,736	13,159	1,832	
df	4	4	4	4	4	4	4	4	4	4	4	
Asymp. Sig.	,116	,028	,008	,009	,095	,002	,096	,479	,947	,011	,767	

Daily life activities by the grouping variable: education

	A1	A12	A17	A18	A19	A20	A21	A22	A23	A2	A3	A4
Chi-Square	6,407	23,416	10,384	1,375	1,526	5,522	1,931	4,689	14,096	5,356	22,193	15,122
df	4	4	4	4	4	4	4	4	4	4	4	4
Asymp. Sig.	,171	,000	,034	,849	,822	,238	,748	,321	,007	,253	,000	,004
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	,998	,898	14,075	4,550	1,810	2,164	9,378	2,351	9,297	6,636	3,619	
df	4	4	4	4	4	4	4	4	4	4	4	
Asymp. Sig.	,910	,925	,007	,337	,771	,706	,052	,672	,054	,156	,460	

Daily life activities by the grouping variable: work status

	A1	A12	A17	A18	A19	A20	A21	A22	A23	A2	A3	A4
Chi-Square	4,950	17,535	1,788	5,246	16,578	36,117	18,205	11,818	18,286	5,511	13,291	12,546

df	5	5	5	5	5	5	5	5	5	5	5	5
Asymp. Sig.	,422	,004	,878	,387	,005	,000	,003	,037	,003	,357	,021	,028
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	12,657	4,163	20,494	9,488	8,229	13,346	10,905	6,503	11,041	20,837	5,233	
df	5	5	5	5	5	5	5	5	5	5	5	
Asymp. Sig.	,027	,526	,001	,091	,144	,020	,053	,260	,051	,001	,388	

Daily life activities by the grouping variable: annual personal investment for tourist travel and vacation

	A1	**A12**	**A17**	**A18**	**A19**	**A20**	**A21**	**A22**	**A23**	**A2**	**A3**	**A4**
Chi-Square	7,060	9,723	,125	4,291	1,789	1,502	2,779	6,442	23,545	10,412	22,835	6,673
df	2	2	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	,029	,008	,939	,117	,409	,472	,249	,040	,000	,005	,000	,036
	A5	**A6**	**A7**	**A8**	**A9**	**A10**	**A11**	**A13**	**A14**	**A15**	**A16**	
Chi-Square	1,139	,750	10,065	4,935	,036	,322	3,135	2,383	27,848	8,956	,237	
df	2	2	2	2	2	2	2	2	2	2	2	
Asymp. Sig.	,566	,687	,007	,085	,982	,851	,209	,304	,000	,011	,888	

Source: Authors' calculations

Using the Kruskal-Wallis H Test, there were statistically significant differences regarding the following activities:

- A12 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=23.854, p=0.000, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the ≥56 *age group*, and at the lowest level in the ≤25 *age group*.
- A18 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=15.394, p=0.004, Md=0; regarding the mean values of group ranks, A18 was at the highest level in the 26-35 *age group*, and at the lowest level in the 36-45 *age group*.
- A22 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=18.579, p=0.001, Md=0; regarding the mean values of group ranks, A22 was at the highest level in the 26-35 *age group*, and at the lowest level in the ≥56 *age group*.

- A23 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=15.856, p=0.003, Md=0; regarding the mean values of group ranks, A23 was at the highest level in the 36-45 *age group*, and at the lowest level in the ≤25 *age group*.
- A3 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=16.209, p=0.003, Md=0; regarding the mean values of group ranks, A3 was at the highest level in the ≥56 *age group*, and at the lowest level in the ≤25 *age group*.
- A4 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=15.348, p=0.004, Md=0; regarding the mean values of group ranks, A4 was at the highest level in the ≥56 *age group*, and at the lowest level in the ≤25 *age group*.
- A7 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=19.427, p=0.001, Md=0; regarding the mean values of group ranks, A7 was at the highest level in the ≥56 *age group*, and at the lowest level in the ≤25 *age group*.
- A8 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=18.759, p=0.001, Md=0; regarding the mean values of group ranks, A8 was at the highest level in the ≤25 *age group*, and at the lowest level in the ≥56 *age group*.
- A9 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=14.143, p=0.007, Md=0; regarding the mean values of group ranks, A9 was at the highest level in the ≤25 *age group*, and at the lowest level in the ≥56 *age group*.
- A10 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=31.056, p=0.000, Md=0; regarding the mean values of group ranks, A10 was at the highest level in the 26-35 *age group*, and at the lowest level in the ≥56 *age group*.
- A11 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=9.623, p=0.047, Md=0; regarding the mean values of group ranks, A11 was at the highest level in the ≤25 *age group*, and at the lowest level in the 26-35 *age group*.
- A13 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=13.691, p=0.008, Md=0; regarding the mean values of group ranks, A13 was at the highest level in the ≤25 *age group*, and at the lowest level in the 26-35 *age group*.
- A15 between the *age groups* (≤25, n=82, 26-35 n=54, 36-45 n=119, 46-55 n=128, ≥56 n=84), c^2 (4, n=467)=32.650, p=0.000, Md=0; regarding the mean values of group ranks, A15 was at the highest level in the 26-35 *age group*, and at the lowest level in the ≥56 *age group*.

The in-depth analysis indicated that the youngest age group (up to 25 years) most prefer the following daily activities: sport, dancing, fitness, and fashion shows, while the least prefer activities such as reading, going to the theatre, museum or on exhibition, as well as membership in organizations. The younger age group (26-35 years) is interested in pubs, cinema, painting, and body care, while it is the least interested in fashion shows. The middle age group (36-45 years old) prefers going to the theatre, while they are least attracted to painting and body care. The oldest age group (over 56 years) chooses reading, visits to museums and exhibitions, and being a member of the organization, while the least attracted are going out to the cinema, pub, playing sport, dancing, or fitness.

- A12 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=20.504, p=0.000, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the *divorced group*, and the lowest level in the *single group.*
- A7 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=20.113, p=0.000, Md=0; regarding the mean values of group ranks, A7 was at the highest level in the *single group*, and the lowest level in the *widow/widower group.*
- A10 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=21.887, p=0.000, Md=0; regarding the mean values of group ranks, A10 was at the highest level in the *widow/widower group*, and the lowest level in the *married group.*
- A11 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=11.380, p=0.023, Md=0; regarding the mean values of

group ranks, A11 was at the highest level in the *cohabitation group*, and the lowest level in the *married group.*

- A14 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=9.807, p=0.044, Md=0; regarding the mean values of group ranks, A14 was at the highest level in the *widow/widower group*, and the lowest level in the *married group.*
- A15 between the *marital status groups* (single, n=125; cohabitation, n=61; married, n=238; divorced, n=29; widow/widower, n=14), c^2 (4, n=467)=10.270, p=0.036, Md=0; regarding the mean values of group ranks, A15 was at the highest level in the *cohabitation group*, and the lowest level in the *widow/widower group.*

Singles are attracted to organization memberships, cohabiting couples are attracted to fashion shows, restaurants, and pubs, while divorcees choose fitness. Those who are married are least interested in fitness and fashion shows, while those who are divorced are least interested in membership organizations, restaurants, and pubs.

- A12 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=12.962, p=0.011, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the *≥4 number of children group,* and at the lowest level in the *0 number of children group*.
- A2 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=9.899, p=0.042, Md=1; regarding the mean values of group ranks, A2 was at the highest level in the *0 number of children group*, and at the lowest level in the *≥4 number of children group*,
- A6 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=10.903, p=0.028, Md=0; regarding the mean values of group ranks, A6 was at the highest level in the *≥4 number of children group*, and at the lowest level in the 2 *number of children group*,
- A7 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=13.898, p=0.008, Md=0; regarding the mean values of group ranks, A7 was at the highest level in the *≥4 number of children group*, and at the lowest level in the *0 number of children group*.
- A8 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=13.506, p=0.009, Md=0; regarding the mean values of group ranks, A8 was at the highest level in the *0 number of children group*, and at the lowest level in the *≥4 number of children group*.
- A10 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=17.528, p=0.002, Md=0; regarding the mean values of group ranks, A10 was at the highest level in the *0 number of children group*, and at the lowest level in the *≥4 number of children group*.
- A15 between the *number of children groups* (0, n=182; 1, n=100; 2, n=142; 3, n=41; ≥4, n=2), c^2 (4, n=467)=13.159, p=0.011, Md=0; regarding the mean values of group ranks, A10 was at the highest level in the *0 number of children group*, and at the lowest level in the *≥4 number of children group*.

People without children prefer to go to concerts, do sports and fitness, and go out to pubs, while people with four and more children prefer to read, participate in humanitarian activities, and become a member of organizations. People without children are least interested in reading and membership in organizations, while people with two children are least interested in humanitarian activities. People with four or more children are least interested in concerts, sports, fitness, and going out to pubs.

- A12 between the *education groups* (without formal education, n=2; primary education, n=3; secondary education, n=92; college, n=60; university, n=310), c^2 (4, n=467)=23.416, p=0.000, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the university education group, and at the lowest level in the without formal and the secondary education group.
- A17 between the *education groups* (without formal education, n=2; primary education, n=3; secondary education, n=92; college, n=60; university, n=310), c^2 (4, n=467)=10.384, p=0.034, Md=0; regarding the mean values of group ranks, A17 was at the highest level in the primary education group, and at the lowest level in the secondary education group.
- A23 between the *education groups* (without formal education, n=2; primary education, n=3; secondary education, n=92; college, n=60; university, n=310), c^2 (4, n=467)=14.096, p=0.007, Md=0; regarding the mean values of group ranks, A23 was at the highest level in the university education group, and at the lowest level in the without formal and primary education group.

- A3 between the *education groups* (without formal education, n=2; primary education, n=3; secondary education, n=92; college, n=60; university, n=310), c^2 (4, n=467)=22.193, p=0.000, Md=0; regarding the mean values of group ranks, A3 was at the highest level in the university education group, and at the lowest level in the without formal and primary education group.
- A4 between the *education groups* (without formal education, n=2; primary education, n=3; secondary education, n=92; college, n=60; university, n=310), c^2 (4, n=467)=15.122, p=0.004, Md=0; regarding the mean values of group ranks, A4 was at the highest level in the university education group, and at the lowest level in the without formal and primary education group.

People with a university degree prefer reading, and going to the theatre, museum, or exhibition, while photography is an activity that attracts people with primary education. People with primary and no formal education are least interested in reading, theatre, museums, and exhibitions, while people with secondary education are least interested in reading and photography.

- A12 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=17.535, p=0.004, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the self-employed group, and the lowest level in the student group.
- A19 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=16.578, p=0.005, Md=0; regarding the mean values of group ranks, A19 was at the highest level in the other group, and the lowest level in the student, unemployed, and retired groups.
- A20 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=36.117, p=0.000, Md=0; regarding the mean values of group ranks, A20 was at the highest level in the self-employed group, and the lowest level in the student group.
- A21 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=18.205, p=0.003, Md=0; regarding the mean values of group ranks, A21 was at the highest level in the other group, and the lowest level in the retired group.
- A22 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=11.818, p=0.037, Md=0; regarding the mean values of group ranks, A22 was at the highest level in the student group, and the lowest level in the retired and other groups.
- A23 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=18.286, p=0.003, Md=0; regarding the mean values of group ranks, A23 was at the highest level in the employed group, and the lowest level in the student group.
- A3 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=13.291, p=0.021, Md=0; regarding the mean values of group ranks, A3 was at the highest level in the retired group, and the lowest level in the student group.
- A4 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=12.546, p=0.028, Md=0; regarding the mean values of group ranks, A4 was at the highest level in the other group, and the lowest level in the student group.
- A5 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=12.657, p=0.027, Md=0; regarding the mean values of group ranks, A5 was at the highest level in the self-employed group, and the lowest level in the employed group.
- A7 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=10.494, p=0.001, Md=0; regarding the mean values of group ranks, A7 was at the highest level in the student group, and the lowest level in the unemployed, retired and other groups.

- A10 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=13.346, p=0.020, Md=0; regarding the mean values of group ranks, A10 was at the highest level in the retired group, and the lowest level in the student group.

- A15 between the *working status groups* (student, n=71; unemployed, n=30; self-employed, n=46; employed, n=280; retired, n=30; other, n=10), c^2 (5, n=467)=20.837, p=0.001, Md=0; regarding the mean values of group ranks, A15 was at the highest level in the student group, and the lowest level in the retired group.

Students show the least interest in reading, sculpting, old crafts, going to the theatre, museums, exhibitions, and membership in organizations. Unemployed and retirees are least interested in sculpting and fitness, while pensioners are least attracted to activities related to arts and crafts, going to the cinema, fitness, and going out to pubs. Students prefer to go to the cinema, the gym, or the pub, while the self-employed opt for reading, old crafts, and volunteering. Employed people prefer going to the theatre and are least interested in volunteering activities. Retirees are most likely to choose to go to a museum and membership in an organization, while others prefer sculpting, art crafts, exhibitions, and least fitness.

- A1 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=7.060, p=0.029, Md=1; regarding the mean values of group ranks, A1 was at the highest level in the 500-1000 euro group, and at the lowest level in the <500 euros group.

- A12 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=9.723, p=0.008, Md=1; regarding the mean values of group ranks, A12 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A22 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=6.442, p=0.040, Md=0; regarding the mean values of group ranks, A22 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A23 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=23.545, p=0.000, Md=0; regarding the mean values of group ranks, A23 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A2 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=10.412, p=0.005, Md=0; regarding the mean values of group ranks, A2 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A3 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=22.835, p=0.000, Md=0; regarding the mean values of group ranks, A3 was at the highest level in the >1000 euro group, and the lowest level in the 500-1000 euros group.

- A4 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=6.673, p=0.036, Md=0; regarding the mean values of group ranks, A4 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A7 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=10.065, p=0.007, Md=0; regarding the mean values of group ranks, A7 was at the highest level in the >1000 euro group, and the lowest level in the 500-1000 euros group.

- A14 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=27.848, p=0.000, Md=0; regarding the mean values of group ranks, A14 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

- A15 between the *annual personal investment for tourist travel and vacation groups* (<500 euros, n=189; unemployed, n=30; 500-1000 euro, n=159; >1000 euro, n=128), c^2 (2, n=467)=8.956, p=0.011, Md=0;

regarding the mean values of group ranks, A15 was at the highest level in the >1000 euro group, and the lowest level in the <500 euros group.

Tourists who annually invest more than 1,000 euros prefer reading, cinema, theatre, concerts, museums, exhibitions, and the membership of organizations, restaurants, and pubs, while tourists who invest from 500 to 1,000 euros prefer computer activities. The least interested in computers, reading, cinema, theatre, concerts, exhibitions, restaurants, and pubs are tourists who invest up to 500 euros per year. The least interested in museums and membership in organizations are tourists who invest from 500 to 1000 euros.

There were statistically significant differences regarding all daily life activities except activity A16, for all grouping variables. Hypothesis H3 was confirmed.

The survey on respondent's indoor and outdoor activities indicated (Table 3):

- most respondents are nature lovers (82.4%) and lead a healthy and active life (85.2%) which confirmed hypothesis H4.
- slightly more than half of respondents are users of walking tours (52.9%);
- there are almost an equal number of respondents who are partial users of walking tours (40.5%) and who would like to become a user of walking tours (39.8%);
- the largest number of respondents opted for the walking tour with mountain scenery (67.5%), and the rest for the countryside walking tour (15.4%), the urban walking tour (12.6), and others (4.5%). Hypothesis H5 was not confirmed.
- the most common way of organizing a walking tour was by self-guided (67.5%), by association or club (16.3%), by a commercial company (3.9%), and by others (12.4%). Hypothesis H6 was not confirmed.
- respondents usually went walking or hiking in the countryside or mountain less than ten times a year (76.7%), but some respondents go walking up to 20 (13.5%), 30 (4.7%), and more than 30 (5.1%) times a year;
- respondents generally prefer walks lasting 45 min - 90 min (56.5%), to walks from 90 min - 240 min (37.0%), and at least walks from 240 min - 7h (6.4%). Hypothesis H7 was confirmed.

Table 3. Indoor and outdoor activities

Are you a nature lover?		
Value label	**Frequency**	**Percent**
Partially	75	16.1
Yes, completely	385	82.4
Indifferent	7	1.5
Total	467	100.0
Do you lead a healthy and active life?		
	Frequency	**Percent**
No, and I would not like it	1	.2
No, but I would like it	65	13.9
Yes, partially	261	55.9
Yes, completely	137	29.3

Indifferent	3	.6
Total	467	100.0
Are you a user of the walking tour?		
	Frequency	**Percent**
No, and I would not like it	18	3.9
No, but I would like it	186	39.8
Yes, partially	189	40.5
Yes, completely	58	12.4
Indifferent	16	3.4
Total	467	100.0
What kind of walking tour would you choose?		
	Frequency	**Percent**
Urban walking tour	59	12.6
Countryside walking tour	72	15.4
Walking tour with mountain scenery	315	67.5
Other	21	4.5
Total	467	100.0

How do you organize a walking tour?		
	Frequency	**Percent**
By commercial company	18	3.9
By association or club	76	16.3
Self-guided	315	67.5
Other	58	12.4
Total	467	100.0
How many times did you go walking/hiking in the countryside/mountain this year?		

	Frequency	Percent
<=10	358	76.7
11-20	63	13.5
21-30	22	4.7
>=30	24	5.1
Total	467	100.0
What kind of walk do you prefer?		
	Frequency	**Percent**
45 min - 90 min	264	56.5
90 min - 240 min	173	37.0
240 min - 7h	30	6.4
Total	467	100.0

Source: Authors' calculations

The statistical analysis of the research indicates that the management of walking tourism should develop activities based on natural values, well-being packages, tourist-guided mountains, countryside, and urban easy and medium walking trails strongly focusing on existing and potential users of walking tours.

5. Conclusion

Based on research and facts that „tourism is a major part of the contemporary experience economy" (OECD Studies on Tourism, 2012), and „walking tourism is now one of the most popular ways to experience a destination"(UNWTO, 2019), the sustainable local economic development strategies with the specific goal related to the local tourism development, should integrate the cultural and historical heritage with walking tourism as a new tourism area. The management of walking tourism should be a part of the strategic action plan with activities that are more targeted female population, middle-aged adults, employed people with university education, and families with children, as well as the development and promotion of tourism through the design of tourist packages with a value of up to a thousand euros in cooperation with tour operators. Among the most frequent tourists' daily life activities are reading, using a computer, and going to restaurants. The management of walking tourism should include activities designed to attract the population, with special orientation on the male population, interested in reading, computers, restaurants, and sport. People with several children, a university education, self-employed, and ready to invest more than 1000 euros in their tourist trip or vacation showed a strong need for reading, while the need for reading is least pronounced among the youngest (up to 25 years), without children, with a lower educational level, students, and those ready to invest less than 500 euros in a tourist trip or vacation. Painting, as a daily life activity, is most present among younger people (26-35 years old), and least present among the middle-aged population (36-45 years old). Going to the cinema is the activity most preferred by the younger population (26-35 years old), students, and ready to invest more than 1,000 euros in a tourist trip or vacation. Going to the cinema is the activity most preferred by the younger population (26-35 years old), students, and ready to invest more than 1,000 euros in a tourist trip or vacation, while the least preferred by the oldest (over 56 years old), retired people and ready to invest up to 500 euros in a tourist trip or vacation. Going to the theatre is preferred by the middle-aged population (36-45 years old), university-educated, employed, and ready to invest more than 1000 euros in a tourist trip or vacation, while the youngest (up to 25 years old), with a lower level of education, students and ready to invest up to 500 euros for a tourist trip or vacation. Visiting museums, exhibitions, and membership in organizations are daily life activities that are most often used by the oldest (over 56 years), university-educated, retired, and ready to invest more than 1,000 euros in a tourist trip or vacation, while the mentioned activities are the least represented by the youngest (less than 25 years), with a lower level of education, students and ready to invest less than 1,000 euros in a tourist trip or vacation. Sports activities are most often chosen by the youngest (up to 25 years old), without children, while the oldest (over 56 years old) and people with several children choose the least. Dance, fitness, and fashion are activities most often chosen by the youngest (up to 25 years), while the oldest (over 56 years old) and couples who prefer cohabitation are the least frequently chosen. Body care is the most frequent activity among younger people (26-35 years old), and the least frequent among middle-aged people (36-45 years old). Pubs are mostly visited by younger people (26-35 years old) and students, and least often by the oldest (over 56 years old) and pensioners. Pubs and restaurants are chosen by single people, people without children and ready to invest more than 1,000 euros in a trip, and less often by divorced people, people with several children and those who invest less than 500 euros in a trip. Concerts are attractive to those who invest more than 1,000 euros in their travel and vacation, while they are least visited by people with several children, and those who invest up to 500 euros in travel. Humanitarian activities are most often carried out by people with more than four children, followed by people without children, with one and three children, while the least common are people with two children. Photography is an activity that attracts people with primary education, least of all people with secondary education. The sculpture is the least interesting for students, the unemployed, and pensioners, while the rest show interest. Old crafts are the least interesting for students and pensioners, while self-employed people and others prefer to do them. Art crafts are the least attractive to retirees. Voluntary activities are most often performed by the self-employed, while the least frequently by employees. Computers are mostly used by people who invest 500 - 1,000 euros in their travel and vacation, while the least are those who spend up to 500 euros for the trip.

Therefore, the management of walking tourism should take into account the differences that exist concerning indoor and outdoor activities between tourists of gender, age, marital status, the number of children, education, work status, and annual personal investment for tourist travel and vacation.

Especially in the post-covid crisis period when the health systems slowly and selectively recognize the importance of movement for people's health, the advantages of the natural environment, and well-being concepts supported by tourist-guided medium strongly walking trails on the mountain, rural and urban areas focusing on both existing and potential users of walking tours, are a platform for the development of strategies of the walking tourism management.

Strong community awareness and its full participation "enabling the revitalization of the local productive practices and non-episodic actions of the cultural and tourist-related valorisation of local territories" (Belliggiano, et al., 2021, p. 17). Significant potential for creating tourism development strategies are findings that students like classes in nature more that contribute “to involve young people more significantly in planning and organizing local events” (Trišić, et al., 2023a, p. 13), as well as on the strengthening of local institutions in the development of sustainable tourism (Trišić, et al., 2023b, p. 11). The authors recommend upgrading the strategy for sustainable local economic development by embedding the walking tourism component. This research was conducted in Serbia and the region so the results avoid generalizing and request special attention for applying to other countries and cultures. Future research will be focused on analysing the factors that increase levels of tourist walking as follows: public health, climate change mitigation, public green space, and personal health (Kim & Hall, 2022).

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An explorative study regarding the relationship between the Light Triad of personality, counterproductive work behavior and organizational citizenship behaviour

Romascanu Marius Constantin
Lecturer, National University of Political Studies and Public Administration, Faculty of Communication and Public Relations, Bucharest, Romania
ORCID ID:0000-0002-5943-8360
Email: marius.romascanu@comunicare.ro

Stanescu Dan Florin
Associate Professor, National University of Political Studies and Public Administration, Faculty of Communication and Public Relations, Bucharest, Romania
ORCID ID:0000-0001-8188-903X
Email: dan.stanescu@comunicare.ro

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Abstract

The research aims to explore the relationships between the Light Triad of personality, Counterproductive Work Behaviors, and Organizational Citizenship Behaviors. This study is based on a quantitative, cross-sectional, and correlational design. The sample consists of 115 participants (89 females and 26 males) aged between 22 and 45 years (M=28.33, AS=10.14). The participants were invited to answer a series of research instruments: the Counterproductive Work Behavior Checklist (CWB-C, Spector et al., 2006), the Organizational Citizenship Behavior Checklist (OCB-C, Fox et al., 2012), and the Light Triad Scale (LTS, Kaufman et al., 2019). The results indicate significant negative correlations between the Light Triad and Counterproductive Work Behaviors (rho=-.255, p<.01) and significant positive correlations between the Light Triad and Organizational Citizenship Behaviors (r=.283, p<.01). Finally, the practical implications, the limits of research, and future research directions are discussed.

1. Introduction

In the last decades, personality research has focused mainly on the dark side of personality, with a very limited number of studies on the positive side. In 2002, Paulhus and Williams introduced the concept of the "Dark Triad" of personality (i.e., Machiavellianism, Narcissism, and Psychopathy). Since then, more than 500 articles on dark personality traits have been published in over 150 journals (Dinic & Jevremov, 2019).

While expanding research on the Dark Triad continues, the positive side of personality – the Light Triad, was first conceptualized in 2019 by Kaufman, Yaden, Hyde, and Tsukayama. This new conceptualization can contribute to the detailing and enriching of the personality profile and, applied in an organizational context, it can establish new correlations with a large array of organizational behaviors.

In this respect, unlike task performance, which is predicted, among others, by general intelligence, the level of knowledge, skills, and abilities, extra-role performance, or organizational citizenship behavior (OCB), which significantly contributes to organizational development, shows a clear connection with personality (Chiaburu et al., 2011).

Although task performance is usually the primary criterion in the context of personnel selection, research indicates that workplace deviance is one of the most detrimental behaviors to organizational success (Dunlop & Lee, 2004).

Therefore, counterproductive workplace behavior (CWB) and organizational citizenship behavior (OCB) are two frequently studied forms of active and volitional behavior. These forms of extra-role behavior that could harm organizations (i.e., counterproductive behaviors) or support progress (i.e., civic behaviors) were, until recently, treated separately and considered opposites in terms of the causes and consequences associated with each (Sackett, 2002).

The propensity to act deviant at work is not limited to a particular workplace but, similar to organizational citizenship behaviors, crosses tasks, jobs, and work environments (Podsakoff et al., 2009). This concern is due to both the acuteness of the presence of undesirable behaviors in the workplace and their considerable impact on personal and organizational outcomes (Griffin & Lopez, 2005).

2. Literature review

2.1. Light Triad of personality

One of the most influential theories of socially undesirable personality traits is the Dark Triad of Personality, conceptualized by Paulhus and Williams (2002). Comprising three dimensions (i.e., Narcissism, Machiavellianism, and Subclinical Psychopathy), the Dark Triad has been included in much empirical research, with a large number of studies dedicated to correlating its characteristics with a variety of psychosocial outcomes (Dinic & Wertag, 2018; Koladich & Atkinson, 2016, Paulhus, 2014). A few years ago, a fourth dark trait - sadism - was added to the Dark Triad, forming a Dark Tetrad (Paulhus, 2014).

Previous research has shown that individuals who score high on these traits tend to be more arrogant and volatile, and are more likely to engage in antisocial activities and generate social distress. While this research trend has generated a considerable number of findings that allow us to understand the negative aspects of personality, the positive dimensions of mental life and their individual and social consequences have not been consistently investigated (Gerymski & Krok, 2019).

Meanwhile, the positive psychology literature has revealed a large number of positive characteristics that largely determine human functioning (e.g., life satisfaction, positive emotions, personal growth, self-actualization, and forgiveness). This approach proved successful, as it demonstrated that human nature not only revolves around negativity and pathology but also contains a positive, development-oriented side.

Following the direction reflected by this perspective, Kaufman, Yaden, Hyde, and Tsukayama (2019) proposed an antithetical construct of the Dark Triad. Aiming to contrast the dark side of the personality with the light, the authors introduced the term "Light Triad".

Using a large number of different scales that capture the influence of the Dark Triad on a variety of elements (e.g., personality, psychological needs and motives, values, defense styles, worldview, self-esteem and authenticity, relationships, empathy, compassion, styles interpersonal, egoism, aggression, moral judgment, religion, spirituality, self-transcendence, curiosity, and life satisfaction), Kaufman and his collaborators (2019) developed the Light Triad Scale (LTS). The Light Triad scale reflects a caring, selfless attitude that can be identified in everyday life. The conceptual meaning of the three factors is deeply rooted in the field of positive psychology, reflecting a generally optimistic view of people (Gerymski, & Krok, 2019).

The Light Triad consists of three dimensions: Kantianism, Humanism, and Trust in Humanity. The idea was not to create a construct that was just a reverse-coded version of the Dark Triad (Gerymski & Krok, 2019), but to outline a conceptual orientation that allows for the measurement of positive aspects of personality.

Kantianism is based on Immanuel Kant's second formulation of his categorical imperative, which imposes as a moral condition of actions, treating people with dignity and respect, relating to them as deserving human beings, without degrading them and without he treated them as "means" to ends, but as ends in themselves. Humanism is about appreciating the dignity and worth of each individual. Trust in humanity is characterized by belief in the fundamental goodness of people (Kaufman et al., 2019).

Kantianism, Humanism, and Trust in Humanity represent the potential strengths of humanity and capture the tendency to move from a negative approach to human nature to a positive one, emphasizing constructive and ethical interaction. The Light Triad factors also reflect the ability to resist, to a great extent, the thoughts and desires that lead people to engage in selfish, volatile, and hostile behaviors.

About two decades ago, Seligman and Csikszentmihalyi (2000, apud Lukic & Zivanovic, 2021) promoted positive psychology as a pathway of research in the field of psychology with an emphasis on human strengths and virtues. This orientation took shape in the context of the predominance of a "negative tendency" to approach the individual, with a disproportionate emphasis on psychopathology, to the detriment of the individual's potential development perspective (Maddux, 2002).

2.2. Counterproductive Work Behavior

Describing employees as active and proactive tends to have a positive connotation (Frese & Fay, 2001). However, as Spector and Fox (2002) point out, people can be active and take the initiative in many ways, including negative behaviors, called counterproductive work behaviors. Research on counterproductive workplace behaviors has proliferated in recognition of the financial, personal, and organizational costs associated with counterproductive behavior (Kelloway et al., 2010).

The concept’s most well-known and comprehensive definition is provided by Spector and Fox (2002, p. 271), who describe it as emphasizing its purpose: "is that behavior intended to harm the organization or members of the organization." Building on Kaplan's (1975) notion of organizational norms, Robinson and Bennett (1995) defined workplace deviance as behavior that voluntarily and consciously violates organizational norms, thereby threatening the well-being of members and the organization in assembly. Thus, according to this framework, workplace deviance is not defined in terms of moral standards, but rather by reference to deviations from formal norms as prescribed in norms, procedures, and policies. Furthermore, this approach states that to be considered deviant, a behavior must at least have the potential to harm either the organization or its members, excluding a violation of good manners.

Robinson and Bennett (1995) presented a comprehensive, two-dimensional typology in which any behavior that fits the definition can be categorized and differentiated from other deviant actions. The first dimension of deviant behaviors – severity – classifies them as minor or severe. Some deviant behavior such as having conversations instead of completing tasks would be classified as a minor deviant act. Other incidents, such as physical assault, would be classified as serious. The second dimension of deviant behaviors is aimed at the target, so the behavior can be harmful to an individual's well-being, in which case interpersonal deviance occurs, or it can affect the organization, in which case organizational deviance is identified. Combining these two dimensions results in four quadrants that form the basis of the classification of deviant behavior: deviance from production (i.e. low severity, organizational target, e.g. leaving early or too many breaks), deviance from property (i.e. high severity, organizational target, e.g., theft or embezzlement), political deviance (i.e., low severity, interpersonal target, e.g., gossip or unfair competition), and personal aggression (i.e., high severity, interpersonal target, e.g., verbal abuse or sexual harassment).

Another distinction is made by Bowling and Gruys (2010), who consider whether actions contravene legal regulations (e.g., theft, assault, drug use) or not (e.g., lateness, slow work pace, waste of time). This dimension captures a potential fear of legal sanctions and the social stigma associated with law-breaking behaviors and may cause most people to avoid engaging in illegal behaviors.

Researchers have also considered hostile versus instrumental aggression (Bushman & Anderson, 2001). While hostile aggression involves the infliction of harm itself, instrumental aggression captures the use of aggression to obtain benefits. Spreading a rumor about a co-worker, an action initiated to harm that person, is an example of hostile aggression. On the other hand, spreading a rumor about a rival colleague so that the one who started the rumor increases his chances of success at the expense of the colleague is an example of instrumental aggression.

2.3. Organizational Citizenship Behavior

The idea of extra-role behavior and the study of its impact on the effectiveness of organizations can be attributed to researchers Katz and Kahn (1966, apud Spik, 2018), who argue that there are three ways in which employees can contribute to organizational well-being. One of these forms was called innovative and spontaneous behavior, concerning the performance shown beyond the demands of the role, to fulfill organizational functions. The manifestation of extra-role performance includes cooperative attitudes, protecting the organizational system, continuous professional development, and creating a favorable image of the organization in the external environment (Organ, Podsakoff, & MacKenzie, 2006).

Organ (1988, apud Mahdiuon, Ghahramani, & Sharif, 2010, p. 4) defined organizational citizenship behaviors as "individual discretionary behaviors that are not directly or explicitly recognized by the formal reward system and that, as a whole, promote the effective functioning of organization".

Bolino and Turnley (2003) discovered two common characteristics of organizational citizenship behaviors: they are not directly applicable (i.e. they are not technically necessary as a requirement for the performance of tasks) and they are embodiments of additional, extra-role efforts that organizations need their workforce to be successful. According to the two authors, examples of organizational civic behaviors are the following: voluntary assistance to colleagues, professional development, compliance with company rules (even when no one is checking), promoting and protecting the organization, and maintaining a positive and tolerant attitude about inconveniences at work.

Bolino, Turnley, and Bloodgood (2002) defined organizational citizenship behavior as employees' willingness to go beyond formal workplace requirements to help each other, to subordinate their interests to organizational ones, and to genuinely care about the organization's activities and overall mission.

Organ and his collaborators (2006) conducted a comprehensive study on research related to the dimensions of the construct and established the existence of the following types of organizational citizenship behaviors: *organizational compliance* is identified by actions such as: following the rules and regulations of the organization, even when the violation of the regulations could not be observed by anyone, and using only a fraction of leave when possible; *endurance,* which refers to going through difficult situations without complaints, to displaying a positive attitude, regardless of the context; *civic virtue* is revealed by participating in decision-making processes that concern the organization and supporting the administrative function of the organization, such as participating in meetings that are not mandatory and engaging in the process of organizational change; *helping behavior* includes altruism, maintaining a non-conflictual organizational climate, and offering support; *individual initiative* stands out through the voluntary assumption of new responsibilities and tasks that support the well-being of the company, encouraging others to adopt a similar behavior, identifying effective ways of completing tasks; *organizational loyalty* involves promoting the organization in the external environment and protecting it against criticism from people outside the company; *personal development* is achieved through voluntary activities to develop knowledge and skills to increase task performance.

2.4. Previous empirical studies

Organizational citizenship behaviors are essential for effective organizational functioning because they increase managerial and executive productivity and strengthen the organization's ability to attract and retain the best employees (Podsakoff et al., 2000).

Research on the predictors of organizational citizenship behaviors has focused, in particular, on personal factors (Bourdage et al., 2012) and less on contextual factors, although the organizational environment, as a whole, as well as concrete elements of it, can influence the occurrence of organizational citizenship behaviors.

Studies conducted to capture the social reality of the construct have associated it with certain traits and values, such as prosocial personality (Penner, Midili, & Kegelmeyer, 1997), orientation towards others (Meglino & Korsgaard, 2004) and empathy (Joireman et al., 2006).

People with high scores on the Light Triad traits tend to be empathetic, compassionate, cooperative, and forgiving, and strive to maintain high-quality relationships with others. They also tend to be highly concerned with how their actions may affect others and therefore pay close attention to their behaviors so as not to be viewed as aggressive (Kaufman et al., 2019).

According to Kaufman and colleagues (2019), the Light Triad is associated with more positive and optimistic attitudes, higher levels of personal growth, quality of life, and well-being. Research has shown that psychological well-being, which consists of positive traits, has contributed to social and emotional development, helping to understand other people and their social environment, especially understanding what is good and worth setting as a goal (Schmid & Muldoon, 2015). Therefore, the Light Triad provides a deeper insight into how people understand ethically and socially caring and compassionate values and behaviors (Gerymski & Krok, 2019).

Furthermore, research has shown that individuals with certain positive personality traits can control their behaviors when experiencing negative work events and are less likely to be triggered by transient emotions (Malik et al., 2020). For example, Sulea and colleagues (2013) found that individuals who scored high on Conscientiousness, Agreeableness, and Emotional Stability were less likely to engage in counterproductive work behaviors in response to abusive supervision.

In another study, Yang and Diefendorff (2009) demonstrated that the positive relationship between negative emotions and counterproductive work behaviors directed at coworkers is weaker for individuals who score high on Agreeableness.

The light triad weakened the relationship between abusive supervision and evil creativity, as well as the relationship between psychological contract violation and evil creativity. These results suggest that individuals high in the Light Triad are less likely to use evil creativity to cause intentional harm to others in response to abusive supervision and psychological contract violation. Moreover, the Light Triad moderates the relationship between abusive supervision and malevolent creativity through a perceived breach of the psychological contract (Malik et al., 2020).

The actions of individuals possessing positive personality traits are less likely to be influenced by negative work events and emotions, and there is a tendency to seek more constructive ways to deal with undesirable situations at work (Yang & Diefendorff, 2009; Sulea et al., 2013).

Starting from the main findings presented in the reviewed literature, the following research questions are outlined:

RQ1: What relations could be observed between the Light Triad of personality and counterproductive work behavior (CWB)?

RQ2: What relations could be observed between the Light Triad of personality and organizational citizenship behavior (OCB)?

3. Methodology

3.1. Participants

This study is based on a quantitative, cross-sectional, and correlational design. The sample consists of 115 participants (89 females and 26 males) aged between 22 and 45 years (M=28.33, AS=10.14). Regarding the educational level, 14 are graduates of upper secondary education, 74 people had completed their university education, and 27 respondents had their postgraduate studies.

3.2. Instruments

The questionnaires designed to evaluate each of the variables were uploaded together with the informed consent to the Google Forms platform and distributed on social networks (i.e. Facebook), being available for completion for one month, bringing together 143 items, with an approximate duration of 20 minutes.

Counterproductive Work Behavior Checklist (CWB-C, Spector et al., 2006) integrates the vision of researchers Robinson and Bennett (1995) who differentiated the counterproductive behaviors manifested in the workplace according to their target (i.e. organizational vs. interpersonal) and the classification made by Spector and his collaborators (2006), which includes abuse, deviance of production, sabotage, theft, and withdrawal, managing to overlap the typologies. Thus, abuse falls within the scope of counterproductive interpersonal behaviors, the other four being deviant behaviors aimed at the organization.

The questionnaire contains 45 self-reported items and asks respondents to select the answers that reveal the frequency of the stated behaviors, using a five-point Likert scale, where 1 represents "Never" and 5 represents "Daily." The total score of the scale is obtained by the sum of the answers.

The scale showed excellent reliability scores (Cronbach): CWB-O (toward organization) α=.89, CWB-I (toward individuals) α=.95, and for the composite score CWB the score was α=.95.

Organizational Citizenship Behavior Checklist (OCB-C, Fox et al., 2012) is a 20-item scale aiming at measuring self-reported extra-role behaviors. Respondents are asked to choose the answers that correspond to the frequency of manifestation of the stated behaviors, using a five-point Likert-type scale, where 1 represents "Never" and 5 signifies "Daily".

The total score of the scale is obtained by the sum of the answers. It is also possible to calculate the score for each of the two dimensions: civic behaviors directed to and for the benefit of the organization and those directed to and in helping colleagues at work.

The Cronbach alpha internal consistency index of the tool showed the following values: Organization-centered Civic Behavior α=.77, Person-centered Civic Behavior α=.92, and for the Organizational citizenship behaviors as a whole the index was α=.93.

The Light Triad Scale (LTS, Kaufman et al., 2019) was recently developed and is intended to assess people's orientation, authentically and lovingly, and contains 12 items, four assigned to each of the three dimensions, as follows: Kantianism (i.e. treating people as ends and not means), Humanism (i.e. appreciating the dignity and worth of people), Trust in humanity (i.e., trust in the fundamental goodness of people).

The evaluation of the items is self-reported and requires the respondents, using a five-point Likert-type scale, where 1 represents "Strongly Disagree" and 5 signifies "Strongly Agree", to express the extent to which each statement describes them. The total score of the scale as well as the score of each facet is calculated as the mean of the assigned items.

Regarding the Cronbach alpha internal consistency index, in the present study, the following values were obtained: α=.80 for the Light Triad scale, α=.61 for Kantianism, α=.79 for Humanism, and α=.70 for Trust in humanity.

4. Results

After collection, the data were analyzed using SPSS 26.0 (IBM Corporation, 2019). Furthermore, being aware that the study is based on self-report questionnaires, to avoid the possible impact of common method bias Harman's single-factor test was performed (Tehseen, Ramayah, & Sajilan, 2017). As recommended by Podsakoff and colleagues (2003), all items corresponding to selected variables were loaded into an exploratory factor analysis to check whether one factor can explain the majority variance. The results indicated that the first factor accounted only for 27.24% of the variance.

Means, standard deviations, and normal/abnormal distribution for all the study variables are presented in Table 1.

Table 1. Descriptive statistics of the study variables

	Mean	Std. Dev.	Skewness		Kurtosis	
			Statistic	Std. Err.	Statistic	Std. Err
CWB	63.86	20.454	2.697	.226	7.843	.447
CWB-O	33.37	10.328	1.741	.226	3.191	.447
CWB-I	27.47	10.506	3.467	.226	12.329	.447
OCB	66.92	15.713	-.144	.226	-.486	.447
OCB-O	16.29	4.360	-.076	.226	-.525	.447
OCB-I	50.63	11.799	-.183	.226	-.382	.447
Light Triad	48.58	6.370	-.433	.226	-.390	.447
Kantianism	16.37	2.627	-.705	.226	.413	.447
Humanism	16.90	2.503	-.385	.226	-.835	.447
Trust in humanity	15.31	3.065	-.843	.226	1.111	.447

The analysis of the skewness and kurtosis scores displays an abnormal (nonparametric) distribution of data for all CWB scales and normal distribution for OCB and Light Triad scales.

To answer the previously mentioned research questions, the corresponding Spearman or Pearson bivariate correlation was calculated, both between the composite scores of the selected variables and between the sub-dimensions of each scale.

Regarding the first research question - RQ1: What relations could be observed between the Light Triad of personality and counterproductive work behavior (CWB)?, as can be observed in Table 2, a series of negative significant correlations were observed. Thus, the composite score of Light Triad negatively correlates with the composite score of CWB (rho=-.255, p<.01). Moreover, the composite score of Light Triad negatively correlates with both CWB-O (rho=-.202, p<.05) and CWB-I (rho=-.260, p<.01). Similarly, Kantianism showed negative correlations with CWB composite score (rho=-.206, p<.05) and with CWB-I sub-scale (rho=-.214, p<.05). Humanism showed negative correlations both with CWB composite score (rho=-.284, p<.01) and with CWB-O (rho=-.230, p<.05) and CWB-I (rho=-.306, p<.01). Trust in humanity is the only dimension of the Light Triad showing no correlations with CBW or any of its subdimensions.

Table 2. Correlation matrix Light Triad and CWB

Spearman's rho		CWB	CWB-O	CWB-I
Light Triad	Correl. Coeff.	-.255**	-.202*	-.260**
	Sig. (2-tailed)	.006	.030	.005
Kantianism	Correl. Coeff.	-.206*	-.164	-.214*
	Sig. (2-tailed)	.027	.080	.022
Humanism	Correl. Coeff.	-.284**	-.230*	-.306**
	Sig. (2-tailed)	.002	.013	.001
Trust in humanity	Correl. Coeff.	-.151	-.098	-.174
	Sig. (2-tailed)	.107	.298	.063

As for the second research question - RQ2: What relations could be observed between the Light Triad of personality and organizational citizenship behavior (OCB)?, the results (Table 3) showed significant positive correlations between Light Triad composite score and OCB composite score (r=.283, p<.01) and with both OCB-O (r=.297, p<.01) and OCB-I (r=.268, p<.01) subdimensions. Moreover, both Humanism and Trust in Humanity subdimensions of the Light Triad showed positive correlations with OBS and its subscales. Hence, Humanism positively correlates with OCB composite score (r=.306, p<.01) and with both OCB-O (r=.309, p<.01) and OCB-I (r=.293, p<.01) dimensions. Likewise, Trust in Humanity showed a positive correlation with OCB composite score (r=.290, p<.01) and with both OCB-O (r=.296, p<.01) and OCB-I (r=.277, p<.01) dimensions.

Table 3. Correlation matrix Light Triad and OCB

		OCB	OCB-O	OCB-I
Light Triad	Pearson Correlation	.283**	.297**	.268**
	Sig. (2-tailed)	.002	.001	.004
Kantianism	Pearson Correlation	.058	.081	.047
	Sig. (2-tailed)	.539	.389	.617
Humanism	Pearson Correlation	.306**	.309**	.293**
	Sig. (2-tailed)	.001	.001	.001
Trust in humanity	Pearson Correlation	.290**	.296**	.277**
	Sig. (2-tailed)	.002	.001	.003

5. Conclusions

Counterproductive work behavior and organizational citizenship behavior are forms of active and volitional behavior that can harm organizations or support progress. Contemporary organizations have sought new ways to achieve a stable competitive advantage. Reinforcing positive extra-role behaviors is considered one of the most effective strategies for shaping a potential competitive advantage because these types of behaviors serve the good of the organization and cannot be taken over by competitors.

As mentioned, organizational citizenship behaviors refer to those actions undertaken by employees that go beyond the requirements of the job (Organ, Podsakoff, & MacKenzie, 2006). Moreover, they support the social and psychological environment of the organization and, as a whole, promote the functioning of the organization. These actions are typically considered to be less likely to be rewarded by the organization and are more discretionary than task performance. Researchers have become interested in organizational citizenship behaviors because they are considered vital to the performance and viability of an organization (Organ, Podsakoff, & MacKenzie, 2006).

On the other hand, unlike task performance, the prediction of job-related deviant behavior reiterates certain personal variables and the propensity to act inappropriately in an organizational context is not limited to a specific job, but, similar to organizational citizenship behaviors, crosses tasks, companies, jobs, and work environments (Podsakoff et al., 2009). Researchers' concern regarding counterproductive work behaviors is due to both the exacerbation of undesirable workplace manifestations and their considerable impact on both personal and organizational outcomes (Griffin & Lopez, 2005).

Organizations need to understand what causes employees to exhibit extra-role behaviors, in order to be able to act in the sense of decreasing the chances of registering counterproductive behaviors, but also in the direction of increasing the probability of the appearance of civic behaviors.

Despite the valuable findings of this study, it possesses some shortcomings that have to be taken into consideration. One of the main weaknesses of this study is related to the fact the questionnaires were self-reported, and the tendency is to investigate and report attitudes, rather than behaviors (Hughes et al., 2018). In order to tackle this limitation and to avoid the common method bias we have carried out Harman’s single-factor test (Tehseen, Ramayah, & Sajilan, 2017). Another issue to be considered is the relatively small sample, which makes the results difficult to generalize and the uneven gender distribution.

Although the researchers identified some personal and organizational antecedents of the aforementioned behaviors, the results of the current study provide additional information through the connections established by the Light Triad. Specifically, the findings highlight that people with high levels of the Light Triad are less likely to engage in counterproductive behaviors, but are more likely to engage in civic behaviors.

However, it should be noted that, unlike dark traits that have emerged from personality research and clinical settings as separate research subjects (e.g. Paulhus & Williams, 2002), the Light Triad appears to be largely a theoretical construct. The authors of the scale constructed the items without relying on any model of prosocial behavior or other clearly conceptually delineated constructs that mark the benevolent and loving orientation towards others but used items from the Dark Triad to establish indicators of benevolent behavior. As the Dark Triad does not represent a full spectrum of evil and antisocial behaviors (Marcus & Zeigler-Hill, 2015), there is a possibility that one set of indicators may not be sufficiently representative of prosocial behavior in general. Thus, the Light Triad scale presents characteristics that are vaguely defined at the conceptual level but narrowly captured at the operational level. Therefore, it seems difficult to fully understand its content and potential facet-level traits that need to be explored in future studies. Future studies on light traits could examine the construct in relation to other benevolent traits (e.g., altruism) to demonstrate that the dimensions of the Light Triad are distinct.

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Monetary policy and manufacturing export performance in SSA: Evidence from Panel ARDL modelling

Hope E. Agbonrofo
Babcock University, Ilisan, Nigeria
ORCID: 0000-0002-5943-8360
Email: hope.agbonrofo@gmail.com

Ajibola Olusegun
Babcock University, Ilisan, Nigeria
ORCID: 0000-0002-0012-4471

Biola Phillip
Babcock University, Ilisan, Nigeria
ORCID: 0000-0001-5566-577x

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Abstract

We investigate the effect of monetary policy on manufacturing export performance in Sub-Saharan Africa (SSA) over the 1995 and 2020 period. Using the pooled mean group framework and focusing on 24 SSA countries, evidence shows that interest rate boosts manufacturing export in the short and long-run. However, exchange rate negatively impacts manufacturing export performance in both periods. While exchange rate is significant in the short term, it is insignificant in the long run. Lastly, private sector credit negatively and insignificantly influences short run manufacturing export, while it is substantially positive in the long-run. It is important that efforts are geared towards improving monetary policy effectiveness in the countries involved to boost the performance of manufacturing export and ensure growth.

1. Introduction

Sub-Saharan Africa comprises 49 African countries with about 1.2 billion population, making it second as the world's most populous region after Asia with 4.7 billion people. Therefore, this region accounts for about 14.7% of the world's population but contributed less than 5% of global GDP (UNCTAD, 2022). The countries in this region are diverse in size, scale and economic development, endowed with immense natural and human resources. However, the Sub-Saharan Africa (SSA) region has long been considered one of the world's least developed regions, with high poverty rates, low levels of human development, and persistent economic underperformance. One of the main reasons for this underperformance is the need for export-oriented growth in the region. Despite its abundant natural resources and potential for agricultural production, SSA countries have not been able to take advantage of these advantages to promote export-led growth (Rodríguez-Pose and Tijmstra, 2007). The global community faces a significant development challenge in integrating Africa into the global economy to boost growth. The experiences of industrialised countries successfully demonstrate that diversifying exports through the expansion of manufactured goods improves connections to the international economy and leads to sustained growth (Africa, 1999). In recent years, SSA has seen a growing interest in the role of manufacturing in economic development. This is because manufacturing is crucial in driving economic growth and job creation, particularly in developing countries. However, the manufacturing sector in SSA has traditionally been underdeveloped and has fallen behind those in other regions (Mesagan et al., 2018; Myovella et al., 2020).

Barasa et al. (2018) indicated that one of the main problems of the manufacturing sector in SSA is the weak access to financing, which limits firms' ability to acquire new technologies and expand their operations. This is why the region is dominated by small and medium enterprises (SMEs), which is mostly un-organised. In addition to the financing constraint, the manufacturing industry in SSA also faces other challenges such as inadequate infrastructure, lack of skilled labor, and limited market access. These challenges lead to a relatively low competitiveness that in turn constrained the ability of firms to export their products (Charles et al., 2018; Yusuf et al., 2020). Given the crucial role of manufacturing in job creation and economic growth, it is crucial to understand the factors that affect the performance of this sector in SSA.

The region has faced several financial challenges in recent years, including persistent trade deficits, low economic growth, and high inflation (Kaplinsky & Morris, 2008; Mesagan et al., 2022). Many SSA countries have turned to monetary policy as a key policy tool to address these challenges. Monetary policy, as the primary tool of macroeconomic management, plays a crucial role in fostering export-oriented growth. Monetary policy can affect the exchange rate, interest rates, and inflation, all of which can influence the competitiveness of a country's exports. Weak institutional frameworks, limited policy credibility, and a lack of foreign exchange reserves often constrain monetary policy in SSA. These factors can limit the ability of central banks to use monetary policy to stabilize the economy and promote growth.

The principal objective of monetary policy is achieving price stability, promoting economic growth and full employment. This can be done through the enhancement of manufacturing export, which provides a key source of foreign exchange for SSA countries. Also, it affords these nations growth enhancement opportunities and trade deficits reduction. In addition, monetary policy can affect manufacturing export performance by impacting exchange rates, interest rates, and other macroeconomic variables. As noted in Ca' Zorzi et al. (2020), a tight monetary policy through the raising of interest rates can lead to a stronger currency, making exports less competitive in the global market.

Conversely, a loose monetary policy that lowers interest rates can lead to a weaker currency, making exports more competitive. Additionally, monetary policy can also affect manufacturing export performance through its impact on domestic demand, which can affect the demand for exports. This study is necessary due to the limited number of studies that have examined this relationship, especially in SSA countries. Previous studies such as Beyene and Singh (2019) have drawn attention to the effect that monetary policy could have on industrial growth using ARDL modelling for its framework. It mentioned that industrial growth included the final goal of exporting manufactured goods to get foreign exchange. While scholarly attention in prior studies like Asaleye et al. (2018), Isola & Mesagan (2018), Ca' Zorzi et al. (2020) and Jungo et al. (2022) have been drawn toward the nexus between monetary policy and manufacturing export performance, it is not yet exhaustive. Also, while taking into account the unique characteristics of resource-rich nations in sub-Saharan Africa, a recent study by Obi (2021) considered monetary policy and manufactured output in Nigeria, while Asongu (2020) had a similar focus on SSA. The omission of export performance in previous studies provides a strong rationale for this research.

As such, this study analyses the monetary policy and manufacturing export performance in SSA. It examines the effect of monetary instruments like the lending rate, exchange rate, and banks credit on manufacturing export performance. This study contributes to knowledge by providing new insights into the factors affecting manufacturing export performance in the SSA region. This research also provides the monetary authority with valuable policies that are conducive to manufacturing export expansiveness in the region. The paper's structure is as follows: literature is reviewed in Section 2, the empirical model is presented in Section 3, the findings are discussed in Section 4 and finally, the study concludes with recommendations in Section 5.

2. Literature Review

Researchers have done studies on similar topics as outlined in the first section; however, monetary policy and manufacturing export performance remains elusive. For instance, Mwega and Ndung'u (2001) examined the relationship exchange rate policy and manufacturing export in Kenya between 1980 and 1990. Using descriptive analysis, the study argued that industrial policy is crucial in shaping the development of a nation's export-oriented industries. Eichengreen (2007) analysed exchange rate and output growth and observed that it had a short and long-term positive effect on growth. Rodríguez-Pose & Tijmstra (2007) investigated the opportunities and challenges that face SSA countries in relation to local economic development. The paper utilized a descriptive method of analysis to identify if Local Economic Development (LED), which is a standard development tool could be applied as complement to growth in SSA. Evidence suggested that monetary policy enhanced growth through expanding the exports capacity. Ojo & Alege (2014) had a similar study on SSA macroeconomic performance using the system Generalised Method of Moments (SYS-GMM) from 1995-2007. Result showed that long-run nexus was found between exchange rate and other macroeconomic variables responsible for economic growth in the SSA countries. Egbetunde (2015) examined the situation in 21 SSA nations using the Vector Error Correction framework. They found a mutual causality between output growth and financial globalization. Also, Egbetunde & Akinlo (2015) had a similar focus using panel cointegration. They found that financial globalization enhanced long run output growth in SSA.

Moreover, Goshit et al. (2018) focused on Nigeria between 1986 and 2015. Evidence showed that monetary policy positively and substantially enhanced manufacturing performance. It also deployed the Two Stage Least Square (2SLS) and granger causality. Result showed that manufacturing output had a causal relationship with both reserve requirement and broad money supply. However, there was no causal relationship between manufacturing output and monetary policy. Similarly, Ekpo (2018) conducted a descriptive analysis and revealed that one of the defining characteristics of the manufacturing sector is its heavy reliance on imports. It claims that investment returns, output size, cost of production and product competitiveness would be closely tied to the availability and exchange rate of foreign currency as a result. Asaleye et al. (2018) analyzed the link Nigeria's financial sector and manufacturing output using VAR. Evidence showed that the manufacturing sector was significantly and positively related to credit to the private sector along with market capitalization and employment in the private sector while broad money supply that was used to indicate the financial sector exerted a long run negative influence. The paper also discovered that the decomposition of variance reveals that the forecast error shock of credit to prime interest rate and private sector has a greater influence on manufacturing performance than other financial indicators.

Furthermore, Asongu (2020) investigated how financial access influenced manufacturing productivity in 25 countries in the SSA using the GMM) from 1980-2014. Results revealed that financial access positively drive total factor productivity, but does not significantly impact manufacturing productivity. Hammed (2020) examined the relationship in Nigeria using time series data that covering 1981 and 2018 using the cointegration test and the structural VAR model to test for shocks. Evidence revealed that money supply positively and significantly enhanced manufacturing output. Conversely, interest rate exerts a negative but insignificant impact on manufacturing output. Jungo et al. (2022) focused on financial inclusion and monetary policy in the Caribbean, SSA and Latin America using the panel VAR and feasible generalised least squared model. Result showed a bidirectional causality between both indicators.

However, since it is necessary to understand the various effects of monetary policy and manufacturing export performance, several studies have been done to encompass these 2 factors as well as other important factors. For example, Ojo and Alege (2014), Asaleye et al. (2018), Goshit et al. (2018), and Jungo et al. (2022) examined factors such as financial inclusion, manufacturing output, financial access and exchange rate fluctuations. However, previous research in this field did not examine the relationship between monetary policy and manufacturing export performance. Our study fills this gap by exploring this relationship, providing a novel contribution to financial economics literature. By using three strong indicators of monetary policy (private sector credit, interest rate and the exchange rate), clear insight is given for the future of manufacturing export in countries of the SSA. Furthermore, given the diverse nature of the SSA nations analyzed in this paper, we utilize the pooled mean group (PMG) framework that is well-suited for handling dynamic and heterogeneous panels. This approach has the potential to deliver more consistent results, compared to previous studies.

3. Methodology

The empirical model of this study was built from the Keynesian IS – LM function proposed by Keynes in 1930 and developed later by John Hicks (1937). The IS – LM framework provides a theoretical explanation of how both the product and money markets reach simultaneous equilibrium at the same level of income and interest rate. This is represented as:

$$\Delta RGDP_{it} = \alpha_0 + \alpha_1 \Delta GDP_{it} + \alpha_2 \Delta M2_{it} + \alpha_3 \Delta IR_{it} + \alpha_4 \Delta INF_{it} + \alpha_5 \Delta REER_{it} + \alpha_6 \Delta ER_{it} + \varepsilon_{it} \quad (1)$$

In equation (1), α_1, α_2, α_3, α_4, α_5 and α_6 are coefficients while GDP represents economic growth, M2 represents money supply, IR indicates interest rate, INF indicates inflation rate, REER signifies real exchange rate and ER represents external reserve. The i and t represent the countries and series respectively that were used in this panel model. Building upon the work of recent manufacturing studies, this study employs empirical models, similar to those utilized in Saud et al (2019), Yang et al. (2021), Amadi et al. (2021) and Mesagan et al. (2021), we present the manufacturing export performance equation as:

$$\Delta EXP_{it} = \alpha_0 + \alpha_1 \Delta INTR_{it} + \alpha_2 \Delta EXR_{it} + \alpha_3 \Delta CPS_{it} + \alpha_4 \Delta TOP_{it} + \alpha_5 \Delta YF_{it} + \varepsilon_{it} \quad (2)$$

The equation (2) regressors include lending interest rate (INTR), exchange rate (EXR), credit to the private sector (CPS), while the other regressors like trade openness (TOP) and foreign income (YF) are used for control purpose. Hence, α_1, α_2, α_3, α_4, α_5 and α_6 are the regressors' slope coefficient, ε_{it} is the disturbance term, while the other variables are as previously indicated. Table 1 shows the summary of the data.

Table 1: Variables Summary

Regressors	Name	Measurement	Source
EXP	Manufacturing Export	This is the total percentage of toral goods that make up exports.	WDI 2022
INTR	Lending Interest Rate	It is calculated by adjusting for inflation. The real interest rate is derived by deflating the nominal interest rate.	WDI 2022
EXR	Exchange Rate	It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar), that is LCU\GDP.	WDI 2022
CPS	Credit to the Private Sector	It is measured as the percentage of banking sector domestic credit to real GDP at constant USD.	WDI, 2022
TOP	Trade Openness	It is measured by the ratio between the sum of exports and imports and gross domestic product (GDP)	WDI, 2022
YF	Foreign Income	It is captured with foreign direct investment net inflows in % of GDP	WDI, 2022

Source: Authors' Compilation

The dependent variable, manufacturing export, is represented in Table 1 as a percentage of total exports. These dynamic heterogeneous panel regression techniques - Panel Dynamic Fixed Effect (DFE), Mean Group (MG) and Pool Mean Group (PMG) estimate techniques - are used in this study's investigation. This strategy was chosen for its dynamic nature and its ability to overcome the restrictions of cross-section (N) and time (T) in the GMM. Additionally, given that 24 SSA nations were selected for analysis and their heterogeneity, the dynamic heterogeneous panel approach is preferable. The technique divides impact into both long- and short-run impacts, with the Error Correction Term (ECT) quantifying the capacity of the model to return to long-run equilibrium after short-term adjustment (Tabash et al., 2022; Mesagan et al., 2022). As a result, the PMG framework's ECT term contributes to the verification of the regressors' long-term connection and their long-run convergence. After conducting the three estimations, we use the Hausman test to choose the most appropriate for interpretation purpose. The Hausman tests displayed in Table 5 are insignificant as their *p* values exceed the 5% critical values. It means we accept the PMG regressions through out. Data for twenty-four[1] SSA nations are employed. They are generated from the World Development Indicators based on availability between 1995 and 2020.

4. Empirical Results

In Table 2, we display the unit root result for the homogeneous and heterogeneous panels. This test is designed to ascertain if the panel series is stationary, as non-stationary series might result in biased and inconsistent estimates, leading to false conclusions. While Im et al (2003) were employed for the heterogeneous condition, the homogeneous condition was examined with the Breitung (2001) and Levin et al (2002) criteria. The findings of both the homogeneous and heterogeneous processes at the level, i.e., I(0), show that TOP and INTR are stationary at 1% while EXP and YF are stationary at a 5% level using the homogeneous criteria. The heterogeneous criteria, on the other hand, show that none of the variables are stationary at the 1% and 5% levels. EXP, INT, EXR, CPS, TOP, and YF, on the other hand, are I(1) regressors for both homogeneous and heterogeneous processes. After determining the variables' stationarity, using the KAO test, the panel cointegration is reported in Table 3.

Table 2: Unit Root Test

Regressors	**Homogeneous Processes**				**Heterogeneous Processes**			
	Level		**First Difference**		**Level**		**First Difference**	
	Breitung	**Levin et al.**	**Breitung**	**Levin *et al.***	**ADF–Fisher**	**Im *et al.***	**ADF–Fisher**	**Im *et al.***
EXP	-4.1350***	-4.1298	-14.198***	-14.994***	-0.7733	-1.1530	-21.814***	-5.4083***
CPS	1.4527	-2.9726	-6.7983***	-17.022***	2.2017	-1.0955	-16.819***	-4.5097***
INTR	0.2754	-8.5502**	-6.4164***	-23.802***	-1.9299**	-2.8583	-19.773***	-6.8523***
EXR	8.7566	-1.2983	-11.268***	-15.048***	18.2486	-0.0360	-11.468***	-3.4283***
TOP	-2.0028**	-6.5264	-9.0946***	-20.877***	-1.0461	-1.7144	-22.238***	-5.4773***
YF	17.3797	-2.9664***	-11.250***	-18.6668***	8.4331	-0.0134	-6.8901***	-2.6677***

Note: **, *** signify 5%, 1% significance level. Source: Authors' Computation

[1] Angola, Botswana, Burundi, Cameroon, Central Africa Republic, Congo, Cote D Ivoire, Gabon, Gambia, Ghana, Kenya, Madagascar, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, South Africa, Tanzania, Uganda, Zambia.

Table 3 displays test for cointegration and it shows that the Kao residual statistic is significant at the 1% significance level, indicating that there is long-term link between the regressors. Hence, we accept the null hypothesis that there is long-run relationship.

Table 3: Cointegration Test using the Kao Residual

H_0: No co-integration		
	t-Statistic	**Probability**
Unadjusted modified Dickey-Fuller t	-4.5163	0.0000***
Residual Variance	-0.1986	

Note: ***1% significance level. Source: Authors' Computation

Table 4 shows the results of the correlation analysis for the panel. The result indicates that there is no high correlation coefficients in the table that exceed 0.646. Thus, since the correlation is low, this implies that the regressors in the empirical model do not exhibit considerable multicollinearity. As a result, the study moves on to give the results of the analysis in Table 5.

Table 4: Bivariate Correlation Result

	EXP	**CPS**	**INTR**	**EXR**	**TOP**	**YF**
EXP	1.0000					
CPS	0.4035	1.0000				
INTR	0.2024	0.1649	1.0000			
EXR	0.0725	0.2601	0.0678	1.000		
TOP	0.1088	0.2572	0.1199	0.3191	1.000	
YF	0.0707	0.2103	0.2526	0.1833	0.0528	1.000

Source: Authors' Compilation

In Table 5, the analysis for the impacts of interest rate, exchange rate, and private sector credit on manufacturing export is presented. As explained in section 3, the Hausman results across the three models exceed the 5% mark. Hence, we interpret the PMG in Table 5. This is because the study hints to the suitability of the pooled mean group.

Table 5: Monetary Policy and Manufacturing Export in SSA

Explanatory Variables	Explained: ΔEXP		ARDL (1,1,1,1,1,1)
	PMG	MG	DFE
Long Run			
INTR	0.0035**	0.0180	-0.0059
	(0.0016)	(0.0114)	(0.0030)
EXR	-0.0001	0.0062	-2.0400
	(0.0001)	(0.0049)	(0.0001)
CPS	0.0114***	0.0276**	0.0052
	(0.0016)	(0.0141)	(0.0067)
TOP	0.0065***	-0.0009	0.0082
	(0.0008)	(0.0055)	(0.0029)
YF	-0.7758***	-0.2728	-0.6334
	(0.0790)	(0.2448)	(0.2134)
Short Run			
ECT	-0.2676***	-0.7409***	-0.2039***
	(0.0623)	(0.0941)	(0.4144)
INTR	0.0005	-0.0041	0.0001
	(0.0032)	(0.0037)	(0.0007)
EXR	-0.0074**	-0.0143**	-0.0001
	(0.0029)	(0.0066)	(0.0001)
CPS	-0.0045	-0.0157***	-0.0086
	(0.0029)	(0.0051)	(0.0021)
TOP	0.0027	0.0021	0.0013
	(0.0017)	(0.0022)	(0.0007)
YF	-0.3476	0.8330	-0.3848
	(0.2539)	(0.4595)	(0.3241)
Constant	6.2613***	5.4714	3.9119
	(1.4324)	(5.5509)	(0.9927)
Hausman Stat.		5.04	4.19
[prob]		[0.4111]	(0.4027)

Note: **, *** signify 5%, 1% significance level. Source: Authors' Computation

Table 5 shows the short- and long-run results of monetary policy on industrial export performance in SSA. The interest rate coefficients (INTR) are positive in both the short and long runs, with 0.0005 and 0.0035, respectively, but only the long run has a significant impact on manufacturing export performance at the 1% significance level. It means that the interplay between interest rates and manufacturing export performance has a long-term impact. However, the exchange rate has a detrimental short-term and long-term influence on industrial export performance. With the coefficients of -0.0001 and -0.0074 for the short run and long run periods for exchange rate (EXR) respectively, only the short run had a significant impact at the critical value of 5%. This implies that the fluctuation of currency prices would reduce manufacturing export performance within a short period of time before getting a balanced point.

In the short run, the coefficient of credit to the private sector (CPS) is -0.0045, indicating a negative influence on manufacturing export. It reduces manufacturing export in the short run. Nonetheless, the long term coefficient of 0.0114 indicates that credit to the private sector has a positive long-run effect on manufacturing export. The results show that credit to the private sector has a considerable long-run influence but has little short-run impact. The consequence is that a unit increase in credit to the private sector reduces short-term manufacturing export by roughly 0.004 units while increasing long-term manufacturing export by about 0.011 unit. Another result is that, considering the p-values and coefficients, the long run rise in Africa's manufacturing exports surpasses the short run loss caused by credit to the private sector (CPS) while holding the other regressors constant.

5. Discussion of Findings

The following paragraphs present the insights gained from the empirical results on how monetary policy affects manufacturing export performance. The study found that monetary policy had varying impacts on manufacturing export performance, depending on the variable used. The paper revealed that interest rate has a positive impact on manufacturing export performance in both the short run and long run. However, only the long run was significant. This implies that lowering interest rates would encourage investment into the manufacturing and production sector in the long run. With increased investment into the sector, there will be greater output and in turn, greater export of goods to other countries. Higher interest rates, however, would have an opposite effect in the long run. The exchange rate had a negative impact in both the long run and short run. However, it was significant in the short run. This can be seen in the volatility of the foreign markets and currencies which could lead to uncertainty when planning and budgeting for exports. Since the volatility can lead to lower profit margins and higher competition in the foreign markets. These would discourage exports and may even increase imports for a short period of time. However, since the volatility can be adjusted to over time, the effect is insignificant in the long run.

Credit to the private sector had a negative and insignificant impact on manufacturing export in the short run, but a positive and significant impact in the long run. In the short run, credit to the private sector can cause increased competition among domestic firms. This would lead to increase production and exporting which then results in a decline in the price of exports. This could limit export profitability. It could also lead to the appreciation of the local currency, making it harder for foreigners to import goods from that country due to how expensive the exports are. But in the long run, credit to the private sector ensures increased investment into the sector. This is a major impact as it has the potential to greatly increase manufacturing export in Sub Saharan Africa (SSA) through export diversification. The interaction between credit to the private sector and interest rate can increase long-term manufacturing exports and improve positive competitiveness and access to markets. This suggests that if well harnessed, monetary policy can promote long-run economic stability and sustainability in SSA. The recent initiatives by numerous African states to adopt sustainable monetary policies are a favourable sign for increasing the economic welfare of SSA countries. This demonstrates that the financial resources made available to the private sector by Africa's financial institutions, together with other monetary policies, can guarantee long-term growth of manufacturing exports and its performance.

6. Conclusion

The study uses the PMG methodology is used to analyse the relationship between monetary policy and manufacturing export performance in Sub-Saharan Africa (SSA). The paper is conducted for the time period of 1995 to 2020. The findings of the PMG, MG, and panel DFE are reported, whereas the Hausman results suggest that the PMG is the best fit. The results show that, for our first objective, interest rates have a beneficial influence on manufacturing export performance in the short run, but have a considerable positive impact in the long run. The results reveal that for the second objective, exchange rate negatively impacts manufacturing export performance in both the short and long run. The long run was insignificant but the short run had a significant impact. This is not unconnected with the recent volatility in local currencies as well as fluctuations in the prices in foreign markets. However, we attribute the insignificance of the exchange rate in the long run to the effects of market forces and economic fundamentals which tend to drive exchange rates towards a more stable and predictable level over time. The third objective which examines the effect of credit to the private sector is displayed in the result that credit made available to the private is negative and insignificant impact on manufacturing export in the short run, but a positive and significant impact in the long run.

Hence, monetary policy must be prioritised among Sub-Saharan African countries. To do this, it is essential to urge all countries in Sub-Saharan Africa to advance monetary policy in order to boost economic growth brought on by the benefits of manufacturing exports. The resources gotten can be invested back into the economy in order to develop even more industries and provide jobs for the unemployed. Sound monetary policies would also attract foreign investments by providing a stable economic environment with predictable inflation rates and interest rates. One of the primary goals of monetary policy is to control inflation. High inflation can lead to a decrease in the value of a country's currency, which can make imports more expensive and hurt consumers' purchasing power. In Sub-Saharan Africa, many countries have struggled with high inflation rates in the past, making inflation control an important objective. Lastly, effective monetary policy can help to promote financial stability by preventing financial crises and protecting consumers and businesses from financial shocks. This can be achieved by influencing interest rates and credit availability. Considering the study's weakness, because our analysis primarily focuses on monetary policies and their influence on manufacturing export performance, the story might differ slightly if fiscal policies are taken into account. This possible constraint should pique the curiosity of future researchers in this field. Nonetheless, monetary policy aligns nicely with the scientific enquiry conducted in this paper.

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The impact of the financial position elements changes on the market capitalization of InsurTech companies: A standard study on a sample of companies operating in the U.S. insurance market using panel models

Anis Derradji
Ph.D. student, LFIEGE laboratory, Annaba University, Algeria
ORCID: 0000-0002-6484-1189
Email: anis23000@outlook.fr

Metarref Aouatef
Lecturer Department of Finance, Annaba University, Algeria,
ORCID ID:0009-0006-3261-6899
Email: ametarref@yahoo.fr

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Abstract

The present study aims to the modeling of the relationship between the financial position of insurtech companies changes and their market capitalization by using the triple financial statements on a sample of insurtech companies operating in the United States of America during the period (2019-2022) to identify the impact of these elements on the insurtech companies' market capital. Standard analysis was used via the Panel Cross Series Models in this study where it has been concluded that the insurtech companies' sample study market capitalization is influenced by the size of their assets, the balance of net cash flows, and the total afforded costs, However, the total income balance is non-significant and does not affect the market capitalization, in addition to the static relationship between interpretative variables and market capitalization, which is due to the long-term dynamic balance absence between the studied variables.

1. Introduction

The insurance sector, like any other financial sector, is facing profound technological transformations since the growing and varying customer desires have forced the industry to integrate technology into the insurance value chain at various stages to reduce problems associated with information asymmetry, insurance fraud, and inaccurate standard pricing while adopting a new customer-centered approach. Notably, this highlights the insurtech companies' role as a new party in the insurance industry ecosystem. The small size of these companies, as well as their reliance on competencies and innovative technology, are all advantages earned by the flexibility needed to easily breach the insurance value chain however, financing is seen as a barrier to the growth and development of insurtech companies. Accordingly, financing these companies can be done in several rounds and the company's financial performance can affect the investors' opinions either by stimulating or discouraging them to continue providing financial support. Thus, the survival or withdrawal of insurtech companies from markets depends on their market capitalization, which is mainly influenced by their financial position.

In this context, the following question arises: To what extent does the change in the financial position of insurtech companies affect their market capitalization?

Study Hypotheses:

Study hypotheses are presented as follows:

- The total volume of insurtech companies' assets affects their market capitalization at a significance level of 5%
- The net cash flow balance of insurtech companies affects their market capitalization at a significance level of 5%
- Net income collected by insurtech companies affects their market capitalization at a significance level of 5%
- Total costs incurred by insurtech companies affect their market capitalization at a significance level of 5%

The current study aims to model the relationship between the changes in the financial position of insurtech companies and their market capitalization by using the insurtech companies operating in the United States of America as a sample to determine the impact of these elements on insurtech companies' market capital based on the companies trilateral data from the first quarter of 2019 until the second quarter of 2022.

The descriptive approach was adopted to present the insurtech conceptual framework, the analytical method to read statistics related to the development of insurtech companies, as well as the standard modeling to study the elements of these companies' financial position impact on their market capitalization.

2. Literature review

InsurTech were the main focus of many researchers and academics interested in the insurance industry, the novelty and complexity of this phenomenon have allowed them to analyze it thoughtfully from different perspectives. Taking into consideration the previous studies, the topic has been dealt with through its fragmentation into 04 subthemes.

- The impact of using the fin-tech innovations on the insurance industry: referring to (wang, 2021) research, where a pilot study on modern technologies was examined by relying on China's panel data during the period (2011-2018), in order to quantify the impact of these technologies on the insurance industry. Accordingly, the results showed that there is a significant effect on the assets, liabilities, and risk tolerance of the studied insurance companies, which provides a solid basis for the supervision of the insurance industry development. Additionally, both researchers (Eling & Lehmann, The Impact of Digitalization on the Insurance Value Chain and the Insurability of Risks, 2017) relied on Porter's value chain to analyze 84 research papers based on the digital transformation impact on the insurance sector. Consequently, they reached four main conclusions that include digital transformation enhances the customer experience, improves the business operations of insurance companies, allows the introduction of new products, and enables the insurance industry to compete with other industries. Equally important, the (Abdikerimova & Feng, 2021) study discussed the Peer-to-peer insurance form which was not limited to supporting the current insurance industry, but also provides innovative tools that allow the design of new insurance products. As a result, the work was wrapped up with a comparison between the traditional and the peer-to-peer insurance models, which concluded that the latter supports the insurance industry stability and reduces the insurance companies' costs. Furthermore, the (Zeier Röschmann, Erny, & Wagner, 2022) work addressed the proposal form insurance by introducing it and discussing how it creates value, in addition to the renewal of insurance offers that was identified as a mean to increase the sector's future efficiency. Similarly, (Revathi, 2020) argues that insurance companies are moving slowly but steadily toward digital transformation and that robotic automation technologies, Artificial intelligence, blockchain, and advanced analysis will enhance the insurance importance. The study suggested that insurers should adopt flexible IT strategies and establish their presence in the innovation ecosystem by partnering with emerging companies. (Eling, Nuessle, & Staubli, The impact of artificial intelligence along the insurance value chain and on the insurability of risks, 2021) the study used 91 research papers to analyze the AI dependence impact on the insurance sector, where the conclusion of cost management efficiencies, revenue improvement in addition to the change in the insurance business model philosophy from compensation to prediction and prevention of loss was reached. Also, (Stoeckli, Dremel, & Uebernickel, 2018) research was based on the grounding theory in building a model that includes empirical data of 208 innovations through market analysis based on Twitter data, in which 52 features and 14 transformative capabilities of these innovations in the insurance industry were discovered. By the same token, (Saeed, Arshed , & Zhang , 2022) work highlighted the challenges of the Indian insurance market embracing IOT technology as it was considered in its beginning In addition to the lack of research, weak governance and legislation, and the absence of awareness and systems to ensure data integrity. Consequently, certain solutions were suggested including the protection of related devices from hacking, the establishment of a high-level advisory committee to develop and design and test connected devices, the inclusion of IoT ideas in secondary schools and universities while providing human resources training programs to develop confidence and awareness of the importance of this technology. Further, the (Lin & Chen, 2019) study referred to the insurance technologies' advantages and risks where they offer many advantages in terms of efficiency, cost reduction for insurance companies and clients; however, they are accompanied by organizational risks that exceed the existing regulations capabilities. Depending on technologies such as artificial intelligence and machine learning have led to new risks associated with ethical issues, accordingly the need to investigate ethical contexts and highlight how customer data is used. Markedly, (Mullins, Holland, & Cunneen, 2021) emphasized the previous point by bringing together insurance experts and AI ethics professionals to better assess and understand some of the ethical foundations related to the employment of big data analytics, artificial intelligence, and machine learning methods in the insurance industry. (Grima, 2019) study was also interested in presenting and analyzing the literature that addressed the reliance on technological innovations effectiveness in the governance of the insurance industry by focusing on processes, internal control, supervision, and decision-making policies to ensure effective governance.

- Regulatory sandboxes Establishment for start-ups specializing in insurance technology: taking into consideration (Chen, 2018) work in which the legislative empirical environments in the UK, Australia, and Singapore, were addressed by showcasing and extrapolating these countries' experiences. The researcher considered that the number of Insurtech companies applications to join these environments is relatively low compared to other financial technology branches, also technology supports innovation in the insurance sector but has not affected existing business models. It was believed that the Insurtech innovations are aimed at strengthening and developing the already existing insurance products, coupled with the importance of creating these experimental environments to support companies that provide premium products and services where the current legislation can be seen as an obstacle to their development. Equally important, (Ostrowska, 2021) study considered that the proportionality principle is appropriate, flexible, and sufficient to embrace the activity of Insurtech companies and to address regulatory problems that may arise among stakeholders (insurance companies, regulatory bodies, customers), as this principle spares legislators from making radical changes affecting existing laws.
- The relationship Nature between Insurtech companies and traditional insurance companies: referring to (cappiello, 2020) study in which it focused on the digital transformation that would significantly affect the insurance industry and impose a radical change on the insurance companies' culture, products, operations, and relationships with customers and various competitors, by answering three major questions:
    1. Does a startup specializing in Insurtech hinder the traditional brokerage of insurance companies?
    2. How does technology impact traditional insurance brokerages?
    3. How do the new technologies use change customer relations? And how does it affect their loyalty?

Porter’s forum was used and relied on to answer the previous questions consequently three findings were reached:

- The relationship between start-ups and traditional insurers tends to be one of partnership rather than competition, where the Insurtech companies are not considered a threat to the existing insurance companies and the latter seek to have partnerships with start-ups to improve and develop each stage of the insurance value chain;
- Innovative technologies offer new options for restructuring traditional systems, as digitization profoundly affects all stages of the value chain and offers several benefits: reducing the asymmetry of information, personal and accurate pricing, and effective claims management, but newbies face several constraints that hinder their entry into the insurance market, as well as the cyber risks associated with these technological innovations.
- Concerning customer relationships, these technologies contribute to enhancing customer satisfaction by allowing them to interact with the insurance company at anytime and anywhere, but the absence of direct "face-to-face" communication might negatively affect customer loyalty.

➢ Financing Insurtech companies (Rawat, Rawat, Kumar, & Sai Sabitha, 2021) study considered that despite the multiple advantages offered by Insurtech innovations , Insurtech companies face considerable difficulties in terms of consistency, which raises the question of this model sustainability especially since the funds raised by these companies are used in the distribution of insurance policies rather than investing in the other parts of the insurance value chain and regulatory compliance.

As has been noted, the previous studies focus mainly on the adoption of Insurtech 's impact on the insurance industry and the nature of the relationship between Insurtech companies on the one hand and traditional insurance companies on the other, as well as the lack of studies that have addressed the issues associated with financing Insurtech companies. Consequently, the present study's main idea evolved based on linking the companies' financial position to their market capitalization, which reflects the financing segment.

3. Conceptual framework

Before the provision of Insurtech companies' definition, it is important to highlight the popular concept of insurance technology "Insurtech".

3.1. Insurtech definition:

Previous Academic studies have not agreed on a unified concept of Insurtech, but it can be presented through three main points:

i. Insurtech from a reliable technical perspective: refers to "using technological innovations and digital processes to generate new jobs and increase quality, savings, and efficiency in various value-added steps in the insurance industry model." (PUERTAS, et al., 2017, p. 14)

ii. Insurtech from a technical provider perspective: refers to "an insurance company, broker or insurance value chain sector specialist that uses technology either to compete or to provide value-added benefits to the insurance industry".

iii. Insurtech from both perspectives technical and provider: the term Insurtech is used to describe the use of new technology to enhance efficiency at different points of the insurance value chain, and it is also used as a synonym for startups that offer new products or provide more traditional coverage quickly and efficiently than can be provided by existing insurers. (Mandiri capital, 2020, p. 03)

In short, it can be argued that the concept of Insurtech covers different concepts beyond the idea of combining insurance and technology to include the original customer-centered approach as well as the potential of technology to enable the value chain to disrupt existing insurance business models (VanderLinden, Millie, Anderson, & Chishti, 2018, p. 06)

3.2. Insurtech companies (concept, origin, and development):

Insurtech companies are the main provider of Insurtech innovations, and below is a presentation of some definitions associated with Insurtech companies :

- Insurtech companies are defined as "institutions that use technology to add value to the insurance industry's production chain" (ENDEAVOR MEXICO, 2021, p. 05)
- It is also defined as "emerging companies that offer innovative new insurance products and sometimes offer the same products as traditional enterprises but very quickly and efficiently due to their technology-heavy reliance." (Insurance information institute, 2020)

Thus, it can be said that Insurtech companies are small and dependent on high technology making them flexible and can easily break through the insurance value chain. In Fact, the emergence of Insurtech companies dates back to 2010, as Berlin-based Friendsurance that is one of the first startups to transform the global insurance market. To clarify, This company's business model is based on peer-to-peer insurance where social media relies upon (Facebook, Linkedin..) to encourage users to invite relatives and friends and form mutual support groups where they make contributions to a common fund, part of which is to pay insurance to a third party (insurance company). In case of an accident, an individual will be compensated from the collected contributions. The overflow recorded at the end of the year will be redistributed to the contributing parties; Thus, according to this model, the insurance institution intervenes only if the compensation value exceeds the capacity of the joint fund (Abdikerimova & Feng, 2021, p. 04). Notably, 2015 was considered the Insurtech actual zig in which The world's first Insurtech accelerator was launched in London under the name "startup boot camp". (Startupbootcamp, 2015)

Furthermore Insurtech companies can be classified into 03 main categories (KPMG, 2020):

- Enables: This category provides solutions for corporation business models (B2B) that are designed to improve some of the value chain aspects of traditional insurers, such as using algorithms to improve subscription processes and helping companies understand and identify the real risks associated with insurance policies.
- Partners: This category interacts with traditional companies through platforms through which insurers can offer their products. Unlike the first category, which merely provides solutions to traditional insurers, this category is in partnership with these companies;
- Challengers: These companies are introducing new business models into the insurance sector and are seeking a license, making them a real threat to traditional insurers.

The transaction volume in Insurtech companies has been a positively rising trend since 2012, As of the third quarter of 2021,421, the number of transactions exceeding the transactions annual number of 2018 and the years before. According to a 2022 Drake Star report, the number of unicorn Insurtech companies was 28 companies worldwide (United States of America, United Kingdom, France, Germany, Asia and the Pacific) with a market value of between US $01 billion and US $9.3 billion. (Ostertag, Metzger, Morvan, & Levy, 2022, p. 14)

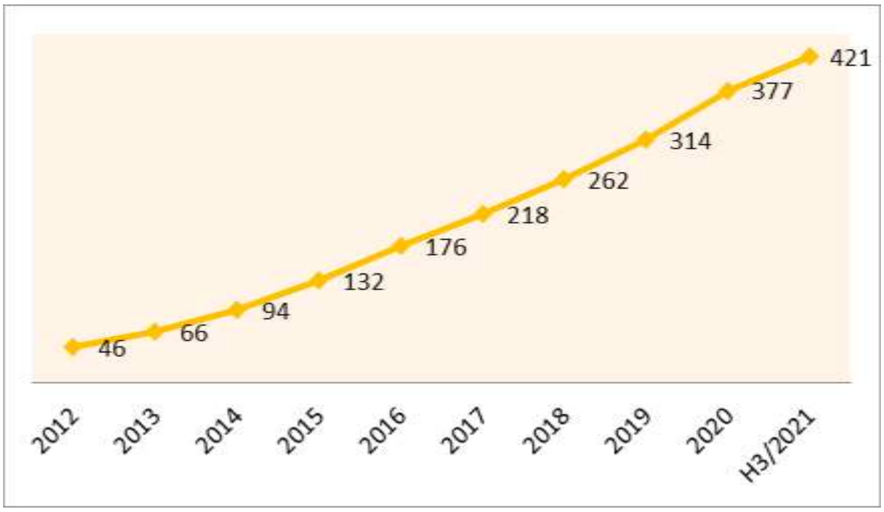

Figure 1. Number of transactions in Insurtech companies from 2012 to the third quarter of 2021

Source : (Willis Towers watson, Willis Re, & CBINSIGHTS, 2021, p. 07)

The United States of America accounts for 51% of total deals from 2012 to the third quarter of 2021, followed by the United Kingdom and China, successively.

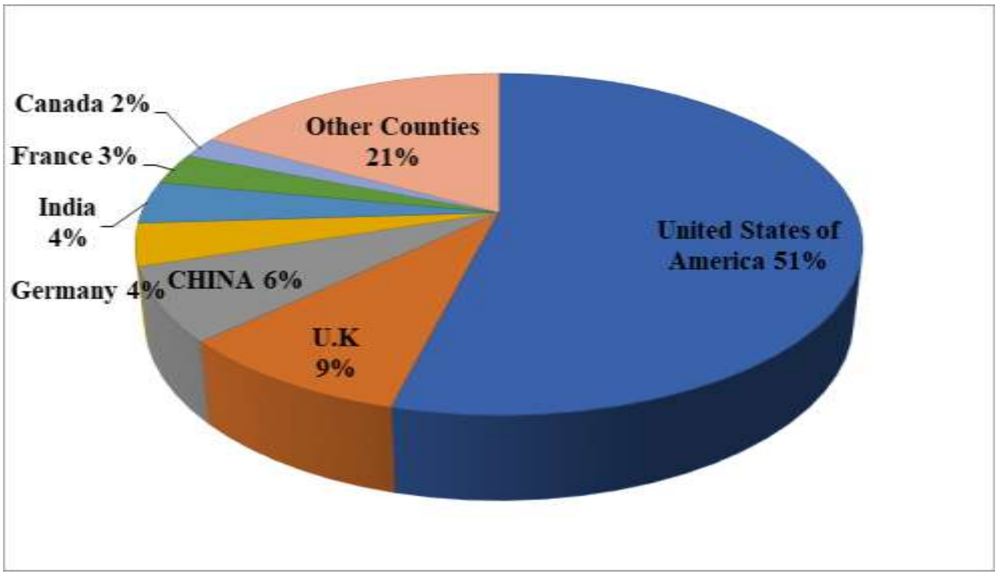

Figure 2. Countries' share of total transactions in Insurtech companies up to the third quarter of 2021

Source : (Willis Towers watson, Willis Re, & CBINSIGHTS, 2021, p. 61)

It can be noticed that the newly established companies have benefited from 37% of the world's total deals because they need funding to launch. Additionally, It is noted that the funding volume decreases with the increase in maturity.

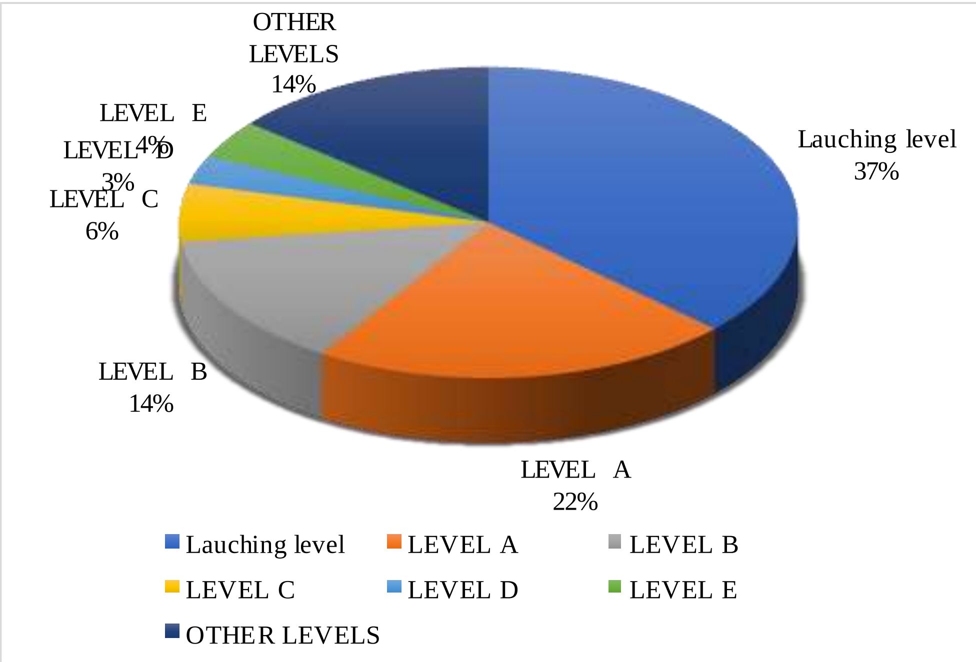

Figure 3. Insurtech companies' share of funding according to the maturity level up to the third quarter of 2021

Source : (Willis Towers watson, Willis Re, & CBINSIGHTS, 2021, p. 61)

Traditional insurers and reinsurers, as well as venture capitals, are among the most prominent financiers of Insurtech companies, according to the "Juniper Research" study. As a matter of fact, Ping An, Axa, Munich Re, Humana, and Allianz are among the largest insurers and traditional reinsurers committed to investing in Insurtech companies, some of which can be referred to as: (Atlas magazine, 2021)

- The insurance company "Generali France" has strengthened its relationship with the Insurtech company "Advize" in order to digitize life insurance services.
- Hollard Insurance (South Africa) and Yellowwoods, a European-based private investment group, jointly invested $1,4 million in Naked Insurance.
- In March 2021, Allianz invested $75 million in WELAB, a Hong Kong lending platform that brings together lenders and borrowers in China and Indonesia.
- The Spanish branch of AXA Complex in Feffrey 2021 entered into a partnership with the French Insurtech company "Akur 8", which will enable the branch to improve its pricing processes.
- At the end of 2019, Covéa, a French cooperative group, launched the Insurtech company Appenin, focusing on digital home insurance.
- Munich Re Complex in Feffrey 2021 announced a partnership with Sun Capital Partners to launch Insurtech specialist Abacai, where the new entity initially focuses on the UK automotive insurance market.

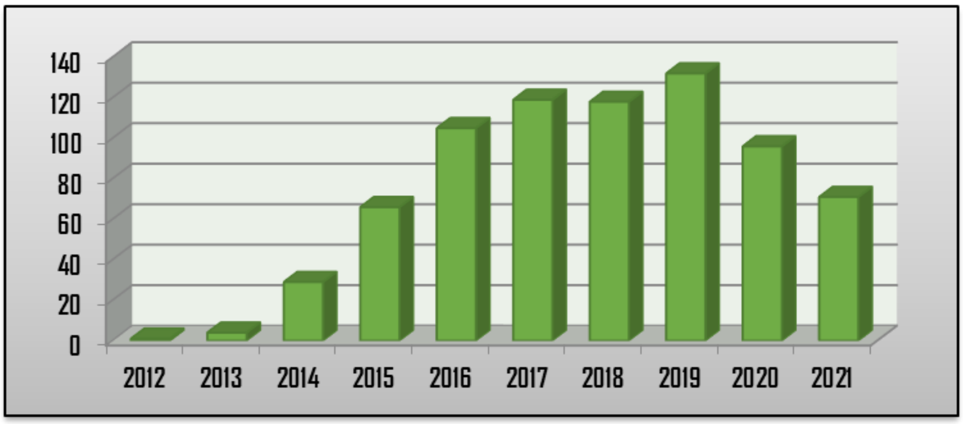

Figure 4. Number of insurance and reinsurance companies' transactions Insurtech companies evolved from 2012 to the third trio of 2021

Source : (Willis Towers watson, Willis Re, & CBINSIGHTS, 2021, p. 81)

The United States of America accounted for 58% of the total number of transactions during this period, followed by France (09%), China (08%), the United Kingdom (06%), Germany (04%), and Canada (03%), while it included the share of other countries combined (12%). In like manner, the number of risk capital institutions investing in Insurtech has seen a record increase from 153 investors in 2012 to 1,118 until the end of 2021 third trimester, an estimated 630 percent increase, reflecting the risk importance that the enterprises' place on the Insurtech sector.

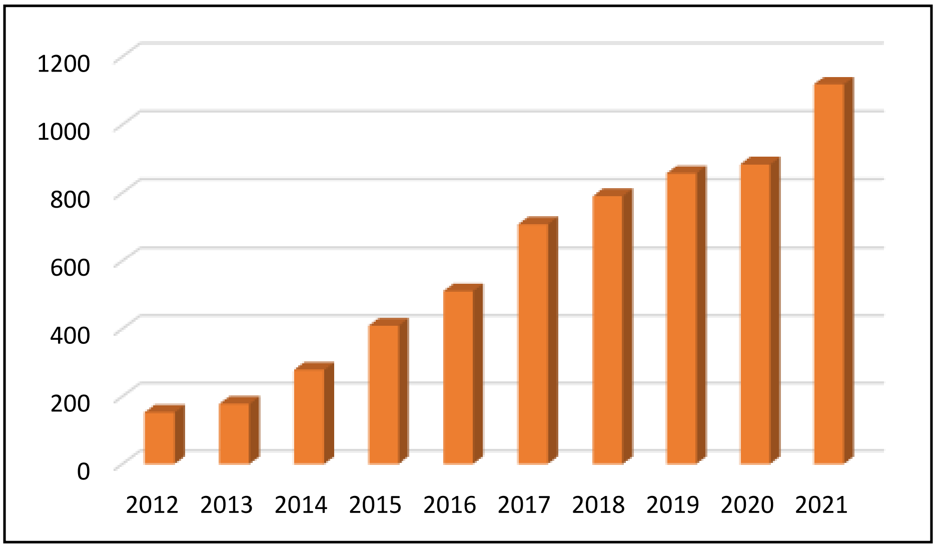

Figure 5. Number of risk capital institutions invested in the Insurtech sector evolved from 2012 to the third trio of 2021

Source : (Willis Towers watson, Willis Re, & CBINSIGHTS, 2021, p. 09)

4. Data and Methodology

The present study data was collected from Insurtech companies operating in the United States of America, including the 07 Insurtech companies (Table No. 1). In fact, The US insurance market is selected because it is holding more than 50% of the total transactions in Insurtech companies globally. Thereupon, The study sample was determined based on the availability of its financial statements. The companies' tripartite data were compiled from the first quarter of 2019 to the second quarter of 2022. That is, (T = 12) based on the Yahoo Finance database, which is available on the financial information issued by the New York Stock Exchange (NYSE) and the Nasdaq, which are the exchanges on which the shares of the studied Insurtech companies.

Table 1. Insurtech Companies Sample Study

Company name	Founding date	Field	Workers number
Root Inc	2015	Car and Home Insurance	1 571
Gohealth	2001	Health insurance	5 448
Duck creek technologies	2016	Cloud computing services in the insurance industry	1 653
Clover health investments	2014	Health insurance	680
Oscar health	2012	Health insurance	2 621
Lemonade	2015	Property Insurance and Civil Liability	1119
Bright health group	2015	Health insurance	3203

Source: by study researchers based on (Yahoo finance)

Before the estimation of the study model, the multicollinearity test was conducted to detect the existence of a multicollinearity problem or not, and to do so the Variance Inflation Factor for each of the independent variables was used. (Akinwande, Garba Dikko, & Samson, 2015, p. 756)

The study was based on the three models of the Panel Methodology: Random Effects Model (REM), Fixed Effects Model (FEM), Pooled Regression Model (PRM), and the differentiation between models took place in two stages:

- **First Phase:** The differentiation between the Pooled Regression Model (PRM), and the Fixed Effects Model has been based on the Likelihood Ratio test, which includes the results of the restricted Fisher test and the Kai Square test.
- **Second Phase:** The Differentiation between the Fixed Effects Model and the Random Effects Model was done based on the (Husman, 1978) test.
  - **Study Model:** To study the financial position element's impact on the capitalization of Insurtech companies, the following model has been relied upon:

Capitalization = F (assets ,Freecashflow,Totalexp,Totalrevenue)

Notably, The model can be drafted mathematically as follows:

$$Capitalization_{it} = a_0 + a_1 Assets_{it} + a_2 Freecashflow_{it} + a_3 Totalexp_{it} + Totalrevenue_{it} + \varepsilon_t$$

Where:

- Capitalization: refers to the total capital of Insurtech companies (market price per share * Number of shares in circulation) in thousands of dollars
- Assets: refers to the total assets of Insurtech companies in the thousands of dollars;
- Free cash flow: refers to The balance of net cash flows from operational investment and financing activities in the thousands of dollars;
- Total revenue: refers to the total income collected by companies in thousands of dollars
- Totalexp: refers to the Total corporate costs of thousands of dollars
- ε_t Random Error Limit.

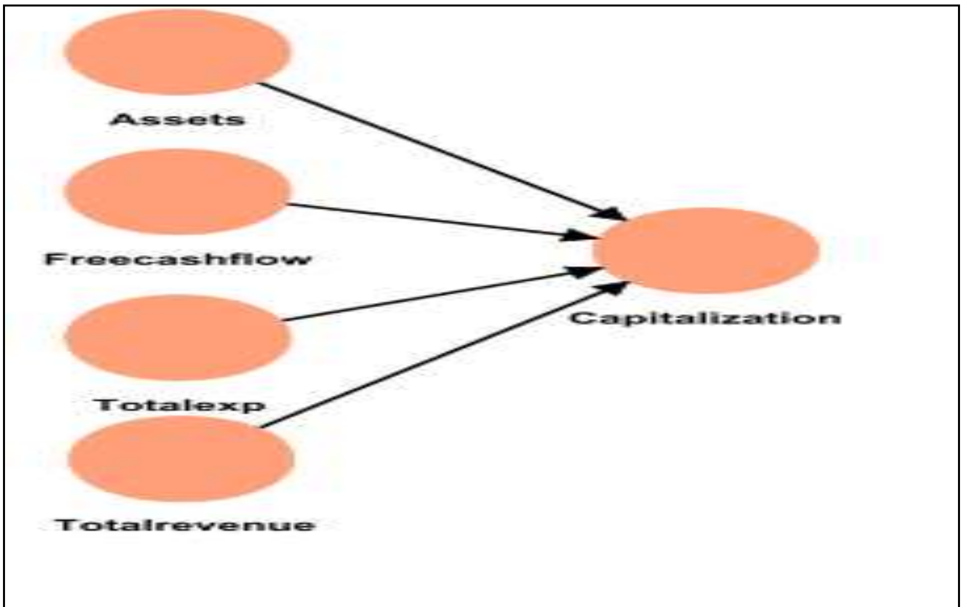

Figure 6. Applied study model

Source: study researchers

5. Applied research Study Results

Variable inflation factor results showed that the VIF value per variable did not exceed the value of 10, which indicates the freedom of the model from the multiple correlation problem.

Table 2. Results of the variable inflation factor

Variables	Total revenue	Totalexp	Freechashflow	Assets
Variable inflation factor (VIF)	3.70	3.70	1.14	2.43

Source: study author

The estimation results reached the significance of the three models, which is proven by Fisher's test probability.

Table3. Estimated Study Model Parameters Using the Three Ways of Panel Methodology

Study variables	Pooled Regression Model (PRM)	Fixed Effects Model (FEM)	Random Effects Model (REM)
Assets	0.643442**	0.740578**	0.693316**
Free cash flow	-0.6879626*	-0.605445*	-0.648250*
Total revenue	-0.192929	-0.262342	-0.224353
Total exp	-0.952541**	-0.891304**	-0.956260**
R^2	0.621901	0.750774	0.673955
Fisher test	38.24	26.20	48.05
Prob(F)	(0.0000)	(0.0000)	(0.0000)

Source: Author's calculation using EVIEWS

Note :

- (*) indicates significance at a 5% level,
- (**) indicates significance at a 1% level.
- Values in parentheses are P value.

- The results of the Likelihood Ratio test showed that the Fixed Effects Model (FEM) was accepted and the Pooled Regression Model (PRM) was rejected, due to the probability value of both tests being less than a 5% significance level.

Table4. Likelihood Ratio Test Results

Test	Statistical value	Freedom degree	P value
Cross-section F	7.497813	(6,87)	0.0000
Cross-section Chi-Square	40.845848	6	0.0000

Source: Author's calculation using EVIEWS

- The results of the Hausman test show acceptance of the Fixed Effects Model and rejection of the Random Effects Model, as the probability value is below the significance level of 5%.

Table 5. Hausman Test Results

Test	Statistical value	Freedom degree	P value
Cross-section F Random		21.707905	0.0002

Source: Author's calculation using EVIEWS

Table 3 results show that the total assets variable is significant at a 1% level which positively affects the capitalization of Insurtech companies, and the net cash flow balance variable is significant at 5%, Positively affecting their capital (the negative indication refers to Insurtech companies inability surveyed to achieve a positive balance throughout the study period)

The total costs variable is significant at a 1% level affecting negatively the capital of Insurtech companies, but the total income variable is immoral as its probability (0.2570) which is higher than the significance level of 5%, While the model explanatory power as a whole is estimated at 75%, confirming that the capitalization of Insurtech companies is greatly interpreted by the studied interpretative variables.

After ascertaining the model significance, the possibility of a long-term balanced dynamic relationship between the variables of the selected Fixed Effects Model was examined by conducting unit root tests, where the tests of LLC, Breitung, IPS, Fisher-ADF, PP were used taking into consideration all test equations included a fixed limit and a general direction where the selection of the delay periods number was automated according to the AIC standard.

Table 6. Unit Root Test Results at the Level of Panel Variables

Tests	LLC	Breitung test	IPS test	ADF test	PP test
Study variables	Prob	Prob	Prob	Prob	**Prob**
Capitalization	3.72788**	4.31938**	0.87114	17.7985	**22.9078**
Assets	4.23800**	0.45797	1.01004	20.6901	**50.7696****
Free cash flow	5.27143**	1.14740	2.80065**	32.3300**	**31.5982****
Total revenue	2.96142**	1.03359	0.22707	13.5682	**20.7893**
Totalexp	5.31234**	1.47621	1.92565*	25.1759*	**27.7302***

Source: Author's calculation using EVIEWS

Note :

- (*) indicates significance at a 5% level,
- (**) indicates significance at a 1% level.

Most of stationarity tests show that Free cash flow and Totalexp are stationary at the level while the rest of the variables are not stationary at the level.

All variables stabilized at the first discrepancies, making them top-notch integral.

Table 7. Unit Root Test Results at First Difference of Panel Variables

Test	LLC	Breitung test	IPS test	ADF test	PP test
Study variables	**Prob**	**Prob**	**Prob**	**Prob**	**Prob**
Capitalization	5.78750**	4.99773**	1.96616*	25.2535*	**77.4604****
Assets	7.61105**	6.38382**	4.57900**	46.7157**	**125.819****
Total revenue	4.39253**	3.76121**	2.80065**	32.3300**	**75.2288****

Source: Author's calculation using EVIEWS

Note :

- (*) indicates significance at a 5% level,
- (**) indicates significance at a 1% level.

The (Pedroni, 1999) tests were used to study the possibility of a long-term balance between interpretative variables and the capitalization of Insurtech companies. To clarify, the following table shows the results.

Table 8. Cointegration Test for Panel Variables Based on Pedroni Tests

Test	Probability
Panel V-Statistic	**0.7131**
Panel rho-Statistic	**0.9000**
Panel PP-Statistic	**0.3039**
Panel ADF-Statistic	**0.8150**
Group rho-Statistic	**0.9941**
Group PP-Statistic	**0.0653**

Source: Author's calculation using EVIEWS

The table results show that the reliable tests probability is higher than the significance level of 5%; therefore the nihilistic hypothesis stating that there is no cointegration between interpretive variables and the variable capitalization of Insurtech companies cannot be dismissed, i.e. the relationship between variables is static and not dynamic in the long term.

6. Discussion of the Findings

The results of the Panel methodology show that the total assets variable of Insurtech companies is significant and positively affects their capital, to clarify, an increase in the volume of these companies' assets would motivate potential investors to subscribe to their shares. Accordingly, Increasing the volume of assets by 01 USD would increase their capital by USD 0.74 USD, and the net cash flow balance variable is significant and positively affects its capital (the negative indication that the Insurtech companies studied are unable to achieve a positive balance throughout the study period),

For this reason, the decline in this balance of 01USD results in the value of its capital deterioration by 0.6 USD due to its negative impacts on investors and its implications for the market value of companies' shares. In addition, the capital of Insurtech companies is influenced by the balance of total costs. Where the increase of this balance by 01 USD results in a decrease in these companies' capital by 0.89 USD and the company's inability to manage and control costs negatively affects the size of its capital.

However, the total income variable is non-significant and does not affect Insurtech companies' market capitalization. Additionally, the cointegration tests were not confirmed which reflected in assuming that the relationship between interpretative variables and market capitalization is characterized by stillness, due to the absence of a long-term dynamic balance between the studied variables.

Table 9. Results of the Study Hypotheses Test

Hypothesis	P value	Tests results
The total volume of Insurtech companies' assets affects their market capitalization	0.0000	Confirmed
The net cash flow balance of Insurtech companies affects their market capitalization	0.0442	Confirmed
Net income collected by Insurtech companies affects their market capitalization	0.2570	Not confirmed
Total costs incurred by Insurtech companies affect their market capitalization	0.0053	Confirmed

Source: Author's

7. Conclusion

Taking into consideration the study results and study findings, the following suggestions can be used in future research:

- Enhancing the activity of Insurtech companies is subject to the availability of experimental regulatory sandboxes that help these companies gradually integrate into the insurance sector. This is reflected in the granting of temporary accreditation for the exercise of the activity, which is subsequently confirmed after ensuring the effectiveness of the products offered by these companies, the reduction in the restrictions associated with the precautionary rules (minimum capital, solvency standards;..);
- When designing and pricing the products, Insurtech companies must take into account aspects of data privacy, customer knowledge policies, money laundering, and terrorist financing;
- Building relationships based on a partnership between Insurtech companies and traditional insurance companies would reflect positively on the insurance sector as a whole. The first is flexible and innovative, while the second has a large base, expertise in the field, and the ability to comply with precautionary rules.

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Strategic management of local economic development in Georgian municipalities: A review of municipal and private sector dialogue[1]

Zura Gamtenadze
Ph.D. student of Business Administration, Ivane Javakhishvili Tbilisi State University, Tbilisi, Georgia
ORCID: 0000-0002-9001-1277
E-mail: gamtenadze.zura@gmail.com

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Abstract

Strategic management of local economic development in Georgia is a complex and multifaceted process that requires the active participation of both the public and private sectors. Municipal economic policies play a crucial role in promoting the sustainable growth of local communities. The inclusion of the private sector in the local decision-making process is a key factor in this regard, as it allows for the alignment of public and private interests and the identification of mutually beneficial opportunities. Municipal and private sector dialogue has increasingly gained attention as a means of fostering private sector engagement in local decision-making processes. While the private sector has traditionally been viewed as a partner in economic development, its role in shaping public policies and strategies has often been limited. However, with the recognition that the private sector can bring valuable expertise, resources, and perspectives to the table, efforts have been made to enhance dialogue and collaboration between municipalities and private sector actors. This paper aims to explore the various forms of municipal and private sector dialogue. Through a review of the literature and case studies, this paper will examine the benefits and challenges of municipal and private sector dialogue in the different sectors. It will also explore the various approaches and mechanisms used to facilitate dialogue and collaboration, including stakeholder consultations, PPP and advisory committees. The findings of this paper will be of interest to policymakers, practitioners, and academics working in the fields of local economic development. It will provide insights into the potential role of the private sector in shaping public policies and strategies, and the importance of fostering dialogue and collaboration between municipalities and private sector actors. This research will contribute to the broader discourse on municipal and private sector dialogue and its potential to support local economic development and decision-making processes.

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1. Introduction

The strategic management of local economic development is an essential process for promoting the sustainable growth of local communities. This process necessitates the active participation of both public and private sectors. The role of municipalities in facilitating economic growth is undeniable; however, the involvement of the private sector in local decision-making processes remains a key factor in determining the success of these efforts. The purpose of this paper is to explore the various forms of municipal and private sector dialogue (MPSD) in the context of Georgian municipalities, and to examine the potential benefits and challenges that arise from such collaborations. Local economic development relies on the successful implementation of strategic policies and plans that can boost job creation, investment attraction, and the overall improvement of living conditions for the residents. These policies and plans need to be in alignment with the private sector's interests to ensure that both parties are working towards shared goals. As such, fostering dialogue and collaboration between municipalities and private sector actors is crucial in developing sustainable local economic growth strategies.

In recent years, Georgia has witnessed several local initiatives aimed at supporting the inclusion of small and medium-sized enterprises (SMEs) in the decision-making process. Mayors have launched initiatives such as Public-Private Dialogue (PPD) Clubs and Needs Assessment Meetings, which help to facilitate a more inclusive approach to local economic development. These initiatives aim to create opportunities for SMEs to contribute their expertise and insights to the development of local policies and plans. However, a significant challenge faced by Georgian municipalities is their limited power to stimulate local economic development. This has necessitated a greater reliance on dialogue and collaboration with private sector actors to harness their resources and expertise in driving local growth. By engaging the private sector in shaping public policies and strategies, municipalities can work towards overcoming these challenges and creating a more conducive environment for local economic development. Key stakeholders in Georgia involved in local economic development and MPSD include the Ministry of Regional Development and Infrastructure, the Ministry of Economy and Sustainable Development, local SMEs, and civil society organizations (CSOs). International organizations also play a role in supporting and promoting local economic development initiatives in the country.

The paper is structured as follows: the first section provides a comprehensive literature review on the various forms of municipal and private sector dialogue, highlighting its benefits and challenges, as well as the different approaches and mechanisms used to facilitate dialogue and collaboration. The second section delves into the specifics of public-private dialogue (PPD) in the context of Georgia, focusing on case studies and real-life examples to better understand the implementation of PPD within the Georgian context. The final section offers a summary of the paper's findings and discusses the implications for policymakers, practitioners, and academics working in the field of local economic development.

This paper aims to fulfill several objectives. Firstly, it seeks to explore the various forms of municipal and private sector dialogue in the context of Georgian municipalities, examining local initiatives such as PPD Clubs and Needs Assessment Meetings. Secondly, the paper strives to examine the benefits and challenges of municipal and private sector dialogue in different sectors, shedding light on the unique challenges faced by Georgian municipalities and the opportunities for collaboration with private sector actors. Thirdly, the paper will investigate the approaches and mechanisms used to facilitate dialogue and collaboration between municipalities and private sector actors, focusing on the role of key stakeholders such as government ministries, SMEs, and CSOs. Lastly, this research will contribute to the broader discourse on municipal and private sector dialogue and its potential to support local economic development and decision-making processes, providing valuable insights for policymakers, practitioners, and academics working in the field.

By addressing these objectives, this paper aims to provide valuable insights into the potential role of the private sector in shaping public policies and strategies in Georgian municipalities, emphasizing the importance of fostering dialogue and collaboration between the two sectors. Furthermore, this research will draw upon the lessons learned from case studies, existing literature, and experiences from other countries, as well as the specific initiatives implemented in Georgia, such as PPD Clubs and Needs Assessment Meetings. This approach will provide a more comprehensive understanding of the mechanisms through which municipal and private sector dialogue can enhance the strategic management of local economic development in Georgia. Ultimately, this research seeks to contribute to a better understanding of the potential synergies between public and private sector actors in promoting sustainable growth and development at the local level, taking into account the unique challenges and opportunities faced by Georgian municipalities.

2. Literature Review

The literature on municipal and private sector dialogue (MPSD) offers a wealth of information regarding the various forms, benefits, challenges, approaches, and mechanisms employed in promoting collaboration between public and private sector actors in local economic development. In this review, the focus will be on understanding the different aspects of MPSD, drawing upon a range of carefully selected sources to provide a comprehensive analysis of the subject.

The literature identifies various forms of MPSD, including Public-Private Partnerships (PPPs), Public-Private Dialogue (PPD) platforms, and advisory committees (Hodge & Greve, 2007; Herzberg & Wright, 2006). PPPs are contractual arrangements between public and private sector actors for the provision of public goods or services (Grimsey & Lewis, 2007), whereas PPD platforms are geared toward creating opportunities for regular communication and consultation between public and private sector representatives (Herzberg & Wright, 2006). Advisory committees serve as another form of MPSD, where private sector representatives participate in the development and implementation of public policies and strategies (Hodge & Greve, 2007).

MPSD offers several benefits in local economic development, such as improved policy-making, increased investment, and better alignment of public and private sector interests (Bingham et al., 2005; Donahue & Zeckhauser, 2011). The private sector can provide valuable expertise, resources, and perspectives, leading to more informed and effective decision-making processes (Rodríguez-Pose & Tijmstra, 2009). By fostering dialogue and collaboration, public and private sectors can identify mutually beneficial opportunities, leverage resources more effectively, and promote innovation in the local economy (Brinkerhoff & Brinkerhoff, 2011). However, challenges associated with MPSD, such as power imbalances, potential corruption, and the risk of regulatory capture, must be carefully managed to maximize the potential benefits (Stiglitz, 2010; Pérard, 2009). Overcoming these challenges requires establishing clear guidelines, promoting transparency and accountability, and implementing mechanisms to address conflicts of interest and ensure equitable representation of stakeholders (Pérard, 2009).

Several approaches and mechanisms have been proposed to facilitate MPSD. Stakeholder consultations involve meetings and discussions between public and private sector representatives to identify shared priorities and develop collaborative solutions (Brinkerhoff & Brinkerhoff, 2011). These consultations can provide opportunities for diverse perspectives to be considered and for stakeholders to reach a consensus on key issues, thus fostering a more inclusive decision-making process (Reed, 2008). Public-Private Dialogue (PPD) platforms provide another mechanism for facilitating ongoing communication and consultation between public and private sector actors (Herzberg & Wright, 2006). These platforms can be tailored to suit the specific needs and contexts of different localities, allowing for a more flexible and adaptable approach to collaboration (Schmitter & Streeck, 1999). Additionally, the formation of joint committees, task forces, or working groups can bring together representatives from both sectors to address specific issues or projects, ensuring close collaboration and the exchange of knowledge and expertise (Jamali, 2004; Nelson & Zadek, 2000). By focusing on shared goals and objectives, these collaborative arrangements can foster a sense of common purpose and facilitate the development of innovative solutions to local challenges (Huxham & Vangen, 2005).

In the Georgian context, specific initiatives such as PPD Clubs and Needs Assessment Meetings, led by mayors, have been implemented to support the inclusion of SMEs in the decision-making process (Georgian Government, 2019). These initiatives are examples of how MPSD can be facilitated at the local level, aiming to create a more inclusive environment for local economic development. By actively engaging SMEs and other local stakeholders in these initiatives, Georgian municipalities can foster a sense of ownership and shared responsibility in the development process, which can lead to more sustainable and effective outcomes (Reed, 2008). A variety of studies and reports highlight successful examples of MPSD in different countries, offering valuable insights into factors that contribute to the success of these collaborations. A World Bank study by Herzberg and Wright (2006) presents case studies from different countries, showcasing the effectiveness of PPD platforms in promoting private sector engagement in public policy-making processes. The study emphasizes the importance of building trust, fostering transparency, and promoting inclusiveness as key success factors for these platforms. In a similar vein, Tennyson (2011) discusses the role of partnerships and dialogue in fostering sustainable development, emphasizing the importance of multi-stakeholder collaboration and shared learning as drivers of successful outcomes.

Researchers have also explored the role of institutional factors in shaping the success of MPSD. Jamali (2004) suggests that the quality of governance and the presence of a supportive legal and regulatory framework play a critical role in fostering successful public-private collaborations. This highlights the need for a strong institutional environment that enables and supports the effective functioning of MPSD mechanisms, by providing clear rules and guidelines, ensuring access to relevant information, and promoting accountability and transparency (OECD, 2016). Furthermore, Hodge and Greve (2007) argue that trust, transparency, and mutual understanding are essential elements for facilitating effective dialogue between public and private sector actors. They emphasize the importance of building and maintaining strong relationships between stakeholders, which can be achieved through regular communication, joint problem-solving, and the development of shared goals and objectives.

In conclusion, the literature on MPSD presents a diverse range of approaches, mechanisms, and success factors for fostering collaboration between public and private sector actors in local economic development. While there are numerous benefits associated with such collaborations, it is important to carefully manage the potential challenges and risks. By drawing on international best practices and tailoring approaches to local contexts and needs, MPSD can contribute significantly to more inclusive and sustainable local economic development outcomes.

3. Research Methodology

This chapter outlines the research methodology employed in this study to investigate the strategic management of local economic development in Georgian municipalities, with a focus on municipal and private sector dialogue (MPSD). The study employs a qualitative research design and analyzes the "Organic Law of Georgia - Local Self-government Code" as the primary source of data, alongside a review of the relevant literature.

A qualitative research design was chosen as it allows for an in-depth exploration of the complex nature of MPSD in Georgian municipalities. The primary source of data, the "Organic Law of Georgia - Local Self-government Code," provides an authoritative account of the legal framework governing local governance in Georgia. In addition to the primary source, a review of the relevant literature was conducted to gain insights into the international best practices and experiences related to MPSD. To analyze the data, qualitative content analysis techniques were employed. This method involves the systematic examination and interpretation of textual data to identify patterns, themes, and categories. Throughout the research process, ethical considerations were carefully addressed to ensure the integrity and validity of the study.

The study has several limitations. First, the reliance on the "Organic Law of Georgia - Local Self-government Code" as the primary source of data restricts the analysis to the legal and institutional framework governing MPSD in Georgian municipalities. This means that the study may not capture the full range of practices, initiatives, and experiences related to MPSD in the country. Second, the lack of available case studies of MPSD initiatives in Georgian municipalities limits the empirical examination of the benefits and challenges of such dialogue in the local context. However, the study addresses this limitation by drawing on international best practices and experiences. Third, the qualitative research design employed in this study may not allow for the generalization of the findings to other contexts or settings. Nevertheless, the study provides a detailed account of the legal and institutional framework governing MPSD in Georgian municipalities, as well as a comprehensive analysis of the benefits and challenges of such dialogue.

In conclusion, this study provides an initial exploration of the legal and institutional framework governing MPSD in Georgian municipalities and contributes to the broader discourse on the potential role of MPSD in supporting local economic development and decision-making processes in Georgia. It is hoped that this research will inspire further investigation and foster a deeper understanding of the dynamics and potential impact of MPSD in Georgian municipalities and beyond.

4. Municipal and Private Sector Dialogue in Georgia

In Georgia, municipal and private sector dialogue (MPSD) has played an essential role in local economic development, despite the lack of well-documented case studies in the literature (Huggins & Thompson, 2015). This chapter aims to explore the various forms and approaches to MPSD in Georgian municipalities, using the information provided in the "Organic Law of Georgia - Local Self-government Code" and other relevant sources, while recognizing the potential limitations in the availability of comprehensive case studies (Parliament of Georgia, 2014). It is important to acknowledge the nascent stage of the PPD process in Georgia; however, municipal management has always included dialogue with stakeholders to some extent, demonstrating the country's ongoing commitment to incorporating diverse perspectives in local decision-making (Huggins & Thompson, 2015; Brinkhoff, 2016).

The "Organic Law of Georgia - Local Self-government Code" outlines the legal framework and powers of Georgian municipalities in managing local affairs, including local economic development (Parliament of Georgia, 2014). According to the Code, Georgian municipalities have the responsibility to design and implement local development policies in consultation with relevant stakeholders, such as the private sector and civil society organizations (CSOs). This highlights the importance of fostering dialogue and collaboration between municipalities and private sector actors in the local decision-making process, as their joint efforts can lead to more effective and inclusive policies that better address the needs of local communities (Brinkhoff, 2016; Besussi et al., 2017).

One way that Georgian municipalities have sought to engage the private sector in local economic development is through Public-Private Dialogue (PPD) clubs (World Bank, 2018). These clubs bring together representatives from the municipal government, private sector, and CSOs to discuss and address local economic challenges and opportunities, enabling an open and constructive exchange of ideas (Krause et al., 2016). Although there is limited empirical evidence on the success and impact of PPD clubs in Georgian municipalities, the existence of such initiatives suggests an awareness of the need for a more collaborative approach to local economic development. It also underscores the potential for PPD clubs to serve as platforms for enhancing trust and fostering stronger relationships between the public and private sectors, which are essential for effective collaboration (Besussi et al., 2017; Arenas et al., 2018).

Furthermore, Georgian municipalities have engaged in stakeholder consultations and Needs Assessment Meetings to involve the private sector, particularly small and medium-sized enterprises (SMEs), in decision-making processes (Porter et al., 2016). These meetings allow for an open exchange of ideas and the identification of mutually beneficial opportunities for public and private sector collaboration. By engaging SMEs in these consultations, municipalities can better understand the needs and priorities of local businesses and develop targeted policies to support local economic development. Such targeted policies can, in turn, contribute to improved economic outcomes for both SMEs and the broader community, reinforcing the value of engaging the private sector in local decision-making processes (Arenas et al., 2018; European Commission, 2020). In this context, municipalities may need to seek creative solutions and leverage the expertise of external partners, such as international organizations, to overcome these limitations and achieve their local economic development goals. By collaborating with international organizations that have experience in promoting PPD and fostering MPSD in various contexts, Georgian municipalities can learn from best practices and adapt them to their unique local circumstances (Söderbaum & Sohn, 2015; World Bank, 2018; European Commission, 2020).

Another challenge facing MPSD in Georgian municipalities is the lack of institutional capacity and resources needed to effectively engage the private sector in local decision-making processes (Meyer-Stamer, 2008). Limited funding, personnel, and technical expertise can constrain the ability of municipalities to initiate and sustain meaningful dialogue and collaboration with private sector actors. This challenge is exacerbated by the often fragmented nature of the private sector in Georgia, which can make it difficult for municipalities to identify and engage relevant stakeholders in a comprehensive manner (Besussi et al., 2017). To overcome these challenges, municipalities may benefit from capacity-building initiatives and support from international organizations, such as the World Bank or the European Union, which have experience in promoting PPD and fostering MPSD in various contexts. These organizations can provide valuable resources, such as training programs, technical assistance, and financial support, to help Georgian municipalities build their capacity to engage the private sector effectively in local decision-making processes (World Bank, 2018; European Commission, 2020).

Moreover, the importance of trust and transparency in facilitating MPSD cannot be understated. In Georgia, as in many other countries, building trust between the public and private sectors can be challenging due to historical factors, cultural differences, and the prevalence of corruption (Söderbaum & Sohn, 2015). Addressing these issues is crucial for fostering a positive environment for MPSD, as trust is a key factor in facilitating open dialogue and effective collaboration between municipal governments and private sector actors (Porter et al., 2016; Brinkhoff, 2016). To enhance trust and transparency in MPSD, Georgian municipalities can implement various strategies and initiatives. One possible approach is to establish clear and transparent procedures for engaging the private sector in local decision-making processes, including the selection of representatives, the organization of meetings, and the dissemination of information (Porter et al., 2016). Another strategy is to establish a clear code of conduct for MPSD participants, outlining their rights, responsibilities, and ethical obligations (Krause et al., 2016). This can help to ensure that all parties involved in MPSD adhere to high standards of integrity and professionalism, thereby building trust and credibility over time (Arenas et al., 2018).

In addition to trust and transparency, effective communication is crucial for fostering successful MPSD in Georgian municipalities. Municipal governments should prioritize the establishment of open and accessible channels of communication with the private sector, allowing for an ongoing exchange of information and ideas (Meyer-Stamer, 2008). This can include the use of technology, such as online platforms and social media, to facilitate communication and information sharing between municipalities and private sector actors (Porter et al., 2016; Brinkhoff, 2016). By fostering a culture of open communication, municipalities can ensure that private sector actors are actively involved in local decision-making processes, leading to more inclusive and effective outcomes (Arenas et al., 2018). In conclusion, while there is limited empirical evidence on MPSD in Georgian municipalities, the available information and the legislative framework provided by the "Organic Law of Georgia - Local Self-government Code" indicate a clear commitment to fostering dialogue and collaboration between municipalities and private sector actors (Parliament of Georgia, 2014). Various initiatives, such as PPD clubs, stakeholder consultations, and Needs Assessment Meetings, demonstrate the ongoing efforts of Georgian municipalities to involve the private sector in local decision-making processes and promote local economic development (World Bank, 2018; Porter et al., 2016; Arenas et al., 2018).

However, several challenges remain, including the limited powers of municipalities to stimulate local economic development, a lack of institutional capacity and resources, and the need to build trust and transparency between public and private sectors (Parliament of Georgia, 2014; Meyer-Stamer, 2008; Söderbaum & Sohn, 2015). To address these challenges, Georgian municipalities can draw on the support and expertise of international organizations, implement capacity-building initiatives, and focus on fostering trust, transparency, and effective communication in their interactions with private sector actors (World Bank, 2018; European Commission, 2020; Krause et al., 2016). By adopting these strategies and learning from global best practices, Georgian municipalities have the potential to strengthen their MPSD efforts and create a more inclusive, collaborative, and effective approach to local economic development. As more successful case studies emerge and lessons are learned, the importance of engaging the private sector in municipal decision-making processes will likely become even more apparent, leading to continued growth and development in Georgian municipalities and beyond (Huggins & Thompson, 2015; Besussi et al., 2017; Arenas et al., 2018).

In light of the challenges and opportunities presented by MPSD in Georgian municipalities, future research should aim to further explore and document the processes, successes, and challenges associated with these initiatives. Longitudinal studies could provide valuable insights into the long-term impact of MPSD on local economic development, while comparative analyses between different municipalities and regions could help to identify best practices and factors that contribute to successful MPSD outcomes. Additionally, engaging with the private sector and other relevant stakeholders in the research process could help to ensure that the findings are relevant, timely, and reflective of the realities and complexities of MPSD in Georgian municipalities (Krause et al., 2016; Porter et al., 2016; Brinkhoff, 2016). Overall, the case of MPSD in Georgia highlights the potential for dialogue and collaboration between municipal governments and private sector actors to contribute to local economic development, as well as the challenges that must be overcome to ensure effective and inclusive decision-making processes. By examining the Georgian context and drawing lessons from other countries, municipalities around the world can learn from these experiences and develop strategies for fostering successful MPSD, ultimately leading to more inclusive and prosperous local communities (Huggins & Thompson, 2015; Besussi et al., 2017; Arenas et al., 2018).

In addition to the strategies and approaches discussed above, there is also a need for greater public awareness and understanding of the benefits and potential of MPSD in Georgian municipalities. Often, the public may not be fully aware of the role that the private sector can play in local economic development, leading to skepticism or resistance to collaboration between municipal governments and private sector actors (Brinkhoff, 2016; Arenas et al., 2018). To address this issue, municipalities can implement public information campaigns and educational programs to inform citizens about the importance of MPSD and the positive impact it can have on local economies and communities (Huggins & Thompson, 2015; Porter et al., 2016). Furthermore, there is a need for stronger coordination and collaboration among different levels of government in Georgia to support and promote MPSD. While municipal governments play a crucial role in fostering dialogue and collaboration with the private sector at the local level, there is also a need for support and guidance from higher levels of government, such as the Ministry of Regional Development and Infrastructure and the Ministry of Economy and Sustainable Development (Parliament of Georgia, 2014; World Bank, 2018). By working together and aligning their policies and initiatives, different levels of government can help to create a more conducive environment for MPSD in Georgian municipalities, ultimately leading to more effective and sustainable local economic development outcomes (European Commission, 2020; Besussi et al., 2017).

Finally, it is important to recognize the role of civil society organizations (CSOs) in promoting MPSD in Georgian municipalities. CSOs can play a crucial role in advocating for greater private sector engagement in local decision-making processes and facilitating dialogue and collaboration between municipal governments and private sector actors (Krause et al., 2016; Söderbaum & Sohn, 2015). By involving CSOs in MPSD efforts, municipalities can ensure that a diverse range of perspectives and interests are represented, leading to more inclusive and effective decision-making processes (Porter et al., 2016; Brinkhoff, 2016). In conclusion, the successful implementation of MPSD in Georgian municipalities requires a multifaceted approach that involves capacity-building initiatives, the fostering of trust and transparency, effective communication, public awareness and understanding, and greater collaboration between different levels of government and civil society actors. As more municipalities in Georgia and around the world adopt MPSD strategies, it is crucial to continue to document and learn from these experiences in order to refine and improve the processes and outcomes of these important efforts. By doing so, municipalities can better leverage the potential of MPSD to contribute to local economic development and create more inclusive, prosperous, and resilient communities for all citizens.

5. Conclusion

In conclusion, this research paper has explored the strategic management of local economic development in Georgian municipalities, with a particular emphasis on the role of municipal and private sector dialogue in shaping public policies and strategies. The study aimed to shed light on the potential role of the private sector in influencing public decision-making and the importance of fostering collaboration between municipal governments and private sector actors. The literature review highlighted the significance of public-private dialogue in enhancing local economic development. Several studies emphasized the benefits of collaboration between municipalities and the private sector, leading to better resource allocation, increased efficiency, and higher competitiveness. The challenges associated with public-private dialogue, such as potential power imbalances and conflicts of interest, were also discussed. Through the research methodology, which focused on a qualitative analysis of relevant documents and legislations, primarily the "Organic Law of Georgia - Local Self-government Code," the study acknowledged the limitations of available data on public-private dialogue in Georgia and the constraints imposed by the research's scope.

The examination of the Georgian context in the "Municipal and Private Sector Dialogue in Georgia" chapter revealed that, despite the scarcity of data on public-private dialogue initiatives, Georgian municipalities have been increasingly adopting new approaches to involve the private sector in local decision-making processes. Key stakeholders in these dialogues include municipal governments, private sector actors, civil society organizations, and different levels of government. The research paper also recognized the challenges Georgian municipalities face in promoting local economic development, such as limited resources and capacities. This often necessitates creative solutions and external support from international organizations. Aligning the interests of public and private sector actors, focusing on shared goals like enhancing local competitiveness, fostering innovation, and promoting social and environmental sustainability, emerged as crucial factors in successful dialogue.

In light of the findings, it is evident that municipal and private sector dialogue plays a vital role in the context of Georgian local economic development. By fostering collaboration and aligning public and private interests, municipalities can leverage the expertise, resources, and perspectives of the private sector to support local decision-making processes and achieve sustainable growth. These insights contribute to the broader discourse on public-private dialogue and its potential role in supporting local economic development and decision-making processes not only in Georgia, but also in other countries with similar contexts.

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Demand and supply-side determinants of financial inclusion: A case study of micro, small and medium enterprises in southwest Nigeria

Dorcas Funmilola Oke
Department of Entrepreneurship, School of Logistics and Innovation Technology, Federal University of Technology, Akure, Nigeria
ORCID: 0000-0002-5362-4218
E-mail: dfoke@futa.edu.ng

Temitope Wasiu Adamson
Department of Economics, School of Basic and Advanced Studies, Lagos State University, Nigeria.
E-mail: adamsontope2002@yahoo.com

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Abstract

This study examined the demand and supply-side factors that influence financial inclusion among micro, small and medium enterprises (MSMEs) in Southwest Nigeria. The study used the survey research design and primary data was sourced with the use of questionnaire. More specifically, the study employed a multivariate regression model. The findings on the determinants of financial inclusion revealed that the major constraint to access to finance by MSMEs was high interest rate charged on loan, while poor infrastructural facilities was a major constraint hindering financial inclusion from the supply-side view. The regression results on demand-side determinants revealed that bank services awareness positively and significantly drives access to, usage and quality of financial services (used as proxy for financial inclusion) of MSMEs. On the other hand, availability of other means of savings aside from bank negatively affects the access to, usage and quality of financial services, income constraint, illiteracy and lack of trust in financial institution negatively drive financial inclusion. Similarly, supply-side determinants such as transaction cost/charges, bank distance, collateral requirements, difficulty to withdraw, and interest rate negatively drive access to, usage and quality of financial services. The study recommends that the borrowing interest rate should be attractive to encourage continuous access to loanable funds. Financial providers should build an effective and well-functioning financial system that offers affordable and sustainable financial services to MSMES.

1. Introduction

Financial inclusion has received increased attention towards inclusive growth. Accessibility to financing forms a major objective of the Sustainable Development Goals (SDGs) with at least seven of the seventeen SDGs (SDGs 1, 2, 7, 8, 10, 12 & 16) connected to financial inclusion. The importance of financial inclusion stems from its potential as a means for economic growth, inclusive growth, poverty reduction, employment generation, wealth creation, and improving people's welfare (Central Bank of Nigeria (CBN), 2012). World Bank (2018), defines financial inclusion as the process by which all households and businesses, regardless of income level, have access to and can effectively use the appropriate financial services they require to improve their lives. Although, there is general increase in the proportion of adults that has account with financial institutions worldwide, the percentage of adults that has access to finance increased by 7 percent from 62 percent in 2015 to 69 percent in 2017. This shows an additional increase of 515 million adults that have gained access to financial services globally (World Bank Global Findex Database, 2017). Nevertheless, even with this increment, about 1.7 billion adults still remain financially excluded. The World account ownership rate stood at 72 percent for male and 65 per cent for female (CBN, 2017; Global Banking Alliance for Women, 2018; Demirguc-Kunt *et al*., 2018). Financial inclusion rate in Nigeria indicated an increase, while the total adult financial inclusion rate, (adults who use formal and informal financial services) increased by 4.8 per cent points from 58.4 to 63.2 % in 2016 and 2018 respectively, the inclusion rate stood at 64.1% in 2020 (EFinA, 2018, 2020).

The focus of policymakers has shifted from financial development to financial inclusion to reach the unbanked and low-income society (Johnson & Arnold 2012). According to Demirguc-Kunt *et al.* (2014), access to finance enables low-income people to borrow, save, and invest in micro, small, and medium enterprises in order to seize economic opportunities. Access to financing is the primary factor influencing the growth of MSMEs and is one of the main reasons in the development of financial inclusion (Ibor, Offiong & Mendie, 2017). Promoting MSMEs' access to financing is crucial and vital in fostering the nation's economic performance and productivity (World Bank 2014). Micro Small and Medium Enterprises (MSMEs) have been recognised by developed and developing countries as the main engine of economic growth. The development of MSME is therefore an essential element in the growth of most countries and holds particular significance for Nigeria (Udechukwu, 2003). MSMEs are the growth-supporting sector that not only contributes significantly to improved living standards but also brings substantial local capital formation and are responsible for driving innovation and competition in developing economies (Small and Medium Enterprises Development Agency of Nigeria (SMEDAN, 2013). Even though the MSMEs sector is very important to the national economy in terms of generating jobs and reducing poverty, many MSMEs are unable to reach their full potential because of a number of factors limit their ability to grow and perform well (Wolday & Ageba, 2004; Gololo, 2017). Limited access to finance is one of the major causes of the Nigerian enterprises underwhelming growth and performance, and the financing gap for MSMEs is influenced by both supply-side and demand-side factors (Wolday & Ageba, 2004; Olowe, Moradeyo & Babalola, 2013).

While finance is obviously not the only problem militating against the growth of the MSME sector, it is certainly the most challenging. Like any other investment in the real sector of the economy, investment in MSMEs is relatively large because of the need for fixed assets such as land, buildings, machinery and equipment. Lack of access to credit has been identified as one of the main obstacles to the development of private sector in developing countries (Chauvet & Jacolin, 2016). To mitigate this challenge, Nigeria's government have introduced various programmes, policies, and the National Financial Inclusion Strategy (NFIS) to encourage easy access to finance, especially for MSMEs. Nevertheless, with these reforms, programmes, and policy initiatives, the exclusion rate from financial access of MSMEs is still on high side (EFInA, 2020).

As financial inclusion is becoming increasingly important, scholars have been assessing its measurement, determinants and effects (Sarma, 2008; Fungacova & Weill, 2015; Olaniyi & Adeoye, 2016). Determinants of financial inclusion can be classified into the demand-side, supply-side and regulatory factors (Yoshino & Morgan, 2016). Supply-side determinants take account of the perceptions of financial providers, like banks and other financial institutions. Demand-side determinants on the other hand recognise the views of individual users, such as firms and households (Wang'oo, 2013). The large financing gap for MSMEs can be explained by several factors on both the demand and supply sides. The supply side, which is financial institutions generally perceive MSMEs as high credit risk enterprises leading to a high default on credit facilities made available to them. Information asymmetry between lenders and MSMEs borrowers were cited as a supply-side determinant (Shinozaki, 2012; Demirguç-Kunt, Klapper, Singer, 2013). While demand-side determinants as revealed in the literature are; unstable and low-income levels; inability to meet account opening requirements and high transaction cost; have poor record keeping; lack financial literacy/capability to meet the requirements for credit; and lack appropriate collateral (Barua, Roy & Raychaudhuri, 2016; Noor, 2016; National Financial Inclusion Strategy (NFIS), 2018).

Research on access to finance has largely ignored the supply-side determinants. Scholars on determinants of financial inclusion do not separate the demand-side from supply-side and even those who do so, focused only on demand side of the determinants (Yoshino & Morgan, 2016; Olaniyi & Adeoye, 2016; Ajide, 2017). Financial inclusion determinants that are solely based on supply or demand-side data may result in inconclusive findings and inconsistent policy formulation. Besides, there were few evidence-based studies that investigated the supply and demand sides determinants of financial inclusion on MSMEs, especially in Southwest Nigeria. As a result, this study aims to close the gap by examining various determinants and indicators of financial inclusion using data from both the supply and demand sides. Thus, this study will fill these gaps in the literature by studying evidence-based country-level/micro level determinants of access to and usage of financial products and services by MSMEs. The general objective of this study is to examine the demand and supply-side determinant factors that affect the financial inclusion of micro, small-medium enterprises in Southwest Nigeria.

2. Literature review

2.1 Theoretical Framework

The mobilization and distribution of funds by financial intermediaries is greatly influenced by the accessibility, affordability, and availability of financial products and services. The earliest theory of financial intermediaries can be traced back to Smith (1776), who argued that growth in an economy is driven by activities of the financial system, because increased production and specialization is facilitated by enhanced resource (credit) acquisition offered by the financial institutions. Bagehot (1873) posits that the industrial revolution in Europe was driven by the financial system which mobilized funds for industry. He emphasized the critical importance of the banking system in economic growth and highlighted circumstance when banks could actively spur innovation and future growth by identifying and funding productive enterprises. Joseph Schumpeter (1911) contends that well functioning banks spur technological innovation by identifying and funding those business owners with the best chances of successfully implementing innovative products and production processes.

Keynes (1930) in his General Theory clearly stated that for investments to take place, savings first need to be gathered and this support Schumpeter’s view. This view has also been reflected in the Keynesian growth models by Harrod (1939) and Domar (1947), which are based on the financial intermediation theory of banking. Keynes maintained that money takes the form of credit money, and he shared the idea that bank money that is, deposits is created in the form of loans (Keynes 1930). Keynes slightly modified his position to the effect that, like Schumpeter, he highlights the possibility of a twofold origin of finance, arguing that the demand for finance can be met in either of two ways: i) through banks creating new liquidity or ii) through financial intermediaries bringing about an increase in the rate of interest and succeeding in making already existing liquidity available to enterprises. In the Keynesian theory, financial deepening or financial inclusion occurs due to an expansion in government disbursement. In order to reach full employment; the government should inject money into the economy by increasing government spending.

Well- functioning financial institutions and markets provide opportunities for all to have access and make investments by channelling funds to their most productive uses, hence boosting growth, improving income distribution, and reducing poverty. Financial inclusion seeks to overcome the frictions that hinder the functioning of the market mechanism to operate in favour of the poor and underprivileged. Developing the financial sector and improving access to finance enhance business performance, accelerate economic growth and reduce income inequality and poverty. The new-Keynesian analysis emphasizes on the market distortions embedded in the microeconomic, for instance information asymmetries. In relation to financial inclusion, credit constraints will adversely affect financial inclusion. Stiglitz & Weiss (1981) shed lights on the effect of imperfect information about borrowers on credit exclusion, whereby creditors tend to raise interest rates and restrict credit in order to avoid risky borrowers (Dymski, 2005).

2.2 Empirical Review on Determinants of Financial Inclusion

Ong’eta, (2019), established that both demand and supply-side related factors influence financial inclusion. Demand related factors include household income level, education, age, financial literacy, gender, and membership of employment guarantee scheme. Interest rates, bank branches, innovation (agent banking and mobile banking), sanitisation of financial products, and advice on money management and debt counselling are all supply-related determinants of financial inclusion. Olaniyi & Adeoye (2016), used different variables and a dynamic panel data method to capture the determinants of financial inclusion in Africa from 2005 to 2014. The study showed that per capita income, literacy, broad money (as a percentage of GDP), internet access, and Islamic banking are significant factors for explaining the level of financial inclusion in Africa. Domestic credit provided by the financial sector (as a percentage of GDP), deposit interest rates, inflation, and population, on the other hand, have insignificant effects on financial inclusion. Similarly, Zins & Weill (2016), examined the individual determinants of financial inclusion in Africa. They used probit estimation on 37 African countries from the World Bank's Global Findex database. The results showed that being a man, richer, more educated, and older supports financial inclusion in Africa with a greater influence on education and income.

Furthermore, Chikalipah (2017), explored the factors that influence financial inclusion in Sub-Saharan Africa for the year 2014. He identified illiteracy as the most significant barrier to financial inclusion in Sub-Saharan Africa. Using the logit regression technique, Abel, Mutandwa & Roux (2018), investigated the determinants of inclusive finance in Zimbabwe. The finding showed that people's confidence and trust in the financial system, as well as their education, age, literacy, income, and internet access, are significant determinants of financial inclusion. Proximity to financial institution and possession of required documents for account opening were identified as insignificant determinants of financial inclusion in Zimbabwe. Using primary data, Poonam & Chaudhry (2019), examined the determinants of financial inclusion in India. Binary logit regression technique was used to estimate the sample size of 411 households. The evidence shows that age, gender, and occupation have an insignificant negative effect on savings which is used as a proxy for financial inclusion. Education and land ownership had positive, but insignificant effects on savings. The study concluded income is a positive significant determinant of financial inclusion that in the study area. Likewise, Ajuwon, Ikhide & Akotey (2018), studied the role of transaction costs in MSMEs' access to credit in Lagos State, Nigeria. Using a questionnaire survey, in-depth interviews, and yearly financial statements of the banks as data sources, their findings revealed that high interest rate and collateral value were the major constraints to MSMEs' access to funding. They also revealed that financial institutions had a hostile attitude toward MSMEs seeking for a loan. The researchers concluded that Nigerian banks are not cost-effective and they need to do a lot more to reduce lending costs.

Yangdol and Sarma (2019), analysed the demand-side factors influencing financial inclusion across 142 countries, using World Bank’s Global Findex database 2014. They revealed that being a woman, not educated, unemployed, and poor were negatively related to financial inclusion for individual adults while higher educational level and income, increased the level of financial inclusion for individuals. Okoroafor and Adeniji (2018), employed supply-side time series data from 1990 to 2016 to investigate the determinants of financial inclusion in Nigeria. The study used Error Correction Model (ECM) and estimated result revealed positive and significant relationship between financial inclusion and GDP per capital, broad money, credit and internet access. The study finds that GDP per capita, the broad money supply to GDP ratio, credit to MSMEs, and internet access are determinants of financial inclusion in Nigeria.

In a recent study, using supply-side data covering the period from 2000 to 2018 and multiple regression techniques, Gbalam and Dumani (2020) study on the determinants of financial inclusion in Nigeria showed that commercial bank branches and deposit interest rates had negative and insignificant impact on financial inclusion. The results also indicated that domestic credit to the private sector, the ratio of rural deposit-to-loans, and the level of interest rate had a positive and significant effect on financial inclusion. The study concludes that domestic credit to the private sector, the ratio of rural deposit-to-loans, and the level of interest rate are the major determinants of financial inclusion in Nigeria. Using primary data and multiple linear regression analysis, Oshora, Desalegn, Gorgenyi-Hegyes, Fekete-Farkas & Zeman (2021), examined the determinant factors that influence financial inclusion among SMEs in Ethiopia. The study showed that supply-side factors, demand-side factors, market opportunity, and collateral requirements had a positive effect on firm's access to finance, whereas institutional framework factors and borrowing cost had a negative effect on firm's access to finance.

3. Methodology

3.1. Research Design

The study employed survey research design with the use of a structured questionnaire. This instrument was used to gather data on the financial inclusion, determinants of financial inclusion, and socio-economic characteristics of MSME owners. The questionnaires consisted of two sets, one for business owners and the other one for bank officials. The questionnaire for business owners consisted of three sections. Section A addressed background information of the respondents and business profile, socio-economic and demographic characteristics of the respondents. Section B contained questions related to access, usage and quality of financial services and products. A Likert scale ranged from “1” (strongly disagree) to “5” (strongly agree) and also Yes or No questions was asked in this section. Section C contained questions on the demand-side constraints to financial inclusion. The second set of questionnaires was for the financial institutions which were administered to the Bank Operation Managers. It contained questions on supply-side determinants of financial inclusion.

3.2 Study Area

This study was conducted in two selected states Lagos and Ondo in Southwest Nigeria. The two states were purposely selected being the state with the highest financial inclusion rate (Lagos) and state with the highest financial exclusion rate (Ondo). The Southwest zone consists predominantly of Yoruba speaking people. The zone constitutes 35% of the country’s population with a total landmass of 76,852 square kilometres.

3.3 Study Population

The study population consists of MSMEs in Southwest Nigeria. In Southwest Nigeria, there were nine million eight hundred and eighty-six thousand, five hundred and thirty-eight (9,886,538) MSMEs (SMEDAN, 2017). Out of these Lagos and Ondo states had a total of four million three hundred and ninety-seven thousand, nine hundred and forty-five (4,397,945) MSMEs, constituting 44.5% of the total MSMEs in Southwest Nigeria. There were 22 fully licensed commercial banks in Nigeria. Out of these 22 banks, 12 commercial banks were purposely selected being the participating banks used by the Development Bank of Nigeria to give loans to MSMEs. The banks were purposively selected in each state capital. Simple random sampling technique was used to select one bank branch from each of the sample banks and where there was only one branch of bank, the branch was automatically selected.

3.4 Sample Size and Sampling Technique

The sample size for this study was based on the total population of enterprises in the two selected states in Southwest Nigeria totalling 4,397,945. The sample size was calculated using Taro Yamane (1967) formula and adopted by Haftom, Fisseha & Araya (2014). This formula was used because the target population is large and more than 10,000 (Taro Yamane, 1967). It is also a suitable formula for calculating sample size in a finite population. The correct sample size is obtained by using Yamane's formula. If the population size is known, under the Yamane equation there is no need to use the mean and standard deviation. The Yamane formula is given by:

$$n = \frac{N}{1+Ne^2} \quad (1)$$

Where:

n = Sample size (unknown)

N = is given as the total population size which is equal to 4,397,945.

e = 5% desired level of precision or error margin which equals 0.05

Therefore,

$$n = \frac{4,397,945}{1 + 4,397,945(0.05)^2} \quad (2)$$

$$n = \frac{4,397,945}{1 + (4,397,945 \times 0.0025)} \quad (3)$$

$$n = \frac{4,397,945}{1 + 10,994.8625} \quad (4)$$

$$n = \frac{4,397,945}{10,995.8625} \quad (5)$$

$$n = 399.96 \approx 400 \quad (6)$$

According to Israel (2013), there is a need to give an allowance of about 10% non-response rate from the sample size, (400 x 10% = 40). Therefore, the total sample for the study was 400 + 40 = **440.**

3.5 Estimation Technique

The study used descriptive and econometric techniques to analyse the information collected from the respondents in the selected study states. Descriptive statistics including frequency distribution, charts, tables and percentages while ordinary least square regression was employed as econometric procedures. However, access was measured directly using account ownership status of respondents. Quality is a combination of items that include documents required to open an account, affordability/ cost of the transaction, ease of transaction; non-inclusion of hidden charges by the bank; and non-requirement of a minimum sum to open an account. Items representing usage include regularity of taking loans; regularity of saving; regularity of making transfer payments using mobile transfer ATM or POS; and regularity of receiving and making payment with e-banking. In all, financial inclusion is a combination of all items representing its three dimensions.

3.6 Model Specification

Following the work of Demirgüç-Kunt, Klapper & Singer (2013) and Ong'eta (2019) model for determinants of financial inclusion is specified as follows:

$$AccessDi = \beta_0 + \beta_1 DD + \beta_2 SocioEco + \varepsilon_t \quad (7)$$

$$AccessDi = \beta_0 + \beta_1 SS + \beta_2 SocioEco + \varepsilon_t \quad (8)$$

$$UsageDi = \beta_0 + \beta_1 DD + \beta_2 SocioEco + \varepsilon_t \quad (9)$$

$$UsageDi = \beta_0 + \beta_1 SS + \beta_2 SocioEco + \varepsilon_t \quad (10)$$

$$QualityDi = \beta_0 + \beta_1 DD + \beta_2 SocioEco + \varepsilon_t \quad (11)$$

$$QualityDi = \beta_0 + \beta_1 SS + \beta_2 SocioEco + \varepsilon_t \quad (12)$$

Where:

AccessDi = Access Dimension ; QualityDi = quality Dimension ; UsageDi = Usage Dimension

DD = Demand-side factors comprises of using other/alternative means to save; illiteracy/ not educated; using some one else's account; income level; awareness about bank services and products; trust and confidence in financial institution.

SS = Supply-side factors consists of collateral requirement; number and simplicity of documents required to open account; bank distance; bank transaction cost; cash withdrawal process.

SocioEco = Socio-Economic factors include: gender, age; marital status; educational level; location, and financial literacy; B_0 = Intercept and ε_t = error term.

4. Results and Discussion

4.1 Socio-economic Characteristics of the Respondents

Respondents were classified based on whether they are formally inclusive, informally inclusive or financially excluded. The financial inclusion of individuals consists of those that are either formally or informally have access to and use financial services and products (EFInA, 2018). From the sample size of 409 respondents, 239 MSME owners were formally included, 149 were informally included and just 21were financially excluded. This supports the finding of EFInA (2018), which revealed that the Southwest geographical zone has the highest financial inclusion rate compared to other regions in Nigeria. Table 1 shows that the survey respondents were made up of mostly female, 208 (50.9%) and male respondents of 201(49.1%). On the age variable, it is shown in Table 1 that the age of the MSMEs owners varied with access to financial services across the two states. The highest percentage of the age group that are formally included fall into the age 35-44 years (37.7%) follow by age 25-34(25.9%), while a significantly low percentage of the age group above 65 years (4.2%) were formally included. This evidence shows that on average, people who are mostly financially included in the study area are below the age of 50 years. The survey results divide the respondents into six categories for educational attainment, including those with no formal education. From the table, the majority of respondents who uses formal financial service are those with BSc/BA/HND holders (41%) and they also had the highest financial inclusion rate, followed by those with ND/NCE/Diploma. This implies that the respondents were knowledgeable and this has aided their financial inclusion status. Secondary school certificate holders of the respondents have the highest financial exclusion rate of (42.9%) followed by those with no formal education (28.6%). Out of 13 respondents without any formal education, 6 (46%) were financially excluded. However, the greatest percentage of respondents with ND/NCE/Diploma (39.6%) use informal financial services. Besides, the chi-square result shows a significant relationship between educational level and financial inclusion rate.

Similarly, Table 1 shows the results of the distance to the commercial bank. The result reveals the importance of distance in determining financial inclusion. The respondents reporting walking distance below 10 minutes and between 10-20 minutes walking distance has the vast number of those that are formally financially included (29.7% and 36.6% respectively). While most MSMEs owners who are financially excluded (38.1%) reported that banks are far from their places of business location or residence with above 30 minutes walking distance; suggesting that the farther the distance to banks, the greater the likelihood to be financially excluded. The result of the chi-square corroborates the finding as it revealed a significant association between distance to the bank and the decision to be financially included with a value χ^2= 16.4*.

Table 1. Profile of the Respondents

	Financially Included (Formal) N_1= 239		Financially Included (Informal) N_2=149		Financially Excluded N_3= 21		All Respondents N_4= 409		Statistical test
	Count N_1	$\%N_1$	Count N_2	$\%N_2$	Count N_3	$\%N_3$	Total N_4 ($N_1+N_2+N_3$)	$\%N_4$	
Demographic									
Gender:									
Male	129	54.0	67	45.0	5	23.8	201	49.1	
Female	110	46.0	82	55.0	16	76.2	208	50.9	χ^2= 8.7
Age (In Year):									
18-24	15	6.3	11	7.4	3	14.3	29	7.1	
25-34	62	25.9	44	29.5	8	38.1	114	27.9	
35-44	90	37.7	59	39.6	6	28.6	155	37.9	
45-54	45	18.8	22	14.8	2	9.5	69	16.9	
55-64	17	7.1	6	4.0	1	4.8	23	5.6	
Above 65	10	4.2	7	4.7	1	4.8	19	4.6	χ^2= 10.8
Educational Level:									
No formal	3	1.3	4	2.7	6	28.6	13	3.2	
Primary school	1	0.4	5	3.4	3	14.3	9	2.2	
Secondary school	48	20.1	26	17.4	9	42.9	83	20.3	
ND/NCE/Diploma	74	31.0	59	39.6	2	9.5	135	33.0	
BSc./ BA/ HND	98	41.0	51	34.2	1	4.8	150	36.7	
Masters/PhD	15	6.2	4	2.7	0	0.0	19	4.6	χ^2= 86.3*
Walking Distance:									
Below 10 mins	71	29.7	24	16.1	5	23.8	100	24.4	
Between 10- 20 mins	85	36.6	55	36.9	4	19.0	144	35.2	
Between 20-30 mins	42	17.2	39	26.2	4	19.0	85	20.8	
above 30 mins	41	17.2	31	20.8	8	38.1	80	19.6	χ^2= 16.4*

Source: Author's Compilation (2022)

4.2 Demand-side Determinants of Financial inclusion in Southwest Nigeria

Table 2 reveals that the major demand-side constraint to have access to finance by MSMEs is the high interest rate charged on loan with the mean value of 2.82 which was ranked highest, followed by preferring using other alternative means to save (M = 2.71), not have trust in formal financial institution (M = 2.69), not aware of financial services offered by banks (M = 2.63), lack of required collateral (M = 2.46), no bank branches closer to me and cost of transaction too high (M = 3.31), low income and not regular money to save (M = 2.30), not have required documents to open an account (M = 2.09), and not educated (M = 2.02). This implies that the high interest rate charged on loan repayment is the major factor preventing MSMEs owners to access financial assistance and financial services being offered by the financial institutions. This study is in line with the findings of Ajuwon, Ikhide & Akotey (2018) that, high rate of interest and lack of collateral security, high bank charges, legal documentation fees are the major factors preventing MSMEs owners to access financial assistance being offered by the financial institution in Nigeria. Prefer to use another means to save and lack of trust in financial institutions were also found to be major factors hindering MSMEs owners to access and use financial services. This support the finding of Mhlanga & Denhere (2021) that trust is a significant factor for financial inclusion in their study on determinants of financial inclusion in Southern Africa. In today's business, building trust with the customers is important even in almost all industries.

Table 2. Mean Score on the Demand-side Constraint to Financial Inclusion by the MSMEs

Statement	Mean	Rank
Not aware of financial services offered by banks	2.63	4th
Don't have trust in formal financial institution	2.69	3rd
Income is low and not regular money to save	2.30	7th
Not educated so I cannot use any financial product	2.02	9th
Don't have the required documents to open an account	2.09	8th
Don't have the required collateral	2.46	5th
No bank branch close to me	2.31	6th
Cost of the transaction is too high	2.31	6th
Interest rate charges on loan repayment is high	2.82	1st
Prefer using other alternative means to save	2.71	2nd

Source: Author's Compilation (2022)

4.3 Supply-side Determinants of Financial inclusion in Southwest Nigeria

Table 3 also reveals the mean score ranking of the supply-side constraint to financial inclusion. From Table 3, the major constraint to financial inclusion as reported by the financial institution is poor infrastructural facilities, that is, poor internet connectivity in some areas, poor road network and epileptic power supply with the highest mean value of 3.58 which was ranked highest, followed by limited bank branches (M = 2.79), banks do not have adequate information on the creditworthiness of MSMEs business owners (M = 2.58), government regulations and policies on the financial inclusion of MSMEs are not supportive and reliable (M = 2.46), Banks take the financial inclusion initiatives due to the pressure from CBN (M = 2.17), Financial Inclusion of MSMEs is not profitable for banks (M = 2.00), most of the bank's financial products and services do not meet the needs of MSMEs (M = 1.96). This implies that the poor infrastructural facilities are the major constraint hindering financial inclusion from the supply-side view. This study is in line with the findings of Raichoudhury (2020) that found that income and infrastructure are the most important determinants of financial inclusion.

Table 3. Mean Score of the Supply-side Constraint to financial inclusion by the Banks

Statement	Mean	Rank
Banks do not have adequate information on the creditworthiness of MSMEs business owners	2.58	3rd
Most of the bank's financial products and services do not meet the needs of MSMEs	1.96	7th
Limited bank branches hinder MSMEs access to banks	2.79	2nd
Poor infrastructural facilities (e.g poor internet connectivity in some areas, poor roads and electricity)	3.58	1st
Government regulations & policies on the financial inclusion of MSMEs are not supportive and reliable	2.46	4th
Financial Inclusion of MSMEs is not profitable for banks	2.00	6th
Banks take the financial inclusion initiatives due to the pressure from CBN	2.17	5th

Source: Author's Compilation (2022)

4.4 Demand-side and Supply-side Determinants of Financial Inclusion

Table 4 shows the results of regression estimation on the demand and supply-side determinants of financial inclusion using access, usage and quality dimension of financial inclusion. The results on Table 4 reveals that when the access dimension was used as a proxy of financial inclusion, awareness of financial services, using some else account positively drives financial inclusion across and among the demand-side factors with only awareness of financial services that is significant. On the other hand, illiteracy, other alternative to save, lack of trust, income constraint negatively affects financial inclusion across and among the demand-side factors with only lack of trust in financial institution that is significant. Whereas high transaction cost, bank distance, documents availability, collateral requirement and withdrawal difficulty negatively affect financial inclusion among the supply-side variables. With only bank distance and withdrawal difficulty that are significantly influencing financial inclusion among the supply-side variables.

Similarly, Table 4 reveals that when usage dimension was used as a proxy of financial inclusion, only awareness of financial services positively and significantly drives financial inclusion across and among the demand-side factors. Whereas, illiteracy, other alternative to save, some else account, lack of trust, income constraint negatively drives financial inclusion across and among the demand-side factors with only lack of trust and income constraint that are significantly affecting financial inclusion across and among the demand-side factors. However, high transaction cost, bank distance, documents availability, collateral requirement, withdrawal difficulty and interest rate negatively drive financial inclusion among the supply-side variables, with only high transaction cost, collateral requirement, and interest rate that were significantly influencing financial inclusion among the supply-side variables. Table 4 also reveals that when quality dimension was used as a proxy of financial inclusion, only awareness positively and significantly drives financial inclusion while other alternative to save negatively and significantly drive financial inclusion among the demand-side factors. On the other hand, document availability, collateral requirement and transaction cost positively but not significantly drives financial inclusion among the supply-side variables. While controlling for individual heterogeneity, it can be shown that gender was negatively but not significantly affect financial inclusion for access and quality dimension across demand-side factors, but for usage both for demand and supply-side factors gender positively and non-significantly drive financial inclusion.

Table 4. Regression Estimate on Demand-side and Supply-side Determinants of Financial Inclusion using Access, Usage and Quality Dimension

	(1)	(2)	(3)	(4)	(5)	(6)
VARIABLES	Access demand-side	Access supply-side	Usage demand side	Usage supply side	Quality demand side	Quality supply side
Awareness	1.52**		0.01*		0.21*	
	(0.57)		(0.08)		(0.07)	
Illiteracy	-0.31		-0.11		-0.07	
	(0.53)		(0.12)		(0.10)	
Other Alternatives to save	-0.69		-0.01		-0.17**	
	(0.52)		(0.08)		(0.07)	
Trust	-0.48*		-0.04**		-0.05	
	(0.75)		(0.12)		(0.10)	
Income constraints	-0.69		-0.35*		-0.11	
	(0.54)		(0.11)		(0.09)	
Someone's account	0.45		-0.09		-0.10	
	(0.58)		(0.09)		(0.08)	
High transaction cost		-0.19		-0.05*		0.01
		(0.49)		(0.07)		(0.07)
Bank distance		-0.81		-0.09*		-0.01
		(0.21)		(0.04)		(0.03)
Documents availability		-0.23		-0.01		0.04
		(0.18)		(0.04)		(0.03)
Collateral requirement		-0.33		-0.07**		0.03
		(0.36)		(0.07)		(0.06)
Withdrawal difficulty		-0.83***		-0.09		-0.21**
		(0.50)		(0.08)		(0.08)
High interest rate		0.05		-0.05**		-0.02
		(0.30)		(0.04)		(0.04)

Gender	-0.17	0.85	0.03	0.06	-0.01	0.15**
	(0.47)	(0.61)	(0.08)	(0.07)	(0.07)	(0.07)
Education	0.71*	1.06***	0.08**	0.22**	0.02	0.01
	(0.20)	(0.56)	(0.04)	(0.10)	(0.03)	(0.10)
Age	-0.26	-0.12	0.01	-0.08	0.04	-0.08
	(0.18)	(0.53)	(0.04)	(0.10)	(0.03)	(0.09)
Constant	4.48**	4.05**	-0.37	-0.37	0.17	0.04
	(1.83)	(1.90)	(0.34)	(0.31)	(0.30)	(0.28)
Observations	408	408	312	312	293	293
R-squared			0.29	0.22	0.27	0.43
r2_p	0.393	0.321	.	.	.	.

Robust standard errors in parentheses * p<0.01, ** p<0.05, *** p<0.1

Source: Author's computation (2022)

Education on the other hand positively and significantly drive financial inclusion for all the three dimensions (except for quality dimension) and across the demand and supply-side determinant factors of financial inclusion. This collaborates the finding of Sanderson (2018) that educated people can quickly comprehend the various financial products in the market and this as well will increase their likelihood of participating in the formal financial market. Age of the business owners negatively but not significantly affect access and usage financial services both for demand and supply-side factors for access and only supply-side for usage and quality dimensions. Our findings support Abel, Mutandwa & Roux (2018), affirmed that education, age, financial literacy, and income are significant determinants of financial inclusion in Zimbabwe. On the contrary, Poonam & Chaudhry (2019), found that age, gender and occupation have an insignificant negative effect on savings which is used as a proxy for financial inclusion in India.

5. Conclusion

The study examined the demand and supply-side determinants of financial inclusion in two selected states in southwest region Nigeria. The findings on the determinants of financial inclusion revealed that the major demand-side constraint to have access to finance by MSMEs was income constraint and high interest rate charged on loan while poor infrastructural facilities was the major constraint hindering financial inclusion from the supply-side view. The regression results revealed that bank awareness positively and significantly drives the financial inclusion of MSMEs. Availability of other means of savings aside from banks negatively and insignificantly affects financial inclusion, income constraint negatively and significantly drives financial inclusion. Similarly on supply-side determinants, high transaction cost; bank distance; collateral requirements; difficulty to withdraw; and high interest rate negatively drive financial inclusion. Thus, the results support the extant literature that constraints from both the users and providers of financial services determine the financial inclusion rate of a country. The study, therefore, recommends that the lending interest rate should be attractive to encourage continuous access to loanable funds. That is, rates that are not too low or excessive that would encourage the economic agent to save and borrow to spur economic activities. More so, effort should be intensified on collateral reform in Nigeria and movable assets such as machinery and equipment that are readily available for MSMEs can as well be used for pledges instead of real estate which may not be available. This will solve the problem of mismatch in the type of assets owned by MSMEs and collateral required by the bank and thus promote easy access to loans.

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Comparative study of the impact of oil price shock on inflation with its impact on inflation determinants in Algeria

Merouane Bensenouci
Ph.D. student, LEPPESE laboratory, Maghnia University Center, Algeria
ORCID: 0009-0009-0400-5187
Email: merouane.bensenouci@gmail.com

Abdelkader Sahed
Professor, LEPPESE laboratory, Maghnia University Center, Algeria
ORCID ID: 0000-0003-2509-5707
Email: sahed14@yahoo.fr

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Abstract

This paper aims to compare and determine the impact of oil price shocks on inflation and on its determinants in Algeria during the period 1975-2021. By using the structural vector autoregression (SVAR) model. Our empirical results found that the oil price shock had a greater impact on the determinants of inflation, such as the exchange rate, money supply, and imported goods, than on inflation itself. Moreover, the response of exchange rate to the oil price shock was significant and negative in the short and long run. Nevertheless, the response of imported goods and money supply to the shock was positive. Whilst the response of inflation in Algeria to the oil price shock was weak and negative. In addition, the results of analysis variance showed that oil price shock has a weak contribution to explaining the changes in inflation rates, in contrast to its contribution to the observed changes in inflation determinants.

1. Introduction

It is well known that inflation represents one of the most important macro-economic factors in the world economy. Algeria as other countries have known contrasts in inflation rates during the last half century, as Algeria is largely dependent on exported oil that can be influenced strongly by its price, this effect can spread across the level of domestic prices. Algeria's inflation can be affected by several variables are assumed to be key factors namely the money supply, imported goods, exchange rates, and oil price shocks.

A rise in money supply can lead to increase in inflation, as more money is available to purchase goods and services (Karoui, 2014) (Umar & Lee, 2018). if the cost of production or transportation for imported goods increases, it can also lead to higher prices and contribute to inflation (Ahmed, Ghauri, Vveinhard, & Streimikiene, 2018) (Sheefeni & Munepapa, 2017). Additionally, a decrease in exchange rates cause an increase in inflation (Kim, 1998) (Ito & Sato, 2008). Also, oil price shocks can have a significant impact on the inflation (Hamilton, 1996) (Mork K. , 1989) (Mory, 1993) (Tang, Wu, & Zhang, 2010) (Lacheheb & Sirag, 2019). However, that the latter has fluctuations substantially influence in exchange rates, money supply and importations. A rise in oil prices can cause a country's currency to appreciate if it is a major oil exporting nation. This is because the increased demand for oil will lead to an inflow of foreign currency, which can cause the country's currency to strengthen (EryiĞit, 2012). An increase in oil prices can lead to an inflow of foreign currency which cause an increase in money supply (Siami & Fahimifar, 2010). Furthermore, a rise in oil prices can lead to higher prices in the cost of production and transportation of imported goods (AbdulRazaq & Hamoud, 2018).

This study aims to investigate the impacts of oil price shocks on inflation and compare them with the impacts of oil price shocks on specified determinants of inflation in Algeria (imported goods, money supply, and exchange rate) during the period 1975-2021. A structural vector autoregressive (SVAR) methodology introduced by (Olivier & Roberto, 2002) was employed to determine the response to shocks and dynamic interactions among the economic variables resulting from various structural disturbances. The remainder of the paper is structured as follows: Section 2 presents the review of the literature; Section 3 describes our methodology; Section 4 discusses empirical results, and finally, Section 5 concludes the paper.

2. Literature review

There are many studies in economics literature investigating the impact of oil prices on economic variables. Therefore, we have reviewed some of the relevant articles and classified literature into four parts. Many studies have advocated the impact of oil prices on inflation, including (Mork K. , 1989) (Mory, 1993) (Hamilton, 1996) (Mork K. , 1994)confirmed the inflationary effect of oil price changes on inflation. (Razmi, M. Azali, Chin, & Habibullah, 2016) explored the impact of oil prices on inflation by applying SVAR method to examine the vulnerability of domestic prices to price shocks in ASEAN-4 countries, the results showed that a positive shock to the oil price could reduce the CPI in Indonesia but would increase the CPI in the Philippines and Thailand, while in Malaysia, there would be no significant effect on the CPI. (LeBlanc & Chinn, Menzie David, 2004)estimate the transmission effects of oil price changes to inflation G5 countries. It was found that the oil price increases have moderate impacts on inflation in the US, Japan and Europe. (Lacheheb & Sirag, 2019) by using the nonlinear ARDL model suggest that oil price increases have a positive and significant effect on inflation in Algeria, but insignificant falling oil prices. (Choi, Furceri, Loungani, & Mishra, 2018)studied the impact of fluctuations in oil prices on the CPI. An unbalanced panel analysis was used for 72 advanced and developing countries, with annual data collected between 1970 and 2015, the results indicated that the oil price impacted positively on inflation, but its effect vanished after two years. (Mukhtarov, Mammadov, & Ahmadov, The Impact of Oil Prices on Inflation: The Case of Azerbaijan, 2019)studied the relationship between inflation, oil prices and exchange rates in Azerbaijan during 1995-2017, by using a vector error correction VECM modal. The results showed that the increases in oil prices and exchange rates leading to rise inflation. Some research asserts that the impact of global oil prices on domestic inflation seem to be limited or declining. (Hooker, 2002)studied the relationship between oil prices and inflation on the sample year 1962-1980 and 1981-2000. It was found that oil price had significance impact on inflation in the first sample period but not in the later sample period. Additionally, the strong relationship between oil price and inflation in the early 1970s has disappeared after mid-1980s. (De Gregorio, Landerretche, Neilson, Broda, & Rigobon, 2007)examined 34 developed and developing countries by using quarterly data from1965Q1 to 2005Q1. Found that the relationship between oil price and inflation was decreasing.

Some works have sought to explain the relationship between oil prices and exchange rates. (Brini, Jemmali, & Farroukh, 2016) studied the impact of oil price shocks on inflation and the real exchange rate of oil imports and exporters in Middle East and North Africa during the period 01/2000-06/2015. Using the structural Vector autoregressive SVAR model. It was found that oil prices have a significant impact on the real exchange rate of importing countries (Morocco, Tunisia). The variance analysis show that oil price volatility contributes to the interpretation of the variance in the error of forecasting the real exchange rate, except for the real exchange rate in Algeria and Iran. (Mukhtarov, Aliyev, & Zeynalov, 2020)the study investigated the impact of oil prices on economic growth export, inflation, and exchange rates in Azerbaijan, using Johansen cointegration and VECM model during the period 01/2005-01/2019. The results confirm the presence of a long-run relationship among the variables. Estimation results reveal that there is a positive and significant impact of oil prices on economic growth, export and inflation. On the other hand, it was found that oil prices have a negative impact on exchange rate (Delgado, Delgado, & Saucedo, 2018). studied the relationship between oil price shocks and exchange rate in Mexico during the period 01/1992-06/2017 by Using the Vector autoregressive VAR model. The result showed that an increase in oil prices lead to higher the exchange rate. (Mohammed Suliman & Abid, 2020) studied the relationship between oil price and exchange rates in Saudi Arabia during the period 01/1986-03/2019. Using the autoregressive distributed lag ARDL model. In the short term the results confirm the existence of unidirectional causal relationship ranging from the oil price to the exchange rate. In the long term, the causal relationship is bidirectional between these two variables. An appreciation of the Saudi exchange rate generates an increase in the relative demand oil, which in turn creates upward pressure on its price. (Hussain, Zebende, Bashir, & Donghong, 2017) use a cross-correlation approach to study the parallel movement of oil prices and exchange rates in 12 Asian countries. Using daily data for the period 05/2006–05/2016. The authors found a low negative cross-correlation between the two variables for most countries. (EryiĞit, 2012) The dynamical relationship between oil price shocks and selected macroeconomic variables in Turkey, during the period 01/07/2005 – 10/31/2008 by using vector autoregressive (VAR) model. The results showed that oil price shocks explain a significant proportion of the Istanbul stock exchange market and interest rates and immediate negative effect on exchange rates.

Some studies have advocated the impact of oil prices on money supply. (Olomola & Adejumo, 2006) examined the effects of oil price shocks on output, inflation, real exchange rates and money supply in Nigeria using quarterly data from 1970 to 2003 Using VAR model. It was found that oil price shocks do not have any substantial effect on output and inflation. Oil price shocks significantly determine the real exchange rate and significantly affect the money supply in the long run. (Siami & Fahimifar, 2010) The Effects of Oil Price Shocks on Monetary policy in Iran over the period 01/1991-01/2008, by using a structural and generalized VAR models. The results showed that the shocks from oil price are in a positive relation with money aggregate (M1) variable and a negative relation with interest rate which in general terms in world be a fluctuation relation for M1. (Lui, Meng, & Wang, 2020) used a structural vector autoregressive (SVAR) model to investigate the effects of oil price shocks on macroeconomic fluctuations in China during the period 12/1999-07/2018. It was found that a positive oil price shock has negative effects on economic growth and the money supply. (Abderrezak, 2005) This study tested the causal relation between oil prices and Algeria's money supply during the period 1970–2002. simulation results showed that a negative and significant correlation has characterised the association between oil exports and the country's money supply. (Baroudi & Filali, 2021) studied the impact of changes in oil prices on Algeria's monetary over the period 1980 to 2019, based on the structural vector autoregression models (SVAR). It was found that the positive impact of oil price fluctuation on the exchange rate (Dinar against Dollar) and money supply. (Mokhtari & Benelbar, 2021) aimed to examine the effect of oil price changes on money supply, unemployment, government spending in Algeria during the period (1980-2018) by using causality tests and relying on the SVAR structural regression methodology. The results showed that there is a positive relationship between oil prices with government spending and the size of the money supply and an inverse relationship between oil prices and the rate of Unemployment.

Some works have sought to explain the relationship between oil prices and imported goods. (Farzanegan & Markwardt, 2009) studied the Effects of Oil Price Shocks on the Iranian Economy during the period1975Q02-2006Q04 using VAR model. it was found that the response of real imports and the real effective exchange rate to asymmetric oil price shocks are significant. Furthermore, the response of inflation to any kind of oil price shocks is significant and positive. Dikkaya, Doyar, & Kanbir, 2018 aims to investigate the effects of oil prices on Azerbaijan's imports from Turkey during the period 2001Q01-2016Q04. Using a vector autoregressive VAR model. It was found that a shock to oil prices positively affects Azerbaijan's imports from Turkey. (Kolli, 2021) studied the effects of oil price shocks on the macroeconomic performance of OPEC economies, during the period 1990-2018 by using PVAR and PVECM Models. the results showed a causal relationship with statistical significance to the effect of oil price shocks on both Gross capital formation and imports in short-term. (AbdulRazaq & Hamoud, 2018) aimed to analyze and measure the impact of fluctuations of oil prices on OAPEC on Iraq's foreign trade for the period 2000-2016, by adopting descriptive analytical methodology and standard methodology. The study concluded that increasing the price of crude oil in Iraq in one unit with the stability of other factors, this leads to an increase in the value of exports by (838.611) million dollars and increase the value of imports by (1.341) million dollars and increase in trade balance surplus by (588.479) million dollars of Iraq.

3. Methodology:

Structural Vector Autoregression (SVAR) models are widely considered as a practical and efficacious mechanism in comprehensive economic analysis due to their reliance on economic theory in establishing the relationship between forecasting errors and fundamental shocks. These models take into consideration the extant temporal effects among economic variables and are derived from Vector Autoregression (VAR) models. Therefore, a VAR model can be formulated as depicted in (Olivier & Roberto, 2002, p. 4):

$$X_{1T} = A_1^{'}(L)X_{1T-1} + u_{1t} \quad (1)$$

$$X_{2T} = A_2^{'}(L)X_{2T-1} + u_{2t} \quad (2)$$

$$X_{1T} = [LEX, LIM, LMS, LOP]$$

X_{1T} : Is the vector of the internal variables of the model 1: Exchange rates (LEX), imported goods (LIM), money supply (LMS), oil price (LOP).

$$X_{2T} = [LINF, LOP]$$

X_{2T} : Is the vector of the internal variables of the model 2: Inflation (LINF), oil price (LOP).

All variables in both models 1 and 2 were taken in logarithm to rectify the existence of multicollinearity between the variables.

u_t: Error terms of Standard VAR Model is assumed to be iid white noise with non-singular covariance matrix, ∑ u, such that $u_t \xrightarrow{iid} (0, \Sigma_u)$.

L: the lag operator.

T: time series.

A' : are (n × n) parameter matrices.

The VAR (Vector Autoregression) model allows the transition from residuals of this model to structural shocks through the formation of the transition matrix S, which establishes the following relationship:

$$u_t = S \times e_t \quad (3)$$

(Perotti, 2004) utilized the following approach in determining the transition matrix S coefficients:

Can be reformulated the previous equation as follows: $Au_t = Be_t$ (4)

Where: $S = A^{-1} \times B$ (5)

A and B: Restriction matrices.

e_t: Error terms of Structural VAR Model.

The elements of matrices A and B are determined by assigning the diagonal elements a value of 1. Meanwhile, the other elements of the matrix are determined based on economic theory. For instance, we assume that one exogenous variable does not have an immediate effect on another by giving it a value of 0. Alternatively, if there is an effect, it must be measured in order to assign a value to the elements α_p^a, β_p^a (Economic Constraints).

4. Empirical Results:

As the first step of the empirical analysis, unit root tests are conducted on all the time series to avoid the problem of spurious regression in the models. Among the most notable of these tests are the Augmented Dickey-Fuller (ADF) test (Dickey & Fuller, 1981) and the Phillips-Perron (PP) test (PHILLIPS & PERRON, 1988).

Table 1. Unit Root Test Results

Variables	UNIT ROOT TEST TABLE (PP)				UNIT ROOT TEST TABLE (ADF)				Decision
	With Constant		With Constant & Trend		With Constant		With Constant & Trend		
	t-Stat	Prob.	t-Stat	Prob.	t-Stat	Prob.	t-Stat	Prob.	
LIM	-1.3378	0.6041	-1.6843	0.7423	-1.3047	0.6196	-4.0976	0.0131	-
LINF	-2.8948	0.0537	-3.4440	0.0580	-2.9108	0.0518	-3.3828	0.0662	-
LMS	-3.0540	0.0373	-0.8039	0.9578	-3.3746	0.0171	-0.5385	0.9780	-
LOP	-1.7845	0.3834	-1.8769	0.6502	-1.7466	0.4017	-1.8769	0.6502	-
LEX	-0.8004	0.8095	-1.3333	0.8668	-0.8717	0.7881	-2.1268	0.5167	-
d(LIM)	-5.6078	0.0000	-5.5640	0.0002	-5.5632	0.0000	-5.5111	0.0002	I(1)
d(LINF)	-9.1138	0.0000	-8.9916	0.0000	-8.9557	0.0000	-8.8410	0.0000	I(1)
d(LMS)	-4.8162	0.0003	-5.5229	0.0002	-4.8527	0.0003	-5.5229	0.0002	I(1)
d(LOP)	-5.9564	0.0000	-5.9417	0.0001	-6.0062	0.0000	-5.9919	0.0001	I(1)
d(LEX)	-4.2553	0.0015	-4.1476	0.0108	-4.1743	0.0019	-4.1532	0.0106	I(1)

Source: Author's calculations using Eviews12

The results of both tests agreed on the non-stationarity of the time series at the level, but in first differences all the series were stationary. After determining the degree of integration of the variables, the existence of a cointegration relationship is tested by using a Johansen test.

Table 2. Results of the cointegration test

Model 01					
Hypothes	**Eigenvalue**	**Statistic**	**Critical Value**	**Prob.****	**Decision**
None	0.441455	26.20893	27.58434	0.0742	**no cointegration**
At most 1	0.267356	13.99932	21.13162	0.3651	
At most 2	0.166813	8.212352	14.26460	0.3575	
At most 3	0.047172	2.174436	3.841465	0.1403	
Model 02					
Hypothes	**Eigenvalue**	**Statistic**	**Critical Value**	**Prob.****	**Decision**
None	0.130822	6.309307	14.26460	0.5739	**no cointegration**
At most 1	0.064175	2.984693	3.841465	0.0841	

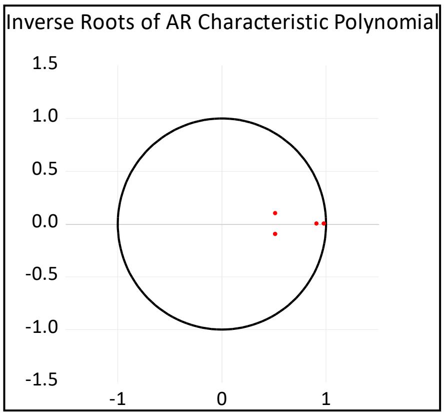
* Denotes rejection of the hypothesis at the 0.05 level, **MacKinnon-Haug-Michelis (1999) p-values.

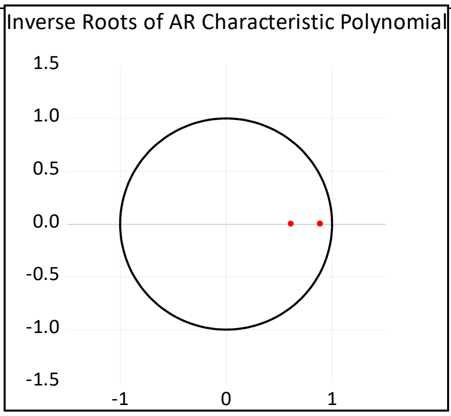
Source: Author's calculations using Eviews12

The results of the test supported the null hypothesis of no cointegration relationship in the models, as indicated in table 2. As a result, the VAR methodology can be applied to estimate the models.

Before estimating the VAR model, an appropriate lag length of one (1) was determined for the models based on Akaike, Schwarz, and Hannan-Quinn criteria. Then, the VAR model was estimated and the stability of the models was tested through the unit cercle. The results indicate that all the processes in the models are within the unit circle.

Model 01 **Model 02**





Graph 1. Autoregressive root graph

Source: Author’s calculations using Eviews12

The results of the autocorrelation tests for the errors in the models indicate that the probability values are greater than 5%, thereby indicating the absence of autocorrelation problems between the errors of both models, as indicated in the table 3.

Table 3. The VAR residual serial correlation LM

Model 01				**Model 02**			
Lag	**LRE* stat**	**df**	**Prob.**	**Lag**	**LRE* stat**	**df**	**Prob.**
1	24.11048	16	**0.0871**	1	3.759509	4	**0.4395**
2	9.333565	16	**0.8990**	2	4.119413	4	**0.3901**
3	13.66131	16	**0.6239**	3	2.838368	4	**0.5852**
4	8.174261	16	**0.9435**	4	1.656695	4	**0.7986**

Source: Author’s calculations using Eviews12

The results of the heteroskedasticity test indicate that the models are devoid of the problem of heteroskedasticity, as the attached probabilities for both models are greater than 5% (Table 4).

Table 4. The VAR Residual Heteroskedasticity Tests

Model 01			**Model 02**		
Chi-sq	**df**	**Prob.**	**Chi-sq**	**df**	**Prob.**
91.89081	80	0.1712	13.44190	12	0.3378

Source: Author’s calculations using Eviews12

Following the estimation of the autoregression for both VAR models and the implementation of various diagnostic tests that confirmed their validity, we can determine the structural shocks by constructing the transition matrix S, relying on matrices A and B for each model. The following assumptions, which are consistent with economic theory and the Algerian economic situation:

Assumptions of the first model 01:

- The first equation assumes that the changes in exchange rates are primarily explained by fluctuations in oil prices, the money supply, and the structural shock to exchange rates.

$$\mu_t^{LEX} = \alpha_{LMS}^{LEX}\mu_t^{LMS} + \alpha_{LPO}^{LEX}\mu_t^{LPO} + e_t^{LEX} \qquad (6)$$

- The second equation posits that the imported goods are influenced by changes in both oil prices and exchange rates, in addition to the structural shock to imported goods.

$$\mu_t^{LIM} = \alpha_{LPO}^{LIM}\mu_t^{LPO} + \alpha_{LEX}^{LIM}\mu_t^{LEX} + e_t^{LIM} \qquad (7)$$

- The third equation asserts that changes in the money supply are affected by fluctuations in exchange rates, oil prices, and the structural shock to the money supply.

$$\mu_t^{LMS} = \alpha_{LEX}^{LMS}\mu_t^{LEX} + \alpha_{LPO}^{LMS}\mu_t^{LPO} + e_t^{LMS} \qquad (8)$$

- The fourth equation presumes that oil prices are solely influenced by the structural shock to their prices.

$$\mu_t^{LOP} = e_t^{LOP} \qquad (9)$$

Assumptions of the second model 02:

- The first equation assumes that oil prices are explained by their structural shock.

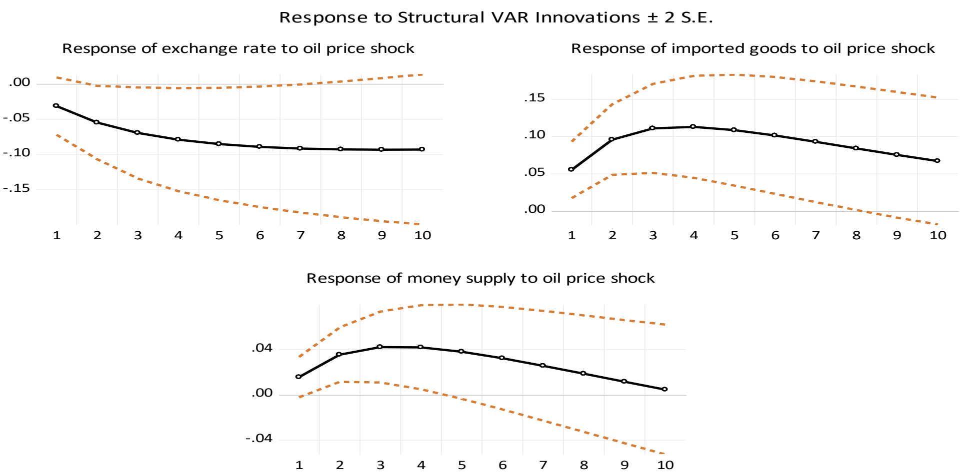
$$\mu_t^{LOP} = e_t^{LOP} \qquad (10)$$

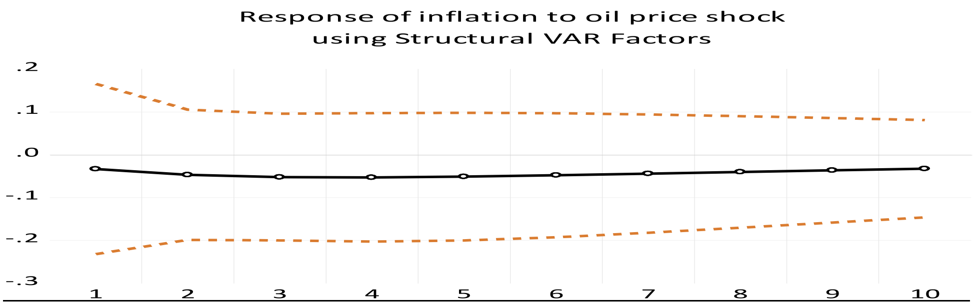
- The second equation assumes that the inflation rate is explained by the changes in oil prices and the structural shock in the inflation rate.

$$\mu_t^{LINF} = \alpha_{LPO}^{LINF}\mu_t^{LPO} + e_t^{LINF} \qquad (11)$$

4.1. Impulse Response

After diagnosing and estimating the structural vector autoregression (SVAR) models, we can analyze the response of the studied variables in the models and determine the degree of responsiveness of each variable (exchange rates, money supply, imported goods, and inflation) to a shock in oil prices.





Graph 2. Impulse response with structural decomposition

Source: Author's calculations using Eviews12

With regards to Model 01, it clarifies:

The Effects of Oil Price Shocks on Exchange Rates: Through the analysis of response functions, it is observed that the occurrence of a 1% shock in oil prices will have a negative effect on exchange rates over response periods. In the first period, the response ratio to the shock was (-0.031%), and in the following years, this negative effect of the oil price shock continues to decrease. This is clearly seen in the ninth and tenth years, where it reaches its lowest value of (-0.093%). The negative impact shows that a rise in oil prices will lead to a decrease in the units of Algerian dinars that can be obtained for one dollar, which is in line with economic theory (merrad & kouidri, 2020, p. 119) and the results of studies (EryiĞit, 2012) (Hussain, Zebende, Bashir, & Donghong, 2017) (Mukhtarov, Aliyev, & Zeynalov, 2020). This result also reflects the important role that oil prices play in maintaining the stability of the Algerian dinar.

The impact of oil price shock on imported goods: A 1% oil price shock would have a positive effect on imported goods both in the short and long run. In the first year of the shock, imported goods would respond with a 0.055% increase, and this percentage would increase in the following years, reaching a maximum value of 0.11% in the third and fourth year. The impact of the shock would then decline in the long run, reaching 0.06% in the tenth year. This positive impact can be explained by the fact that a rise in oil price leads to an increase in the prices of manufactured goods, including necessities, consumer goods, equipment, and intermediate goods, which are considered essential. This result is in line with the findings of studies by (Dikkaya, Doyar, & Kanbir, 2018) (AbdulRazaq & Hamoud, 2018).

The impact of oil price shocks on money supply: In the event of a 1% oil price shock, there will be a positive impact on money supply over the response period. In the short term, the response to the shock is estimated to be at (0.01%) in the first year and will increase in subsequent years, reaching its highest value at (0.042%) during the third and fourth year. However, over the long term, its impact decreases to (0.004%) in the final year. The positive impact of the oil price shock on money supply is attributed to an increase in liquidity in the economy due to a rise in returns. These results are consistent with the findings of studies by (Siami & Fahimifar, 2010) (Baroudi & Filali, 2021) (Mokhtari & Benelbar, 2021).

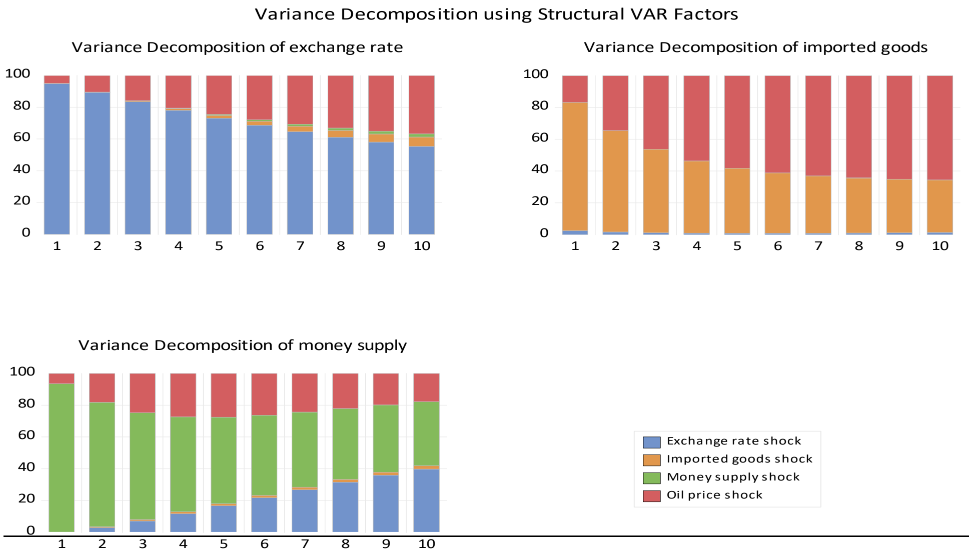
As for Model 2, it illustrates:

The Effects of Oil Price Shock on Inflation: Through the analysis of the impulse response function of Model 02, it was observed that the occurrence of a 1% oil price shock would have a week negative impact on inflation over the response period, with an initial value of (-0.033%) in the first year and decreasing to its minimum value of (-0.052%) in the fourth year. However, in the long run, the inflation response to the shock increases, reaching (-0.032%) in the tenth year. The weak impact of oil price on inflation in Algeria can be attributed to a combination of government policies and exchange rate stability. These results are consistent with studies by (De Gregorio, Landerretche, Neilson, Broda, & Rigobon, 2007) (Hooker, 2002), which indicated a weak inflation response to oil price shocks.

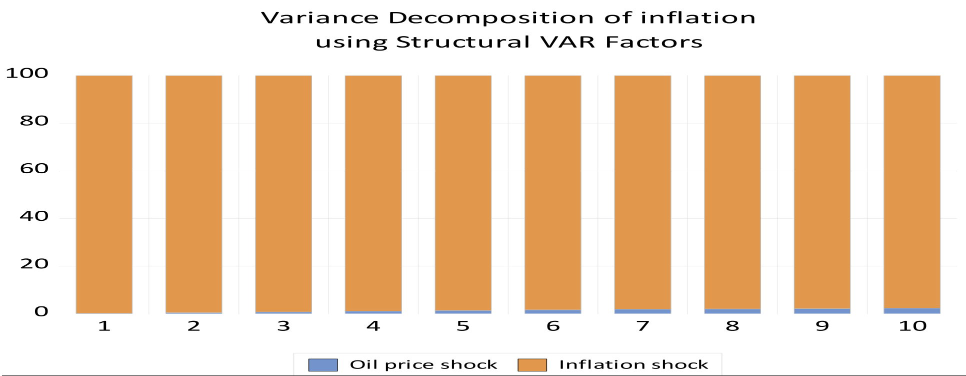
4.2. Variance Decomposition

To express the contribution of oil price shock in explaining the changes in inflation and its determinants, the results of variance decomposition were utilized.

Model 01



Model 02



Graph 3. Variance decomposition results

Source: Author's calculations using Eviews12

In regards to Model 01, the oil price shock played a significant role in explaining the changes in exchange rates. The initial estimated impact of the shock was 5% and increased annually to reach 36.7% in the tenth year. This suggests that the oil price is the most explanatory factor for the changes in exchange rates, after taking into account its own impact. Analysis of exchange rate variability shows that oil prices have a substantial impact on the value of the local currency (Algerian Dinar). As For imported goods, the impact of the oil price shock was 16.8% in the first period and increased to 58.2% in the fifth period and reached 65.65% in the tenth year, indicating that the oil price shock has a greater contribution to changes in imported goods. The analysis of the money supply shows that the impact of the oil price shock has a role in explaining the amount of money offered, as in the first period, its contribution to explanation was 6.4%, which increased over the next four years to reach 27.5% in the fifth year. After that, it started to decline and reached 17.77% in the tenth year. Thus, the oil price shock explains the changes in money supply in the first six years after the shock and is the second most influential factor after exchange rates in the last four years.

The results of the variance decomposition for Model 02 indicate that the oil price shock has a weak contribution to explaining the changes in inflation rates (Hooker, 2002) (De Gregorio, Landerretche, Neilson, Broda, & Rigobon, 2007). During the initial period, it explained 0.24% of the inflation changes and this percentage increased slightly over time, reaching its highest contribution of 2.36% in the tenth period. The weak contribution of oil prices in explaining inflation variability can be attributed to the fact that inflation in Algeria is a result of the increase in import prices due to the re-exportation of inflation by industrialized countries by raising the prices of manufactured products that are sourced to Algeria (Karoui, 2014, p. 86).

The results of the variance decomposition indicated that shocks in oil prices play a significant role in explaining the changes in foreign exchange and imported commodity prices, in addition to the money supply, in Model 1. Conversely, the explanation of oil shocks on inflation in Model 2 was very weak.

5. Conclusion

The primary objective of this research paper is to determine the response of inflation determinants (exchange rate, money supply, and imported goods) in Algeria to an oil price shock and to compare it to the response of inflation rate to the shock, during the period of 1975-2021. This is achieved by employing structural vector autoregression (SVAR) models. The results indicated that the oil price shock had a greater impact on the determinants of inflation, such as the exchange rate, money supply, and imported goods, than on inflation itself. This finding is consistent with our hypothesis. The analysis variance showed that oil price shock has a weak contribution to explaining the changes in inflation rates, in contrast to its contribution to the observed changes in inflation determinants. Moreover, this paper illustrated the impacts of oil price shock on inflation and exchange rate, imported goods and money supply by using impulse response function. The response of exchange rate to the oil price shock was significant and negative in the short and long run. This highlights the important role that oil prices play in maintaining the stability of the Algerian dinar. Furthermore, the response of imported goods to the shock was significant and positive. This positive effect can be accounted for by the correlation between an increase in oil prices and the subsequent rise in the cost of manufactured goods which are considered essential. Additionally, the response of money supply to the shock was positive which means a rise in oil price led to increase the money supply through the process of monetary expansion. When oil prices go up oil exporting countries typically earn more revenue, which they then use to the purchase goods and service, from other countries. This leads to an inflow of foreign currency, which increase the money supply. Whilst the response of inflation in Algeria to the oil price shock was weak and negative, and this is attributed to the utilization of monetary policy by central bank, whereby employ various measures to counteract the effect of oil price fluctuations on inflation by adjusting interest rates. The results of this study underscore the importance of considering the role of oil prices in inflation dynamics and highlight the need for policymakers to take into account the potential impact of oil price shocks on the economy when making decision.

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Awareness strategies of islamic banking system: Evidence from Malaysia

Akilu Aliyu Shinkafi
Zamfara State College of Education, Department of Islamic Studies, Maru, Zamfara Nigeria
ORCID: 0000-0002-8571-7072
Email: aliyuakilu1@gmail.com

Sani Yahaya
Department of Banking and Finance, Federal University Dutse, Jigawa Nigeria
ORCID: 0000-0001-7866-0576
Email: saniytm@yahoo.com

Ahmed Ibrahim Mohammed
Department of Banking and Finance, Federal University Dutse, Jigawa Nigeria
ORCID: 0000-0002-5505-1417
Email: ibrahim96196@gmail.com

Nor Aini Ali
Department of Shari'ah and Economics, Academy of Islamic Studies, University of Malaya, 50603 Kuala Lumpur, Malaysia
Email: aini@um.edu.my

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Abstract

The foundation for the growth and success of every firm is awareness. Unquestionably, the active awareness that may motivate customers to comprehend and apply Islamic financing products in the Islamic banking sector is a key factor in the success of the Islamic banking industry. The study examined the Islamic banking system's awareness-raising tactics using information from Malaysian experience. Face-to-face interview was used in a manner of qualitative method. The data were analysed using descriptive and thematic approaches. The findings indicate that customer awareness, knowledge of Islamic financing products and services, public awareness, and national and international awareness are all methods of Islamic banking awareness practice in Malaysia. The findings also demonstrate that the fundamental objective of the Islamic banking sector primarily relates to patronage and investment, which might be achieved by raising awareness of Islamic financing solutions. Additionally, the outcome shows that Islamic banks, Malaysia's central bank, and the government must step up their efforts to raise awareness in the nation. Therefore, the study has implications for Malaysian Islamic banks specifically and the global Islamic banking industry generally by increasing the capital base of the banks and increasing banking business activities through the adoption of new customers who became aware of Islamic banking modalities, operations, and products. These capital increases and boosts in the Islamic banking industry and have an impact on the profitability, banking performance, Islamic micro investments, SMEs, and new businesses from an economic perspective.

1. Introduction

Islamic banking has evolved over the past forty years into a sort of embodiment to compete with its traditional counterpart, which has a significant presence in the banking sector. However, going back to the evidence available in the context of Shari'ah made Islamic banks a traditional institution aged as Islam. The emergence and contemporary stance made Islamic banks parallel with the modern backgrounds (Hassan, Kayed, & Oseni, 2013; Hassan & William, 2014; Yahaya, Garba, & Shinkafi, 2019). The Arabs have a long history of using interest-free borrowing, particularly for trade financing (Rammal & Zurbruegg, 2007). In recent years, more than 75 nations throughout the world have shown interest in Islamic banking. This cut across the global continents exclusively Organization of Islamic Conference OIC member states, Gulf States, MENA regions, South Asia, Africa, and Europe (Islahi, 2018; Yahaya et al., 2019).

As a result, Islamic banking is developing and openly gaining popularity in the financial sector (Khattak, 2010). The method has become increasingly popular in developing nations as an alternative to conventional banking (Islam & Rahman, 2017; Yahaya, Yusoff, Idris, & Haji-Othman, 2014). Despite their tremendous growth and expansion, Islamic banks nevertheless find it difficult to compete with other banks in the financial sector (Hanafi, Kasim, & Diyana, 2019). This is a clear manifestation of how Islamic banking growth is still under pressure to advance against traditional competition, particularly in developing markets (Dalhatu, Abdullah, Ibrahim, & Abideen, 2015; Yahaya et al., 2014). This is because modern conventional banking is well established and powerful in its ability to compete in the banking sector. In order to compete effectively in the fierce market, Islamic banks must therefore re-evaluate their clients' awareness initiatives, satisfaction levels, and strategies (Yahaya, Hamid, Fauzi, & Haji-Othman, 2016). In this regard, Afzal, Khan, Mahmood, and Shabbir (2019) advise Islamic banking to work to win over a sizable customer base in order to increase revenue and provide services that add value to the client. This calls for effective customer awareness of Islamic financing products and services, Shari'ah awareness, and service quality.

Lack of willingness and understanding of Islamic financing products and services, particularly by non-Muslim in non-Muslim majority states, is attributed for this developing difficulty (Ahmad, Hanifa, & Hyo, 2019). Some critics claim that the Islamic financial system does not adhere to the core principles of Shari'ah because of a lack of knowledge (Majeed & Zainab, 2017). The same criticism was levelled about Islamic banking in Malaysia, where some detractors even claimed that there is little public awareness of Islamic finance options (Dalhatu et al., 2015). According to these assertions, the majority of customers of Islamic banks have not yet learned how Islamic banks differ from regular banks (Maulan, 2016).

Despite the existence of the negative arguments outlined above, positive affirmations demonstrate that the Islamic banking business has considerably contributed to the development of banking industry in Malaysia (Che-Ha, Hamzah, Abd Sukor, Said, & Veeriah, 2017). Therefore, both Muslims and non-Muslims need to comprehend Islamic banking in order to have exposure of Islamic financing products (Hanafi et al., 2019). Given this, Islamic banks must keep their conspicuous signage, necessitating a requirement for awareness. This is because awareness is the cornerstone of any business' success, and without awareness, a company's ability to grow and attract new clients is unquestionably jeopardized (Yahaya, Shinkafi, & Haji-Othman, 2020). Therefore, effective techniques are needed to raise awareness of Islamic financing products and services. Islamic banks must therefore employ a variety of techniques in order to compete in the financial sector of the economy and remain competitive. With numerous institutional and transformational activities covering strategies that include customer awareness, awareness of Islamic financing products and services, public awareness, and national and international awareness, Malaysia has made significant progress in that direction as the hub of Islamic finance and banking in Asia in particular and the world in general (Yahaya et al., 2020). Therefore, the purpose of this study was to investigate how to raise public awareness of the Islamic banking system using Malaysia as a case study. The study also intended to provide an answer to the following questions: How does Malaysia accomplish its Islamic banking awareness? What are the Malaysia's Islamic banking awareness strategies?

2. Literature Review

Many academics are nowadays interested in the literature on the subject of awareness of Islamic banking. In this regard, (Saini, Bick, & Abdulla, 2011) found that although Muslims are aware of Islamic banks, their rate of usage is low and their choice is motivated by efficiency, digital networking system, and lower bank charges rather than religion. These findings are consistent with previous studies that have been conducted within the last ten years. On the other hand, Unegbu and Onuoha (2013) suggest that Islamic banks promote awareness of their presence and efficiency in Nigeria. Similar to this, (Islam & Rahman, 2017) indicate that awareness influences people's intentions to use Islamic banks favourably, and acknowledged that the bulk of their study participants were unaware of Islamic banking practices. Additionally, Dalhatu et al. (2015) demonstrate that increasing awareness benefits northern Nigerian consumers of Islamic banking. On the other hand, Muslims are more familiar with Islamic banking terminologies, culture, and modalities than non-Muslims (Lujja, Mohammed, &

Hassan, 2018). Accordingly, (Shinkafi, Yahaya, & Sani, 2019)observed that one of the key factors in achieving financial inclusion is raising awareness of Islamic banking. While (Shofiyyah, Aisyah, & Shifa, 2019) discovered that there is very little public awareness of crowdfunding. However, Afzal et al. (2019) found that satisfaction promotes a limited amount of intermediation in Shari'ah awareness. In a related effort, Albaity and Rahman (2019) found that the use of the Islamic banking system is significantly influenced by awareness, reputation, Islamic financial literacy, and attitude toward Islamic banks.

On the other hand, certain academics contributed their expertise in the areas of product knowledge and service excellence in Islamic financing. Therefore, Rammal and Zurbruegg (2007) assert that Islamic financial institutions' emphasis should be directed toward educating clients about the modalities of Islamic finance operations as well as the specifics of Islamic financing products and how they work. Accordingly, Bashir (2013) discovered that increased consumer attraction in the Islamic banking sector is positively and significantly impacted by understanding of the service quality and Islamic financial solutions. Che-Ha et al. (2017) contend that Islamic banks in Malaysia do not receive sufficient involvement from the general population as a result of a lack of public understanding about Islamic financing products. On the contrary, Hanafi et al. (2019) discovered a substantial correlation between gender and knowledge of Islamic mortgage products. Last but not least, Ahmad et al. (2019) find that South Korean residents who had spent a large amount of time in Malaysia had little knowledge of Islamic financial products.

Even so, a number of few scholars have revealed their interest in consumer awareness. For instance, Khattak (2010) reports that some consumers are aware of a lot of Islamic financial options but are willing to forego using them. However, Naser, Al Salem, and Nuseibeh (2013) discovered that many long-standing Islamic financing products and services are not known to a sizable portion of Kuwait Finance House (KFH) consumers. Khamis and AbRashid (2018) argued the opposite, claiming that clients were aware of and satisfied with the Islamic financing options offered by Tanzanian banks. In addition, (Maulan, 2016) finds that brand loyalty is less important to consumers' adherence to the Islamic banking system than brand knowledge. But (Kaakeh, Hassan, & Almazor, 2018; Kaakeh, Hassan, Van-Hemmen, & Hossain, 2020) discovered that customer demand directly affects awareness effort, whereas awareness determination affects self-efficacy, self-efficacy proportionately affects performance, and image consistently affects salesperson self-efficacy and performance. However, according to Imran, Samad, and Masood (2011) there is a lack of public knowledge regarding Islamic finance goods and services as well as a lack of Shari'ah understanding on the part of Islamic banks. The relationship between the BNM and other banks, including the local media, could help raise public awareness (Latif & Abdul-Rahman, 2018).

3. Research Methodology

In this paper, we examine the Islamic banking system's awareness-raising tactics using Malaysia as a case study. To address this phenomenon, we considered qualitative research in accordance with the opinions of academics who believe that this type of study interprets a phenomenon and social refinement (Myers, 1997). Similar to this, (Chua, 2013) said that qualitative research give scholars a greater knowledge of the phenomenon or setting in which the event occurred. According to Creswell (2014), qualitative research focuses on investigating and extrapolating the true implications of the global context or presenting a real-life perspective. Thus, by citing the ideas of the aforementioned academics involved in seasonal study, the acceptability of utilizing the qualitative research method was established. When gathering data, we used face-to-face interviewing technique. After adopting purposive sampling for the study, face-to-face interview was conducted with the selected participants. These semi-structured interviews were earlier distributed to the selected research participants to prepare their responses. In total, twelve (12) participants from five (5) Universities located in Kuala Lumpur, Malaysia, and the remaining participants are from the Shari'ah Advisory Council, agreed to participate. Two (2) participants from each university were chosen to prevent sampling bias. However, these participants decided to take part based on condition of anonymity. Most of the participants were interviewed at their offices according to scheduled times and appointments. These participants were chosen based on criteria such as competence, knowledge, and proficiency, the capacity to respond to specifically developed questions, and willingness to participate in the interview. The responses of the targeted participants were coded, transcribed, edited, reported, interpreted, and analysed. We employed thematic and descriptive analysis for the data analysis of the study, themes and sub-themes were portrayed as they emerged from data. We displayed the shreds of evidence of the data as cited by the participants.

3.1. Interpretation and Analysis of Data

The participants' interview responses led to a conclusion that mainly focused on Malaysian initiatives for increasing public awareness of Islamic banking system. The information gleaned from the participants' responses shows that some of the methods utilized to raise public awareness of Islamic banking in Malaysia include customer awareness, national and international awareness, and awareness of Islamic finance products and services.

3.2. Strategies of Islamic Banking Awareness in Malaysia

Awareness is one of the influential strategies that Islamic banks used to charm customers. Generally, the result from the interview responses of the participants reveals that awareness of Islamic banks in Malaysia is basically due to awareness of Islamic financing products, public awareness, national and international awareness, and customer awareness. A large number of responses by the participants reported that these types of awareness are the major reasons for attracting customers by the Islamic banks in Malaysia. However, some participants reveal that there is a need for an extra effort by the Islamic banks, the Central bank of Malaysia, and the government to effectively encourage the level of awareness in terms of Islamic financing products and services, which relates to the mode of operations, and benefits of the Islamic banking products, etc. The data further shows that Islamic banks need to do extra effort on public awareness concerning the issues that are economically profitable or beneficial such as real estate, housing loans, soft loans, and new Islamic banking products, etc. The following sub-themes relates the evidence of the data from responses of the participants:

3.2.1. Awareness of Islamic financing products and Services

According to participant responses, there is strong evidence that public awareness of Islamic finance products and services plays a significant role in the realization of the Islamic banking sector's ultimate objective. The data showed that some of the most effective techniques include Malaysian political willingness, the activeness of the regulators, and the provision of awareness of the specifics and application of Islamic financing products. The findings also show that non-Muslims, mainly Chinese people, use Islamic banking in Malaysia without any prejudice. One of the participants noted the following in this regard:

"*Islamic financing products are popularly known for their Arabic technicalities, the question is how do the non-Muslim understand it? Even if it is by translating the products into the English language, the system needs to provide more awareness about the meaning of each concept and its technicalities. Another question that always comes to mind is how do these Islamic financing products operate in the Islamic banking system? The trend of awareness especially regarding the products makes the system simple to understand without much emphasis on the Arabic technicalities. However, this does not mean that everything is okay regarding the awareness; still, more awareness is needed, it should be put in place from the Bank Negara Malaysia (BNM) in addition to their regulatory and supportive measures to the Islamic banking industry, and from Islamic banks to the entire community, especially the customers. In general, Islamic banking is not a system for the Muslim alone; it is a system to everyone*" (PT: 1).

Another participant reveals that:

Creating awareness of Islamic financing products has a significant role in attaining the main dream of the Islamic banking sector. This is the role of both political class and the regulators in providing the appropriate products. Under the political will, we can say that there is the enactment of existing laws that warrant the products to exist, because; you cannot do it without the approval of the authority here in Malaysia. The initiatives of the regulator on Islamic banking products and more come up with necessary infrastructure that facilitates the operation of Islamic finance industry. There is also the willingness and the demand from the people that need to patronize the Islamic banking system with certain Islamic financing products in mind. This is because, you may have the products, but if no one is patronizing them, it is not going to be sustainable. However, the fact that you have the products and still people are demanding it that is what matters. Therefore, awareness of Islamic financing products is very important to the public and the Islamic banks. For example, here in Malaysia, non-Muslim especially the Chinese patronize Islamic banking without having anything against it. Like maybe to say, "Malay wants to Islamize us". Instead, they consider it as mainstream financing like the conventional banking system. Therefore, this exposes the extent of awareness of Islamic financing products. Although the non-Muslims in Malaysia were initially, find it difficult to comprehend the technicalities and modalities of Islamic banking in terms of understanding and pronunciations of products in Arabic terms. However, along the way, they can now pronounce some words very well like Mudarabah, *and* Musharakah. *Because; there is confusion in understanding the differences between* Mudarabah *and* Murabahah, *they put these products in place of another thing. That is what had happened in the early days. That is why, in an attempt to promote awareness and avoid that kind of misunderstanding, Islamic banks translate the Arabic words into English terms like* Musharakah *(profit and loss sharing), like* Ijarah *(Islamic lease). Therefore, awareness of that kind at least provided an understanding of the Islamic terms for non-Muslims. But, along the way, many of them, even among non-Muslim Chinese and Indians are now familiar, and can now pronounce this Arabic term, you will be surprised to hear them pronouncing (laughter…)* (PT: 6).

The information gleaned from the participants' responses above shows that Malaysia has adopted Islamic finance to the point that both Muslims and non-Muslims do not find it weird because of awareness campaigns. Islamic banking and finance was integrated into Malaysian society and become a wider and popular sector. Indians, Chinese, and Malay people do not perceive anything novel in it because this is commonplace in their societies. This is a fantastic accomplishment for Malaysia, where both Muslims and non-Muslims view Islamic finance as having both ethical and financial advantages.

3.2.2. Public Awareness

In addition to the awareness of Islamic financing products, the data gathered from the participants' responses show that both the government and Islamic banks in Malaysia are accountable for raising public awareness of the Islamic banking system in the country. As a result, one of the participants noted the words:

"*From my perspective, maybe the Malaysian government need to make it more aware, and that is also the role of Islamic banks themselves in making it more aware to attract people. Maybe public awareness can be achieved through advertisements in various supermarkets and malls. They (Islamic banks) should do more to ensure that, the public know the products and the public sector. The government offered the Islamic financial system in terms of mortgages. This means that the public servant can choose the normal conventional mortgage or Islamic mortgage to finance their houses. Therefore, this is around here for another help in the promotion of every task that the Islamic banking and financing products not only by the bank but also by the government*" (PT: 2).

Another participant added that the level of bank awareness in the public depends on the patronage of every commercial activity. The participant cautions Muslims and Islamic banks against depending on concerns of religion to advance awareness of the Islamic banking sector. This is how one of the participants related:

"*In my own opinion, although religiousity matters, we cannot only rely on religiosity only because nowadays we can see that some of the banks are banking for all. Meaning that it does not consider religious affiliation, meaning that it only care to ensure that, we can provide banking for all. Therefore, Islamic banks should focus on realising fairness to the public. Public convenience matters, awareness of service quality, and awareness of operational modalities are also very important to ensure the attraction of customers in Islamic banks. The patronage of every business activity depends on the extent of awareness by the banks. Therefore, public awareness is a very significant issue toward the development of the Islamic banking industry*" (PT: 7).

3.2.3. National and international awareness

Malaysia has demonstrated dedication in the area of publicity to nurture the awareness of the Islamic banking and finance system with regard to the role of Islamic banks in reaching out to the public in both local and international realm. One of the participants gave the following response in this regard:

"*The banks are doing some effort to reach out to the public in Malaysia, and collaborating with banks to show the strength of Islamic banking here in Malaysia. There is some international show from time to time to exhibit some achievements in Malaysia about their initiatives so that the participants can see what is here in Malaysia. One thing that I would like to say is, for example, Kuala Lumpur Islamic finance, which is an annual event of Islamic finance; Malaysia has been doing it for more than one decade. Therefore, all the banks will come and participate; and there is a global Islamic finance forum, which is done once every two years, which invites the global industrial experts here in Malaysia and elsewhere. All of them, will come here (Malaysia) and participate, and share the Malaysian experience. Therefore, there is this popular gathering of Bank Negara, when they wanted to do, they give it to industries here in Malaysia to participate, or sometimes to lead the organization of the program and the event is funded by Bank Negara Malaysia that is how others became aware of the development of Islamic finance in Malaysia. One of the things that also create awareness here in Malaysia is that they have an association with Islamic banks. Therefore, they have one voice and the programs that they use to do from time-to-time*" (PT: 6).

The participants' response above shows that Malaysia has both national and international awareness. The international occasionally likes to highlight certain achievements of Islamic banking and finance in Malaysia. In order to stimulate thought and demonstrate the effectiveness of Islamic banking and finance, the global Islamic finance forum (GIFF) can also bring together a sizable number of international industry specialists in Malaysia or any other nation. The data also shows that Bank Negara Malaysia (BNM) used to host a well-attended event that invited businesses to participate in the program and the event. This well-attended event has promoted Islamic finance awareness in Malaysia. The outcome also indicated that the organization of Islamic banks (OIBs) promoted Islamic financial institutions in Malaysia. Although some participants emphasized the need for national and international awareness, particularly regarding the service quality and awareness of operational modalities to gain more clients for Malaysian Islamic banks, this did not guarantee that everything is normal in terms of national and international awareness of the Islamic banking system.

3.2.4. Customer Awareness

The information gleaned from the participants' responses shows that there is customer awareness in addition to public awareness, financial product awareness, local and international awareness. One participant made the following observation in this regard:

"*In Malaysia, there is customer awareness concerning the service quality, operational modalities for the attraction of customers in Islamic banks. Thus, public awareness, knowledge, and understanding of the Islamic financing products and services, and protocols of how the Islamic banking system works are some of the intent of customer awareness in Malaysia. It also covers awareness of products and services among Muslims and non-Muslims, and awareness of Arabic technical terms of the Islamic financing products among the masses in Malaysia. Thus, it is evident that besides public awareness, awareness of Islamic banking products, national and international awareness, we also have customer awareness, which is mainly intended to target customers and improve a significant financial development in terms of financial inclusion, adoption of Islamic banking services, and involving more players in the Islamic banking industry in Malaysia*".

The information above, which was gleaned from the participants' responses, shows that Malaysia invested in customer awareness to make significant advancements in areas like financial development, financial inclusion, banking choice, adoption of Islamic banking services, and the addition of new players to the Islamic banking industry.

4. Discussion of Major findings

Although there is some level of product awareness in Malaysia with regard to Islamic financing, the data indicates that Islamic banks there need to raise customer awareness even further, especially with regard to vending houses, technicalities, operational modalities, service quality, and newly emerging Islamic banking products. This result agreed with Rammal and Zurbruegg (2007) assertion that Islamic financial institutions should concentrate on informing their clients on the specifics of Islamic finance operations as well as the specifics of Islamic financing products and how they work. Additionally, data garnered from participant responses show that spreading awareness about Islamic financing options is crucial to realizing the primary goal of the Islamic banking industry. According to Bashir (2013) increasing customer numbers in the Islamic banking sector can be attributed in large part to increased awareness of Islamic financial products and service quality. The data also shows that Malaysian political will, which is crucial in ensuring that legislation necessary for the existence of Islamic finance products are passed, is one of the reason why people become aware of Islamic financing products. The regulators' initiatives and activities help in supplying the effective and rightful financing products. These results are supported by Rammal and Zurbruegg (2007) that financial institutions should take into account the dynamics of customer segmentation, cultivate strong client relationships, cater to their needs and preferences in the market, invest in new products, and concentrate on raising public awareness of Islamic banking products and services.

The findings from the participants' responses indicate that Malaysian Islamic banking system is known to both Muslims and non-Muslims (Malays, Chinese, Indians, and minority). However, compared to non-Muslim, Malay Muslims are more aware about Arabic nuances. This view is supported by Lujja et al. (2018) that Muslims are better familiar with Islamic banking terms, culture, and procedures than non-Muslims. The data also show that religiosity is an effective tactic for raising awareness in Malaysia because Muslims also want to avoid *riba* and a system that supports it, which is against the law according to the respective Shari'ah values. This is because; only option left is the Shari'ah compliance finance system due to its certainty, ethics, and dependability. In this regard, Echchabi and Aziz (2012) point out that religiosity has a significant favourable impact on the adoption of Islamic banking products and services. However, the data also shows that non-Muslims engage in the business for profit in Malaysian multi-religious community. This indicates that non-Muslims participate not out of religious conviction but rather for financial gain. Thus, they are aware of Islamic banks due to their natural desire to maximize their financial returns.

The information also shows that Bank Negara Malaysia (BNM) is hosting a popular event that invites businesses to take part in the activities. This has promoted the growth of Islamic finance in Malaysia on a national and international level. However, the evidence indicates that Malaysians need to become extra aware of Islamic banking system and its patronage. This result supports the hypothesis put forth by Latif and Abdul-Rahman (2018) that a partnership between the BNM and other banks, as well as the local media, could help raise public awareness. Additionally, (Imran et al., 2011) emphasized the importance of raising public awareness of Islamic banking, level of Shari'ah awareness, as well as the awareness of products and services it offers. The data collected from participant responses revealed that public awareness is seen as a key factor in the growth of the Islamic banking sector. This finding is consistent with the assertions made by Albaity and Rahman (2019) that the use of the Islamic banking system is significantly influenced by public perceptions of Islamic banks, their reputations, their financial literacy, and their attitudes toward them. Last but not least, the data on customer awareness of Islamic banks in Malaysia indicate that the factor of awareness is crucial to the sector's growth in terms of luring in new customers. In this respect, (Kaakeh et al., 2020) reveal that customer demand directly affects awareness. In addition to that Dalhatu et al. (2015) added that there is benefits of raising awareness for retail customers of Islamic banking industry.

5. Conclusion

This study's objective is to investigate the tactics for raising public awareness that resulted in the accomplishment of the Islamic banking system, using Malaysia as a case study. The findings demonstrate that the Malaysian government, specifically the Bank Negara Malaysia (BNM) in collaboration with Islamic banks, has a substantial impact on the implementation of Islamic banking awareness efforts in Malaysia. The outcome of the study further reveal that Islamic banking awareness campaigns in Malaysia included public awareness, customer awareness, and awareness of Islamic financing products. In conclusion, Malaysia is unwavering in its commitment to enhancing Islamic banks' strategic awareness, which has benefited the system in achieving its anticipated objectives in the nation. Thus, future studies should focus on public awareness, customer awareness, awareness of financing products, and national and domestic awareness separately. This is so that independent studies on each awareness method might potentially offer more information, unearth additional facts, and possibly reveal new business and marketing opportunities. The relevant Islamic financial institutions or the Islamic banking sector should fund more research on the methods used to raise awareness levels of Islamic banking practices in nations other than Malaysia in order to create more opportunities, benefits for the economy, and avenues for financial inclusion.

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