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Financial deepening and human development in Nigeria: A non-linear approach

Mutiu Adeniyi Afolabi

A B S T R A C T
Objective: The study investigated the effect of credit supply on GDP on Human Development and as well examined the impact of Money supply on GDP on human development. It equally assessed the link between bank penetration and human development and the link between financial intermediation and human development.
Research Design & Methods: This study used ex-post facto research design and a Non-Linear Autoregressive Distributed Lag (Asymmetry ARDL) to estimate the effect of financial deepening on human development. Eview 11 was used for the analysis.
Findings: This research work discovered that the positive contribution of credit supply and money supply to human development in Nigeria is weak and the relationship between financial deepening and development is not always linear. The study revealed that the effect of branch expansion in Nigeria is negative because of limited bank products or services.
Implications & Recommendations: The implication of this study is that expansionary monetary policies have the most significant positive impact on human development in Nigeria. The expansionary policy can as well worsen human development through inflationary pressure while a contractionary policy is an anti- human development approach and its effects on human development are negative. The study therefore recommends that: The central bank of Nigeria should place more emphasis on expansionary monetary tools to drive development and be cautious of inflation. CBN and banks should monitor their credit to avoid loan diversion by the beneficiaries and to beat extreme poverty.
Contribution & Value Added: The study used asymmetry ARDL model as an improvement over the conventional regressions that the previous authors have been using to examine the link between financial deepening and human development.
Article type: research article
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INTRODUCTION

The rising case of poor human development is a major source of concern for policymakers in many economies. This concern has recently been heightened by worrying state of unemployment and continuous government inability to better the life of the masses due to scarce financial resources. Many policymakers believe that increasing financial access to the poor masses is a desirable goal because it would enhance human development. It is worthy of note that, human development, poverty alleviation, reduction in inequality and economic growth may not be possible in developing countries without financial system access, financial system depth, financial system efficiency (IMF, 2018). In recent time, financial deepening and human development has been subject of hot debate by policy makers in both developed and developing economies of the World. Part of the efforts made by Policy makers include

setting of Sustainable Development Goals by United Nations, enactment of Community Reinvestment Act of 1997 by United States and this Act requires banks to extend credit throughout their area of operations and discouraging them from targeting only small social and economic elites to break the cycle of poverty and other human development challenges (UNDP, 2015).

Similarly, The United Kingdom Department for International Development (UKDFID) put in place the Financial Deepening Challenge Fund in year 2000 to encourage UK and local financial services providers expand the ranges of financial products available in Africa and South Asia. In 2001 Canada introduced a legislation which requires all banks to offer bank accounts without minimum opening balances.

Related attempts made in developing economies include microfinance banking policy of 2005, financial sector reform of 1986, Central Bank of Nigeria Bank's Recapitalization policy of 2004, Financial Sector Development and Reform Program of 2014 which aim at achieving Global financial access in Nigeria and South Africa (World Bank Global Financial Development Report, 2014). In spite of all the aforementioned policies, the fact still remains that programmes, policies and legislative framework initiated in Nigeria to address people's economic, social and financial deepening challenges could be considered ineffective, weak and counterproductive (Adegboyo *et al.*,2021).

Hence, the debates on how financial deepening influence human development still remain a tensed issue without any moderate consensus and what is evident in developing nations is that there has been growing inequality and very narrowed financial services (Asongu, 2015). The issue of whether those countries that have formulated and adopted policies and programmes that can mitigate financial deepening challenges have witnessed human development still remains question to be empirically analyzed in Nigerian context.

The earliest studies by Schumpeter (1911), Gurley and Shaw (1955) which investigate the relationship between financial development and economic growth failed give empirical backing to their idea and did not believe that finance is one of the determinants of growth in their array of write ups on economics.

Another set of researchers (Enrica *et al.*, 1994; Gusav *et al.*, 1997) study the link between economic growth and human development and established a significant relationship in both direction.

Latest researches by Asteriou and Spano (2019), Younsi and Bechini (2018), Onaolapo (2015), Babajide *et al.* (2015) centre on Financial development, economic growth and inequality, financial inclusion and economic growth, with findings that financial inclusion, financial development has a positive effect on economic growth and inequality.

From all indications, the link between financial development and economic growth, financial development and inequality, financial inclusion and economic growth have been receiving much empirical attention locally and internationally but little is known about the effects of financial deepening on human development in Nigeria.

Additionally, this study is also motivated by the idea that an appropriate modelling or methods of analysis is needed to diagnose the real effect of financial deepening on human development. Thus, this work employed Asymmetric Autoregressive Distributed Lag as an improvement on conventional regressions to analysis the effect of financial deepening on human development.

The objectives of the study are:

1. To investigate the effect of credit supply to GDP on Human Development
2. To examine the impact of Money supply to GDP on human development
3. To assess the link between bank penetration and human development
4. To evaluate the relationship between financial intermediation and human development.

Based on the objectives of this study, the following hypotheses were formulated in their null form:

H1:   Credit to private sector does not have significant effect on human development in Nigeria.

H2:   Money Supply does not have significant impact on human development in Nigeria.

H3:   Banks branch penetration does not have significant link human development in Nigeria.

H4:   There is no significant relationship between commercial bank intermediation and human development in Nigeria.

Financial deepening may do more for the poor than simply help them achieve greater economic stability and prosperity. It could also provide the poor with greater cognitive resources, which would allow them to focus on basic needs and other necessity of life like education of their children, raise the volume of savings and investment (Goldsmith, 1969; McKinnon, 1973; Shaw, 1973).

LITERATURE REVIEW

Conceptually, financial deepening could be described as an expansion in the scale of financial transactions in comparison with a national economy. Financial deepening drives economic growth, human development and alleviates poverty (Gelb, 1989; King & Levine, 1993; Levine, 2005; Levine *et al.*, 2000; Roubini & Sala-i-Martin, 1991; Stiglitz & Weiss, 1981; World Bank, 2018;). For this study, financial deepening simply means widening the supply of financial bonds, cash, stock, deposit liabilities or valuables in the economy. Notably, Gurley and Shaw (1955), McKinnon (1973) among many authors made two crucial observation on financial deepening. Firstly, the development of real money balance is a welcome development for an economy and secondly the development of an economy relies heavily on financial development and financial intermediation. However, in order to give empirical evidences to these propositions (Beck & Levine, 2002; Federici & Caprioli, 2009; Levine, 2005; Liu & Hsu, 2006; Ogwumike & Ifagandeh, 2008; Qi & Teng, 2006; Shaw, 1973; Tsoukas, 2011) carried out a number of cross-countries studies to accept or refute the propositions.

Financial Intermediation

It is the channeling of funds from the surplus unit to the deficit unit of the economy. The process of linking the borrowers and users together is likely to result in the deepening of the financial system (Goldsmith, 1969; Greenwood & Jovanovic, 1990; Harold, 2019). Linking users and the providers of funds will also increase investment. Channeling of fund from the surplus units to the deficit units of the economy promotes growth by way of higher cost of fund to be received on money, and the improved economic performance in turn makes it possible to execute a costly financial mix (Greenwood & Jovanovic, 1990). In the view of Montiel (1995), Beck and Levine (2004), growth and financial development are interconnected because to a limited extent, per capita income can determine the level of financial development and on the other hand, financial development can influence economic growth on temporary and permanent basis. The dimensions of financial deepening which are the channels through which the growth and development of economy are influenced include financial intermediation, bank penetration, Credit to the private sector to GDP, money supply to GDP, market capitalization to GDP, Treasury Bill Etcetera (IMF, 2018).

Human Development

Human development has to do with giving people opportunities and access to basic necessity of life to enhance their living standard, respecting human right and all other forms of self-esteems, access to education, health, political and economic independence (United Nations, 2015; UNDP, 2019). Human development has remained a topical issue in the global discuss because of the perceived and the assumed links between economic growth and development in the second half of the 20th Century (United Nations, 2015). In the beginning of 1960s there were agitations and calls to place less relevance to GDP because economic growth (GDP) had assumed both the leading objective, and measurement of economic performance in many countries in spite of the fact that GDP was not purposely created to be the measure of welfare. From 1970s to 80s development experts strongly argued using alternative focuses to go beyond GDP, by putting greater emphasis on employment, income redistribution, and whether people had met their basic necessity of life. The argument paved way for human development approach, which is about enhancing human life, instead of simply looking at the booming outlook of the economy in which human beings live. The HDI is captured with three key variables: Long life, measured as life expectancy at birth, educational qualification and health.

King and Levine Theory of Financial Development

These theorists re-investigate and re-confirm Schumpeter's study in 1993 and posit that indicators of financial development which are; financial depth or money supply to GDP, the contribution of banks in relation to the central bank, the proportion of bank loan given to individuals and private firms, and credit supply to private sector in relation to GDP are evidently and robustly related with growth, physical capital allocation efficiency and that financial development indicators are significantly associated with the latter coefficient of growth index. King and Levine are of the view that financial development influences the economic development. This theory is relevant to this study because a major indirect channel by which financial development affect human development is through economic growth (Galor & Tsiddon, 1996; Perroti, 1993).

Endogenous Growth Model

The endogenous growth model was pioneered by Lucas and Romer to shed light on the relationship between finance and economic growth. The theory of endogenous growth contends that economic growth is derived from within the economic system as a direct result of internal mechanism (Aghion *et al.*, 1998; Romer, 1994; Solow, 2000). In particular, the theory contends that improvement in human capital will improve the economic performance due to innovation or new forms of technology as well as efficient and effective ways of production.

Empirical Review

In the work of Ranis (2004), human development was used interchangeably with human capital to indicate a two way relationship between economic growth and human development and made a prominent suggestion that countries may enter either into a worsening situation of high growth and large gains in human development, or a difficult situation of low growth and low rates of human development. According to Ranis (2004), the levels of economic growth and human development are jointly dependent, either leading towards a higher spiral of development, or a cycle of poverty. However, the continuity and persistence of these cycles relies on the extent of the connectivity between economic performance and human development. Rani emphatically made a resounding assertions concerning the situation of developing countries; he pointed out that nations could find themselves in a cockeyed state, at least temporarily, with better growth and relatively poor human development, or vice versa. He further pointed out that the basis for poverty are; endemic corruption in government, poor social expenditures, and inequality in income distribution.

On the relationship that exist between financial deepening and human development, Jorgenson and Fraumeni (1994) reveal that human capital investment in the form of education and health spending by banks and government reduces mortality and increases life span thereby enhancing productivity. Similarly, studies on hospital financing highlight the importance of financial institutions in health care financing by exploring the use of derivatives and bonds (Stewart & Owhoso, 2004; Stewart & Trussel, 2006).

Studies by Becker (1962), Nelson and Phelps (1966), Romer (1994), Lucas (1990), Mushkin (1962), Benhabib and Spiegel (1994) assert that investment in human beings through financing of education, on the job trainings and health care inputs has future returns not only for the individual but for entire economy. Therefore, investment in health by households and expansion of the health sector by government and the private sector affect health outcomes and health-related factors like life expectancy, mortality, labour market participation and productivity, human capital accumulation, fertility decisions and demographic structure (Agenor, 2015).

Durusu-Ciftci *et al.* (2017) examine the long run effect of financial development on economic growth using a dataset of forty countries from 1989-2011. The analysis was carried out using Augumented-Mean Group and Common-Correlated Effect. It was reported that financial development has long run effect on per capital income and that credit market contributed significantly to growth.

Akther *et al.* (2020) research on the relationship among finance, human development and growth in 118 countries including 54 IOC countries from 1996 to 2014 using GMM approach. The result of their findings revealed that there exist a positive link between human development variables (average year of

schooling, primary, secondary and tertiary school participation and health spending to GDP) and economic performance. While financial development (domestic credit to private sector, M3, banking deposit and financial system deposits to GDP) and economic growth are negatively correlated, bank cost to income that measures financial system efficiency has negative correlation with the economic growth.

Younsi and Bechtini (2020) evaluate the relationship among growth, financial development and inequality in BRICS countries using panel data analysis and cover the period between 1995 and 2015. The data for financial development were constructed for BRICS countries using Principal Component Analysis. The results of the study indicated that there is a long-run relationship between growth, financial development and inequality. It was reported that GDP per capital has significant positive impact on income inequality while the squared term of GDP per capital has significant negative effect on income inequality. The result of the study showed existence of unidirectional relationship between financial development indicators and income inequality while there is bidirectional causal link between inflation and income inequality.

Agheli and Hadian (2017) investigate the nexus between finance and growth for fifteen developing and Middle Eastern countries using Kónya (2006) bootstrapped panel methodology. The study covers 1980 to 2013. The findings from the study demonstrates that a low financial development account for non- existence of causal relationship between financial development and economic growth. However, there is existence of supply leading and demand following evidence for some others.

Kilic and Ozcan (2018) investigate the relationship between financial development and human capital development in emerging economies between 1990 and 2015 using panel dataset. The researchers constructed proxies for human capital and financial development to mirror the dimensions of both variables. The result of the study showed that financial development has a positive significant impact on human capital in emerging economies.

Asteriou and Spanos (2019) investigate the nexus between financial development and economic growth having factored in the shock from 2008/2009 financial crisis and introduced Structural break to capture pre-financial- crisis and post-financial crisis effect of financial development on growth. The study used panel dataset of twenty six European Union countries and covers 1990-2016. The result of the study revealed that financial development enhanced growth before and after the financial crisis and retard economic activity after the crisis.

Osuka *et al.* (2018) investigate the nexus between human development and financial deepening using time series data from 1991 to 2015 and ARDL approach. The findings of the study revealed that there is a unidirectional causal relationship between financial deepening and Human Development. The study also asserts that financial deepening is a sin-qua-non for improving Human Capital in Nigeria.

Maciejewski and Głodowska (2020) confirm that the countries that experienced the highest level of economic development has no justification to believe that higher level of development in the financial system retards their economic performance. The result further assert that the development of the financial sector, which is harmful to economic performance, occurs in nations that are in transitional stage and those countries with an average economic development level.

Cheshti (2017) investigate the relationship between human development index developed by UNDP and financial development indicator developed by IMF. The result of the investigation revealed that financial development has significant and enhancing effect on human development.

RESEARCH METHODOLOGY

The study use ex-post facto research design.

Model Specification

The study adapts Levine and King's model with little modifications to achieve the study objectives.

Levine and King's (2002) regression is specified as:

$$Y_{it}= a_0+ B_1 F_{it}+B_2 X_{it} +e_{it} \qquad (1)$$

Where Y_{it} is the growth or development, a_0, B_1, B_2 are coefficients, F_{it} is an indicator of a country i Financial Sector Development at time t, X_{it} is the value of control variable for a country i at time t, e_{it} is the error term.

However, the dependent variable (growth) in the Levine and King's regression in the equation (i) above was substituted with Human development in the equation (ii) below;

$$HDI_{it} = a_0 + B_1 F_{it} + B_2 X_{it} + e_{it} \qquad (2)$$

because of the interconnectivity that exists between growth and development.

The independent variable (indicators of financial sector development) in the equation (i) above was also substituted with financial deepening variables in the equation (ii) below;

$$HDI_{it} = a_0 + B_1 FD_{it} + B_2 X_{it} + e_{it} \qquad (3)$$

because financial deepening is synonymous with financial development and is a more acceptable measure of increase in the scale of financial transactions as indicated in the IMF report of 2018.

Time series regression /equation as against the panel regression above were formulated for this study.

According to (IMF, 2018; King and Levine, 2002; UNDP, 2015) the modified or expanded model for this study is specified as follows:

$$hdi_t = f\left(\frac{m2_t}{gdp_t}, \frac{cps_t}{gdp_t}, dep_t, bp_t\right) \qquad (4)$$

where:

$\frac{m2_t}{gdp_t}$ - is the ratio of broad money supply to GDP (financial deepening);

$\frac{cps_t}{gdp_t}$ - is the ratio of credit to private sector to GDP (financial deepening);

$deposit_t$ - is the total bank deposit (bank intermediation);

bp_t - is bank penetration (financial access).

Table 1. Sources and Measurement of Variable

Variables	Definition/Meaning	Sources
HDI	Human development index	United Nation Development Programme Report (1990-2019)
$\frac{m2_t}{gdp_t}$	Ratio of money supply to GDP	Central Bank of Nigeria Statistical Bulletin (1990-2019)
$\frac{cps_t}{gdp_t}$	Ratio credit to private sector to GDP	Central Bank of Nigeria Statistical Bulletin (1990-2019)
Bank deposits	Total deposit in the Nigerian banks	Central Bank of Nigeria Statistical Bulletin (1990-2019)
Bank penetration	Total number of banks branches in Nigeria	Central Bank of Nigeria Statistical Bulletin (1990-2019)

Source: UNDP (2020); CBN (2020).

Pre-Estimation Test

First and foremost, a pre estimation analysis such as descriptive statistics and unit root test were conducted to know the data characteristic and order of integration. The unit root test considered are conventional unit root; namely ADF, Kwiatkwoski-Phillips-Schmidt-Shin (KPSS), Zivot Andrew unit root and confirmatory analysis by comparing ADF with KPSS and Zivot Andrew. Zivot Andrew was specifically included to handle single break and guide the researcher on the appropriate estimation model.

Model Estimation

Asymmetric Autoregressive Distributed Lag (non-linear econometric approach) which is an extension of Auto Regressive Distributed Lag (ARDL) was used to analyse the relationship or the effect of financial deepening on human development in Nigeria because of the non-normality and asymmetric problem. Unlike conventional time series regression which assumes linearity, constant parameter

and proportional changes between the dependent and independent variables, the Asymmetric ARDL assumes asymmetric relationship and considers the fact that nonlinearity is very common within the social sciences and that asymmetry is fundamental to human condition (Pesaran & Shin, 2001). It is the view of the researcher that estimating a relationship which perhaps contains asymmetry with symmetric techniques would appear unfair and lead to serious inappropriate policy conclusion and recommendations (Pessaran & Shin, 2001). The flexibility and suitability of Asymmetric ARDL for 1(0) and 1(1) order of integration, and its capability to test for hidden long run relationship and perform better when the sample is small is appealing to the researcher (Granger & Yoon, 2002).

According to Pessaran and Shin (2001) ARDL model is specified as:

$$\Delta HDI_t = \alpha + \sum_{i=1}^{n} B_{1i} \Delta HDI_{t-i} + \sum_{i=0}^{n} B_{2i} \Delta \frac{M2}{GDP}_{1t-i} + \sum_{i=0}^{n} B_{3i} \Delta \frac{CPS}{GDP}_{2t-i} + \sum_{i=0}^{n} B_{4i} \Delta DEP_{4t-i} +$$
$$\sum_{i=0}^{n} B_{6i} \Delta BPE_{5t-i} + C_1 HDI_{t-1} + D_1 \frac{M2}{GDP}_{t-1} + D_2 \frac{CPS}{GDP}_{t-1} + D_4 DEP_{t-1} + D_5 BPE_{t-1} + e_{it}$$

(5)

Where Δ represent first difference, HDI is the dependent variable, t is period, α denote intercept, $\frac{m2_t}{gdp_t}, \frac{cps_t}{gdp_t}, dep_t, bp_t$ are expressed in form of k by 1 vector of regressors, $C_1, D_1, D_2, D_3, D_4, D_5$ represent long run coefficients while B_1, B_2, B_3 represent short run coefficients, $t - i$ represent optimal lags for the dependent and independent variable, e_{it} represents error term.

However, to examine if the assumption that nonlinearity is very common within the social sciences and that asymmetry is fundamental to human condition are valid and detect asymmetric effects of financial deepening on human development, the researcher decompose financial deepening variables into its positive and negative partial sums:

$$\frac{M2}{GDP}_t^+ = \sum_{j=1}^{t} \Delta \frac{M2}{GDP}_j^+ = \sum_{j=1}^{t} \max(\Delta \frac{M2}{GDP}_{j,0}^+)$$ (6)

$$\frac{M2}{GDP}_t^- = \sum_{j=1}^{t} \Delta \frac{M2}{GDP}_j^- = \sum_{j=1}^{t} \min(\Delta \frac{M2}{GDP}_{j,0}^-)$$ (7)

$$\frac{CPS}{GDP}_t^+ = \sum_{j=1}^{t} \Delta \frac{CPS}{GDP}_j^+ = \sum_{j=1}^{t} \max\left(\Delta \frac{CPS}{GDP}_{j,0}^+\right)$$ (8)

$$\frac{CPS}{GDP}_t^- = \sum_{j=1}^{t} \Delta \frac{CPS}{GDP}_j^- = \sum_{j=1}^{t} \min\left(\Delta \frac{CPS}{GDP}_{j,0}^-\right)$$ (9)

$$DEP_t^+ = \sum_{j=1}^{t} \Delta DEP_j^+ = \sum_{j=1}^{t} \max(\Delta DEP_{j,0}^+)$$ (10)

$$DEP_t^- = \sum_{j=1}^{t} \Delta DEP_j^- = \sum_{j=1}^{t} \min(\Delta DEP_{j,0}^-)$$ (11)

$$PENE_t^+ = \sum_{j=1}^{t} \Delta PENE_j^+ = \sum_{j=1}^{t} \max(\Delta PENE_{j,0}^+)$$ (12)

$$PENE_t^- = \sum_{j=1}^{t} \Delta PENE_j^- = \sum_{j=1}^{t} \min(\Delta PENE_{j,0}^-)$$ (13)

RESULTS AND DISCUSSION

Descriptive Statistics

From the table 1, the null hypothesis of normal distribution was rejected for deposits and the proportion of Credit Supply to GDP. This technically revealed that distribution of these two variables were not independent and identical. The results provided by Skewness, Kurtosis and Jarque Bera P value as regard deposits and credits supply showed the presence of potential asymmetry in the distribution of time series data. Therefore, the asymmetric autoregressive distributive lag modeling (NARDL) might be needed to address the problem of asymmetry (Shin *et al.*, 2014), if further preliminary test also suggest non linearity.

From The kurtosis statistic, bank penetration, CPS/GDP, M2/GDP were platykurtic in nature while HDI and Deposits on the other hand are leptokurtic. From the results below using the P-values associated with the Jarque-Bera statistics, the HDI, M2/GDP and bank penetration were normally distributed while CPS/GDP was marginally abnormal and Deposits was not normal. Overall, both deposits and CPS/GDP exhibited non normality or asymmetric and the issue of asymmetry might stem from non-normality and asymmetry of both the bank deposits and CPS/GDP.

Table 2. Descriptive statistics

Variables	Mean	Median	Max.	Min.	Std. Dev.	Skewness	Kurtosis	Jarque-Bera Prob.	Prob.
HDI	0.46	0.48	0.58	0.32	0.074	-0.52	2.17	2.30	0.32
DEPOSITS	2714.233	451.9631	12146.91	11.49	3970.380	1.324259	3.338325	9.208435	0.010010
CPS/GDP	11.2599	8.2436	20.773	6.2173	5.3757	0.8703	1.9585	5.3145	0.0701
BPENE	3327.129	2407.000	5809	1367	1527.368	0.540499	1.684861	3.743440	0.153859
M2/GDP	14.48608	13.0639	21.2905	9.1517	3.9306	0.5732	1.8072	3.5350	0.1708

Source: own computation using Eview, 2021.

Preliminary or Pre estimation Analysis

While it is essential to conduct a formal unit root test, it is of upmost importance to first plot the time series under investigation in order to get a clearer picture of the stationarity and integrating properties of the variables. Based on the above view, HDI, M2/GDP, CPS/GDP, Deposits and Bank Penetration were graphically examined and presented in figure 1 to 5 (Appendix). It is evident from the graph that the variables were trended in nature which was a clear evidence of unequal means and variance over-time (which means the variables could only be stationary after difference). The researcher had on this basis assumed that the variables under study were not stationary over the study period.

Unit Root Test

The researcher employed Augumented Dickey Fuller, Kwiatkowski-Phillips-Schmidt-Shin test statistic and Zivot Andrews unit root tests to examine numerically and statistically the stationarity nature of the variables since using these three unit root test would enhance the credibility of the unit root test results (Enders, 1995). ADF and KPSS unit root test were initially conducted to determine the properties of the series. The researcher discovered that there existed a structural break in the series while carrying out preliminary test. The descriptive statistics such as skewness, Kortois and JB statistics pointed out the issue of non-normality or asymmetries which made the researcher to suspect that ADF and KPSS unit roots might have given ambiguous and false result because both tests ignored the importance of structural break in a series. Hence, Zivot Andrew unit root was employed to confirm the existence of a structural break and the timing of the break because ZA is capable of providing superior empirical results in the presence of unknown single structural break in the series.

Table 3. Augumented Dickey Fuller

Variable	Constant with trend @level	@difference	Order of integration
HD	–	-4.296729 (-7.169834)***	1(1)
CPS/GDP	–	-4.323979 (-4.760542) ***	1(1)
M2/GDP	–	-4.309824 (-4.880502) ***	1(1)
Deposits	–	-4.309824 (-6.910605) ***	1(1)
Bank penetration	–	-3.679322 (-3.688802)***	1(1)

* (**) (***) denotes significance at 10%, 5% and 1%.
Source: own computation using Eview, 2021.

Table 4. Kwaiatkowski Philips – Schmidt-Shin (KPSS) Unit Root

Variables	Constant with trend level	Order of integration
HD	0.216000 (0.090042)	1(1)
CPS/GDP	0.216000 (0.164708)	1(1)
LM2/GDP	0.216000 (0.095679)	1(1)
Deposits	0.216000 (0.188756)	1(0)
Bank penetration	0.216000 0.081170	1(1)

Source: own computation using Eview, 2021.

Table 5. ZIVOT Andrew Unit Root Result

Variable	T-Stat	Time break	Order of Integration
HD	-5.3475 (-10.3465) ***	1993	1(0)
CPS/GDP	-5.3475 (-5.6307) ***	2006	1(1)
LM2/GDP	-5.3475 (-5.8758) ***	2006	1(1)
Deposits	-5.7191 (-7.9220) ***	2003	1(1)
Bank penetration	-5.3475 (-5.6367) ***	2003 (3rd quarter)	1(1)

* (**) (***) denotes significance at 10%, 5% and 1%.
Source: own computation using Eview, 2021.

Table 6. Confirmatory analysis

Variable	ADF	KPSS	ZA with break	Decision
HD	1(1)	1(1)	1(0) (1993 + 2month)	inconclusive decision due to structural break
CPS/GDP	1(1)	1(1)	1(1) (2006 +5months)	Conclusive decision
LM2/GDP	1(1)	1(1)	1(1) (2006+6months)	Conclusive decision
Deposits	1(1)	1(0)	1(1) (2003+7months)	Conflicting decision due to break
Bank penetration	1(1)	1(1)	1(1) (2003+3months)	Conclusive decision

Source: own computation using Eview, 2021.

NARDL Model

Before conducting the NARDL test, the researcher strictly follow Pessaran and Shin rule of I(1) for the dependent variable, I(1) and I(0) or mutually cointegrated for independent variables (see table 6 for details). Although, the unit root result for HD and deposit were not conclusive, yet the NARDL result remained valid because a valid conclusion could be drawn from the Bound test for cointegration even in the presence of a conflicting unit root tests (Pesaran et al, 2001). As part of the preliminary steps, the researcher logged deposit variable which appeared to have exhibited skeweness and exponential distribution while HDI, CPS/GDP and M2/GDP were not logged because they were in percentage. From the NARDL results, 99% of the variation in human development was explained by money supply, bank credit, deposits and bank penetration. The DW value of 3.14 indicated that appropriate lags were selected for the model and there was no serial correlation. The F- statistics is statistically significant at 1%. Thereafter, the long run coefficient (calculated) obtained are 0.08, 0.15, 0.07, 0.23, 0.00007,

0.00009, 0.000056 and 0.000027 respectively. From the above long run coefficient, an increase in the proportion of money supply led to about 8% improvement in the human development index while a decrease (contractionary policies*)* in the proportion of money supply led to a fall in human development index by 15%. An increase in the proportion of credit supply to the private sector would improve human development index by 7% but a decrease (contractionary policies) in the proportion of credit to the private sector would worsen or deplete human development index by 23%.

Interestingly, bank penetration and deposit had significant negative and positive impact on human development index in Nigeria. The cumulative effect of Branch expansion was negative and this result is consistent with Cristina and Paola (2017) which was an indication that branch expansion has not increased credit availability, service quality, client base, financial depth, financial efficiency and general accessibility to bank services. The cumulative effect of deposit mobilization was positive. In the short run, a negative shock to money supply sometimes worsened or improved human development index while a positive shock to money supply also reflected mixed result on human development but the cumulative effect of the shock in money supply on human development is positive and this was a confirmation of Nonlinear relationship between money supply and human development in Nigeria.

The Nonlinear effect of money supply on human development might be attributable to policy inconsistence and huge proportion of cash outside the bank system. Surprisingly, there was also asymmetry relationship between credit to private sector and human development in the short run. It was discovered that a positive shock to credit had a negative effect on human development and this might be attributable to factors such as; country inability to meet an empirically acclaimed Pro growth/development threshold of 70-100% of CPS to GDP. Likewise, a negative shock to credit supply significantly worsened human development in Nigeria.

Conclusively, the cumulative effect of credit supply on human development was negative for the period under study. Both negative and positive shocks to bank branch penetration affect human development negatively in the short run. There was also an asymmetry relationship between bank deposits and human development. The mixed effect of bank deposit on human development is not surprising because this might be attributable to poor saving habit and low income of the Nigerians.

Table 8. Nonlinear ARDL Model

Variables	Coefficient	Std. Error	T-Statistic	Probability
Constant	**-0.147523**	**0.001047**	**-140.8786**	**0.0045*****
$HD(-1)$	0.142287	0.001737	81.89394	0.0078***
$M2\,TO\,GDP^+(-1)$	0.011388	0.0000273	417.0473	0.0015***
$M2\,TO\,GDP^-(-1)$	0.021024	0.0000509	412.9660	0.0015***
$CR\,TO\,GDP^+(-1)$	-0.O10186	0.0000506	-201.3121	0.0032***
$CR\,TO\,GDP^-(-1)$	-0.032211	0.000122	-263.6596	0.0024***
$BANK\,PENE^+(-1)$	0.0000105	0.000000221	47.69439	0.00133***
$BANK\,PENE^-(-1)$	-0.0000128	0.000000472	-27.19923	0.0234***
$DEPOSIT^+(-1)$	-0.0000079	0.000000055	-146.0322	0.0044***
$DEPOSIT^-(-1)$	0.0000384	0.000000185	207.1087	0.0031***
$\Delta M2\,TO\,GDP^-(-1)$	-0.005413	0.0000284	-190.5700	0.0033***
$\Delta BANK\,PENE^+(-1)$	0.0000352	0.000000129	273.8736	0.0023***
$\Delta CR\,TO\,GDP^+(-1)$	-0.015196	0.0000448	-338.8482	0.0019***
$\Delta CR\,TO\,GDP^-(-1)$	-0.019564	0.0000891	-219.5042	0.0029***
$\Delta M2\,TO\,GDP^-(-1)$	0.018877	0.0000720	248.5911	0.0026***
$\Delta M2\,TO\,GDP^+(-2)$	-0.004254	0.0000428	99.37927	0.0064***
$\Delta DEPOSIT^+$	-0.0000019	0.000000067	-28.75614	0.0221***
$\Delta M2\,TO\,GDP^+$	0.014061	0.0000631	222.8851	0.0029***
$\Delta HD(-3)$	-0.145470	0.000529	-257.1090	0.0023***
$\Delta CR\,TO\,GDP^+(-3)$	-0.007631	0.0000198	-385.6169	0.0017***
$\Delta CR\,TO\,GDP^-(-2)$	-0.006073	0.0000371	-163.7828	0.0039***
$\Delta BANK\,PENE^-(-3)$	0.0000501	0.000000429	116.7659	0.0055***

Variables	Coefficient	Std. Error	T-Statistic	Probability
Constant	-0.147523	0.001047	-140.8786	0.0045***
$\Delta CR\ TO\ GDP^-(-3)$	0.010118	0.0000725	139.6260	0.0046***
$\Delta DEPOSITS^-(-3)$	-0.019352	0.000310	-62.34250	0.0102***
$\Delta DEPOSITS^+(-3)$	0.00000137	0.0000000803	17.00361	0.0374***
$\Delta M2\ TO\ GDP^+(-1)$	0.000303	0.0000629	4.820326	0.1302

* (**) (***) denotes significance at 10%, 5% and 1%; R2 – Adjusted 0.9999;
F – Stat (51.0956)0.001105; RSS 0.00000000138; DW 3.136126
Source: own Ccomputation using Eview, 2021.

From the table 8, the calculated f-stat of 51.79 was statistically significant at 1% and exceeds the upper bound Pessaran critical value of 4.01 when k is 4 at 5% p-value. This confirmed the existence of hidden cointegration between Human Development and Financial Deepening for the period under study. There was a long run nonlinear relationship between financial deepening and human development in Nigeria.

Table 9. Bound Test of Cointegration for NARDL

Test Statistic	Value	Df	Probability
F-statistic	51.79378	(7, 1)	0.0011***
Chi-square	36.25565	7	0.0000***

* (**) (***) denotes significance at 10%, 5% and 1%
Source: own computation using Eview, 2021.

Test for Presence of Asymmetry

The table 9 investigated the presence of asymmetry using Wald Test. The calculated f-stat of 33.26 is statistically significant at 1% and exceeds the upper bound Pessaran critical value of 4.01 when k is 4 at 5% p-value. From the result, the null hypothesis of equality is rejected as p-value is less than 0.05. The Wald test indicated that there was asymmetry in the long run impact of financial deepening on Human Development. The positive effect of the series was not the same with the negative effect of the series on Human Development. It was evident from this result that positive shock and negative shock of financial deepening had unequal and mixed effect on Human Development. The result gave a picture of the happenings in Nigeria because in spite of the positive trend for PCI between 2003 -2015 couple with the increase in M2/GDP and increase in bank deposits base, increase in credit and bank branch expansion, the living condition of Nigerians have deteriorated.

Table 10. Test for asymmetry

Test Statistic	Value	Df	Probability
F-statistic	33.26911	(5, 1)	0.0042
Chi-square	16.63456	5	0.0000

* (**) (***) denotes significance at 10%, 5% and 1%
Source: own computation using Eview, 2021.

Discussion

This study found that financial deepening has short run and long run asymmetric effect on human development in Nigeria. From the long run coefficient, an increase in the proportion of money supply led to about 8% improvement in the human development index while a decrease (contractionary policies) in the proportion of money supply led to a fall in human development index by 15%. Investigation also revealed that an increase in the proportion of credit supply to the private sector would improve human development index by 7% but a decrease (contractionary policies) in the proportion of credit to the private sector would worsen or deplete human development index by 23% and this result was consistent with empirical studies of Fry, 1995; World bank, 1990; World bank, 2017; Huber,2018. Obviously, money supply and credit supply played significant but weak role in human development and this was contrary to the work Levine (2000) and supported the research work of

Maciejewski and Głodowska (2020). Interestingly, both bank penetration and deposit mobilization has a significant effect on human development.

CONCLUSIONS

Previous studies (Kilic & Ozcan, 2018; Osuka *et al.*, 2018), affirmed that financial deepening variables had significant and positive effect on human development. However, this research work discovered that the positive contribution of credit supply and money supply to the development in Nigeria is weak and the relationship between financial deepening and development is not always linear. The study revealed that the effect of branch expansion in Nigeria is negative because of limited bank products or services. It was concluded that there is mixed relationship between financial deepening variables and human development in Nigeria. Conclusively, an inverted U-shape link between financial deepening and development has been empirically confirmed by this study for Nigeria when contractionary monetary policy was applied. The limitation for this study is lack of long run data for human development index and lack of consensus on the appropriate measure of human development. Future studies should consider the role of inflation in financial deepening and human development because expansionary policies expose monetary authority to inflationary pressure.

Since money supply to GDP and credit supply to GDP seem to have the most significant impact on human development in Nigeria, the following recommendations were made in line with the findings of the study.

The central bank of Nigeria should place more emphasis on expansionary monetary tools to drive development and be cautious of inflation.

Policy makers should maintain a Credit to GDP ratio of not less than 70% in order to influence human development (income level, education, health,) positively.

CBN and banks should monitor their credit to avoid loan diversion by the beneficiaries and to beat extreme poverty.

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Appendix:

HDI
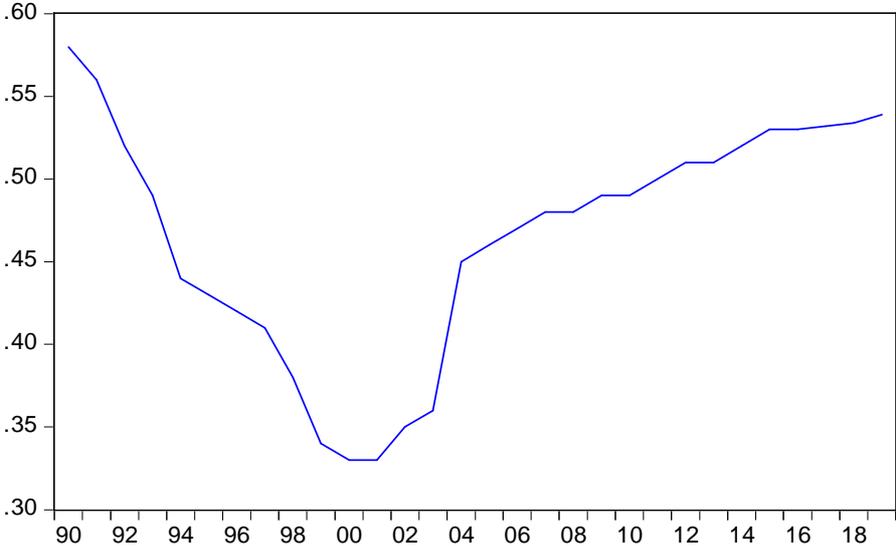
Source: own computation (2021) using Eviews

BPENE
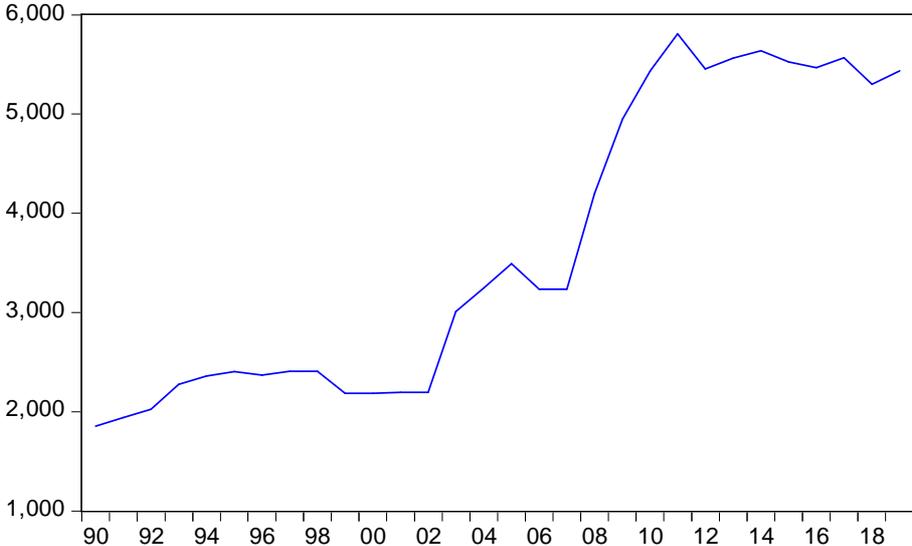
Source: own computation (2021) using Eviews

CPS/GDP
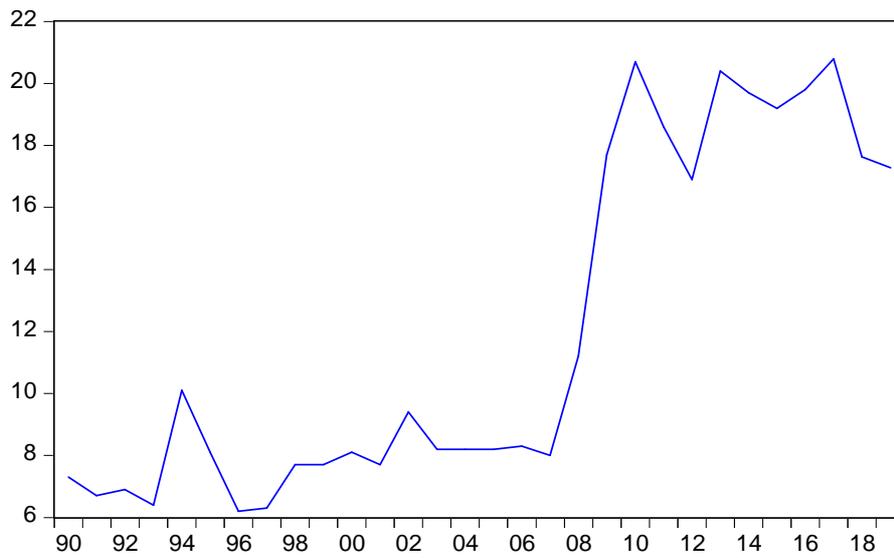
Source: own computation (2021) using Eviews

M2/GDP
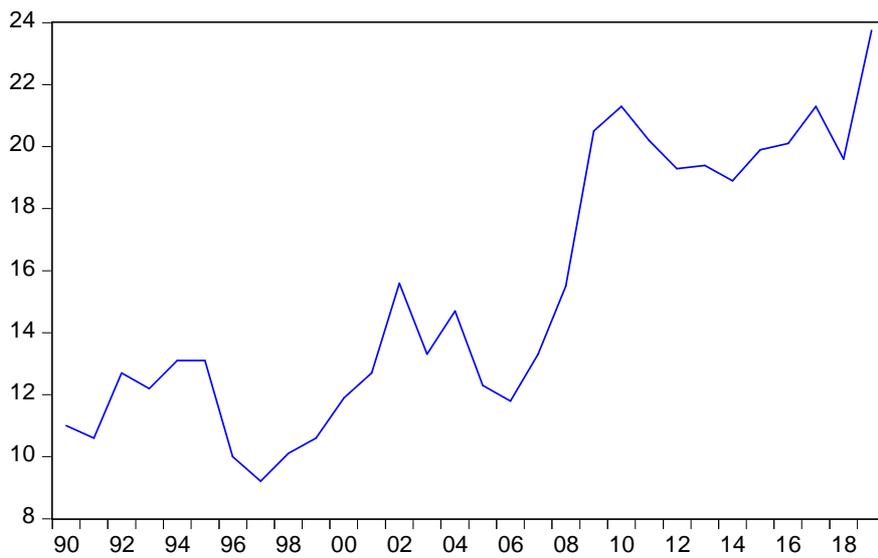
Source: own computation (2021) using Eviews

SAVDEP
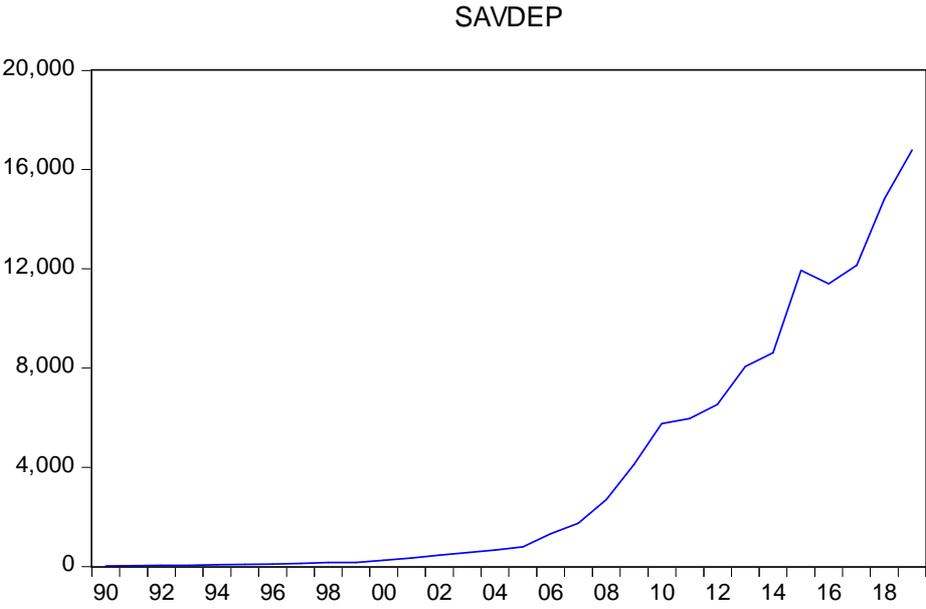
Source: own computation (2021) using Eviews

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Conflict of Interest

T The author hereby declare that there was no any financial that could influence the result of this research.

Evolution of corporate social responsibility standards and their implementation in the strategies of the most powerful corporations: Guidelines for the CSR 5.0 concept

Magdalena Rosińska-Bukowska

A B S T R A C T
Objective: The objective of the article is to assess the advancement of social responsibility (CSR) models of the most powerful transnational corporations (Top TNCs) in terms of the implementation of CSR principles in accordance with the idea of creating of Creating Shared Value (CSV). Additionally, using the concept of the Grounded Theory Methodology (GTM), to create guidelines for CSR 5.0. for the creation of CSV by companies.
Research Design & Methods: The paper, apart from literature review and its critique, presents the results of an authorial survey. The author conducted in-depth studies – using the Multidimensional Statistical Analysis, the Strategic Analyses. The paper presents the results of research (2010-2021) on the strategies of the Top TNCs. The list of key values constituting the pillars of companies' strategies was prepared based on the GTM on the basis of Top TNCs case studies (the ten strongest players in each sector) operating on a global scale in various industries: automotive, electronics, pharmaceutical, consumer goods. The quantitative research of economic indicators and the qualitative analysis of 480 annual reports focus on the assessment of the implementation of the principles of sustainable development to improve the company's ability to create CSV, and thus its competitive ability in the long term.
Findings: The original CSR 5.0 model was designed, adequate to the challenges of the 21st century related to the creation of CSV. The model was constructed on the basis of CSR principles disclosed as universal and included in the strategies of the Top TNCs studied and related to three layers of their intellectual capital (IC). With the use of GTM, a set of key values (three for each layer) was established, constituting the pillars of CSR 5.0, i.e. CSR for business models focused on CSV.
Implications & Recommendations: The emphasis on the creation of CSV is a requirement of 21st century competitiveness, which was confirmed by research for world leaders in four sectors. This is best seen in the area of innovation. The changes also concern the organizational and relational spheres. It is recommended to use the indicated directions of changes to prepare also other companies for new challenges. The CSR 5.0 model indicates the key areas of ICs of companies as requirements for securing long-term sustainable development (including in the era of automation and digitization, e.g. thanks to the personification of goods and services).
Contribution & Value Added: The paper presents an innovative approach pointing to the close relationship between intellectual capital – the implementation of CSR activities – long-term competitiveness as the ability to create CSV. Based on extensive research, the key elements of IC have been identified, reflecting the implementation of CSR in the innovative, organizational and institutional dimensions.
Article type: research article
Keywords: corporate social responsibility; Creating Shared Value; CSR; corporations; Society 5.0
JEL codes: F23, M14, Q01
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INTRODUCTION

The global economy constantly changes which influences all aspects of its functioning as well as participatory entities. This means there are new challenges: "Industry 5.0", "Society 5.0.", and "Economy 5.0." In the 21st century, digital technologies constitute a strategic element of both state competitiveness (Ciffolilli & Muscio, 2018) and enterprise competitiveness, however, in both cases CSV (Creating Shared Value) should constitute their ever-present attribute (Bockstette & Stamp, 2011; Hart & Milstein, 2003; Porter & Kramer, 1999, 2011). The challenge are the necessity to synchronise the economic, industrial and social transformative processes, the sustainable and fair development which emphasises the innovations that focus on man in the long term (EC, 2021).

The effect of the 5.0 approach in business therefore means that innovativeness in necessary, but not sufficient. The 5.0 strategy signifies striving for the creation of socio-economic values (CSV). "Economy 5.0"/"Society 5.0" means that we realize that we are responsible for the sustainable development and welfare of the world we live in (Chemouny Liss & Korzeniewska, 2021; Sarfraz *et al.*, 2021). This requires a holistic, long-term perception, exploration instead of exploitation, management of the influence on society of all types of entities, the use of progress, including innovation and digitisation, as a potential for the creation of smart solutions important to humanity (all groups of stakeholders). The potential for innovation of a company is not measured solely through technological innovations, but also the ability to transform them into a soft value added. The personified CSV-type goods that fulfil specific, even sophisticated, needs of an individual or a group (Strange & Zucchella, 2017), but at the same time fulfil the requirements of production and use in accordance with the standards of social responsibility (CSR). Therefore, currently, innovations create a culture of changes which manifests itself in the adjustments made by companies within three dimensions (Rosińska-Bukowska, 2019): technological one, organisational one and relational one – layers of intellectual capital (IC). The concept of "Society 5.0" has a significant impact on the business models of companies, including strategic development decisions regarding the role of IC.

This topic is very important because the creation of socio-economic value (CSV) is a competitive challenge of the 21st century. CSR strategies, which are now an inherent part of companies' development strategies, indicate numerous activities of companies that are to prove their commitment to the welfare of society. The research questions in this article are:

RQ1: Does the retrospective analysis (2010-2021) confirm that CSR has become an increasingly important part of development strategies of the Top TNCs of various sectors to the same degree?

RQ2: Is it apparent that companies are paying more and more attention to the ability of CSV to innovate, organize and relate?

RQ3: What elements are the recurring universal values responsible for CSV in terms of: innovation, organization and relations?

The paper presents an innovative approach pointing to the close relationship between: (1) long-term competitiveness of companies as the ability to CSV; (2) the importance of IC in strategies of TNCs; (2) the implementation of advanced CSR activities in business models of companies. Based on extensive research of 40 Top TNCs – leaders of industries, the key elements of IC have been identified, reflecting the implementation of CSR in the innovative, organizational and institutional dimensions.

The author presents the results of research on the strategies of the Top TNCs in years 2010-2021. The quantitative research of economic indicators and the qualitative analysis of 480 annual reports. For the quantitative assessment, the author's synthetic measure (Synthetic Indicator of Creation of Added Value – SICAV) was used, taking into account the parameters illustrating economic and intellectual capital of corporations. The list of key values constituting the pillars of companies' strategies was prepared based on the Grounded Theory Methodology (GTM) on the basis of Top TNCs case studies (the ten strongest players in each sector) operating on a global scale in various industries: automotive, electronics, pharmaceutical, consumer goods. The research focus on the assessment of the implementation of the principles of sustainable development to improve the company's ability to create CSV,

and thus its competitive ability (the creation of added value) in the long term. Finally, the results obtained in the linear ordering method were compared with the results of qualitative research on the advancement of the CSR model assessed through the IC prism.

The objective of the article is to assess the advancement of CSR models of the Top TNCs in terms of the implementation of CSR principles in accordance with the idea of CSV. Additionally, using the concept of the GTM, to create guidelines for CSR 5.0. for the creation of CSV by companies. In each of the IC layers, the author, will distinguish three elements were, reflecting the essence of changes taking place in the corporate CSR, the direction of which is universal, and at the same time proves the attitude towards the creation of CSV.

The structure of the article encompasses, firstly, the presentation of the evolution of conceptual framework of CSR, taking into account the influence of the "Society 5.0" concept on the modern model of CSR. Secondly, the integral elements of the 21st century CSR corporate model are identified. This stage is based on the analysis of research results on the strategies of CSR implementation in individual subsystems of the IC in 40 TNCs from various sectors. The conclusion involves discussing the aspects that aim to protect the long-term creation of socio-economic values thanks to the proper exploration of the qualities of the IC layers.

LITERATURE REVIEW

The notion of "CSR" has evolved. The scientific discussion began in the 1930s. The first idea of CSR supposes that the businessmen have an obligation to consider social objectives and values when they make decisions (Bowen, 1953). One of the first approaches to determine the essence of CSR through a model was Eells' continuum (1959). In the 1970s, CSR became more popular as a new challenge of managerial professionalism. The discussion of CSR been very limited in scope (Ackerman & Bauer, 1975; Alexander & Buchholz, 1978; Fitch, 1976; Ford & McLaughlin, 1981; Fritsche & Ehler, 1982; Goodpaster & Matthews, 1982; Keim, 1978; Zenisek, 1979). The Carroll's "Four-Part Model of CSR" (economic, legal, ethical, philanthropic) has become the most well-established concept of CSR (Carroll, 1979).

This concept CSR was extended to include responsible actions and the attitude of organisations towards the natural, social and economic environment only in the 1990s (Carroll, 1999; Waddock & Graves, 1997). L'Etang (1994) stressed that corporations need to place more emphasis on an integrated programme of corporate responsibilities regarding CSR. The approach based on the stakeholder theory expanded the conceptual framework of the functioning of business.

At the turn of the centuries, the need to expand the meaning of CSR. The approach was based on multi-faceted, mutual benefits. It resulted in the vision of a more responsible everyday life, responsible resource management, emphasis on sustainable development and the CSR of all types of entities (Dahlsrud, 2008; Rego *et al.*, 2017). Modern concepts of CSR began to emerge when CSR started to be perceived as not only a function of numerous variables – law, intentions, significant information, effectiveness – but also as a method of transforming matters, issues and social needs into opportunities that make it possible to increase profits by reducing future social costs (Drucker, 2006).

Only in the second decade of the 21st century, CSR conceptualisations were considered obligatory to all organisations in order to implement organisational, innovative and relational improvements which could serve not only the organisation itself, but also all its stakeholders, including the natural environment, and would aim to ensure social welfare (Afuah, 2019; Brunswicker & Chesbrough, 2018; Glavas, 2016; Shen & Benson, 2016; Wang *et al.*, 2016). The companies should not only implement reactive programmes forced by consumer and ecological lobbies. The companies should create image of a socially-responsible entity should involve various pro-active actions, for instance aimed at clients (truthfulness in advertising, long-term responsibility for products and services), investors (clear information on the results and perspectives of the adopted management strategy), a group of other stakeholders in the broad sense (e.g. influence of the company's or subcontractors' activities on climate, social relations, exclusion areas, laws and freedoms).

Traditionally, in the history of mankind, technology was treated separately from social issues (Lasi *et al.*, 2014; Ruttan, 1997). The notion of interdependencies between technology and social

issues first appeared in the sociotechnical theory (Van der Zwaan, 1975; Wang *et al.*, 2016). Currently, treating these issues as an interdependent system is almost common (Glavas, 2016; Krill, 2019; Mulej, 2011; Potočan, 2021; Waldman *et al.*, 2020). A stronger interference of technology ("Industry 5.0") in each sphere of life forces an increased vigilance against the corporations' creation of CSV in the long term. Managers often face restrictions on the adaptation of the mechanisms and processes that could help conceptualise a correct technological advancement in an organisation's CSR (Breque *et al.*, 2021; Crifo & Forget, 2015; Windsor, 2006).

The concept "Society 5.0" makes the achievement of promising results in the area of CSR conditional on the state the advancement of business models, the system of values perceived, the level of knowledge among the participants of the process and the inclusion of more and more numerous stakeholder groups. The concept describes the conditions for development necessary to obtain a responsible, man-centred society wherein the above-mentioned issues would be reduced or, even better – resolved – due to corporate involvement. The concept suggests integral framework for a potential development of CSR in organisations, in order for them to correctly shape their strategies in the matters of the environment, society and economy as integral and overlapping dimensions – integrity/holism of approach (Delfi, 2019; Higashihara, 2018; Nakanishi, 2019; Rego *et al.*, 2017; Žižek *et al.*,2021).

The exploration of the relationship between people, things, data and technology is a crucial element of the concept. It signifies understanding of technological and social correlations of development. The goal is to implement advanced technologies, popularise the newest accessible solutions and create an integrated cyberspace as a source of data which facilitates solving social issues (Alcacer & Cruz-Machado, 2019; Lee *et al.*, 2015; Shiroishi *et al.*, 2019). Therefore, a CSR of organisations should include "good practices" aimed at solving innovation, organisation, and relations problems.

The concept "Society 5.0" shows the possibilities of creating new values through innovations focused on providing goods and services with social and economic value due to innovations, especially social ones, and stimulating the innovativeness of all stakeholder groups in the chains of value creation. From the innovative perspective, it is the use of technological changes – automation, digitalisation and personification ("Industry 3.0" to "Industry 5.0"). From the organisational perspective, it involves man-oriented actions undertaken in organisations. In the institutional perspective, it involves building multi-level, transparent and open relations which take into account both individuals and their organisations. The manner of implementing the CSR concept and the issue of which aspects of the whole potential of theoretical models can be implemented in the CSR strategies of specific organisations depends on the detailed factors determining the functioning of a given entity/enterprise (Gelfand *et al.*, 2017; Mohd & Abid, 2020; Potočan *et al.*, 2016).

In the conditions of limited resources, heavy competition and progressive globalisation, organisations should strive to use more and more modern technologies that reduce environmental exploitation (of both the natural and the social environment). They should create concepts which connect people, things and technologies to create CSV (Palazzeschi *et al.*, 2018; Porter *et al.*, 2021; Savaget *et al.*, 2019). They should redefine business models (internationalisation, innovations, reorganizations of structures, types of the most important connections). The changes in companies' strategies should involve an intricate structure of attitudes, connections, and socio-economical relationships both in and outside the firm, and the way such they are changing (Afuah, 2019; Aharoni, 2014; Aharoni *et al.*, 2011; Buckley & Ghauri, 2015). These changes in companies' strategies (innovations, structures, relationships – layers of IC) are reflected the recommendations of the "Society 5.0" concept.

These results of literature review allowed to assume the following conclusions:

− The social transformation ("Society 5.0") and the technological revolution ("Industry 5.0") both change the business models of companies and this is reflected in the strategy descriptions;
− The implementation of the idea of CSV is recorded in the guidelines for the individual layers of IC;
− The advancement of the principles of the corporate CSR model should concern all layers of IC, because in this way is the company's ability to create value added improved.

RESEARCH METHODOLOGY

The paper presents the results of research (2010-2021) on the strategies of the Top TNCs. The list of key values constituting the pillars of companies' strategies was prepared based on the GTM on the basis of Top TNCs case studies (the ten strongest players in each sector) operating on a global scale in various industries: automotive, electronics, pharmaceutical, consumer goods. The quantitative research of economic indicators and the qualitative analysis of 480 annual reports focus on the assessment of the implementation of the principles of sustainable development to improve the company's ability to create CSV, and thus its competitive ability in the long term.

The research encompassed case studies of corporations representatives of four sectors, selected from among sector leaders. In each case, 10 TNCs of a given sector ranked in the 2021 Forbes Global 2000 were studied. In the automotive sector they were (their rank is given in brackets): Toyota Motor (12); Volkswagen Group (17); Daimler (41); General Motors (47); BMW Group (61); Honda Motor (82); SAIC Motor (139); Hyundai Motor (155), Volvo Group (215); Tesla (262). In the electronics sector: Apple (6); Samsung Electronics (11); Microsoft (17); Sony (35); IBM (59); Intel (36); General Electric (45); Siemens (69); Dell Technologies (92). In the consumer sector: Nestlé (39); Procter & Gamble (46); LVMH Moët Hennessy Louis Vuitton (64); PepsiCo (70); Unilever (91); Coca-Cola (102); L'Oréal (158), McDonald's (102), Danone (238); Henkel (290). In the pharmaceutical sector: Johnson & Johnson (34); Pfizer (58); Roche Holding (60); Novartis (65); Sanofi (72); Merck & Co. (84); GlaxoSmithKline (97); Abbott Laboratories (121); AstraZeneca (161); Novo Nordisk (260).

For the quantitative assessment, the author's synthetic measure was used, taking into account the parameters illustrating economic and intellectual capital of corporations (Synthetic Indicator of Creation of Added Value – SICAV). The most problematic issue is determining the combination of parameters that would enable measurements based on statistical data that has been published (in accordance with widely recognised methodologies). Governed by this criterion, the following have been acknowledged as sources information: profit (P), market value (MV), expenditures for research and development (R&D), stockholders' equity (SE), asset value (A), assets value abroad (AVA), sales (S), sales value abroad (SVA), employment (E), and employment abroad (EA).

The main research method for the non-experimental quantitative research, which was applied in this research project, comprised the collection of comparable data (from international reports, annual reports of corporations, rankings and statistics) with the intent to process them with the Multidimensional Statistical Analysis (MSA). In order to gather empirical material (2010-2021), the author used primarily Forbes Global 2000, Top 100 TNCs UNCTAD, Fortune Global 500, FT Global 500 and the annual reports of surveyed corporations. Based on these sources, relative indices have been created. The constructed SICAV is designed to reflect the ability of the corporation to create added value through the power of connecting all categories of capital. The parameters taken into account in the design of the SICAV were chosen in such a way, as to reflect the impact of elements of the IC as a multiplier of the economic capital (AEC). Table 1 presents the rules for calculating individual SICAV indices of the TNCs ability to create value-added – using the proprietary synthetic measure taking into account the ACE and IC of the corporation (SICAV).

Table 1. Diagnostic indices of the Top TNCs ability to create value-added

No.	Preferences	Specifics	
1	stimulant	Return on equity [ROE] expressed in %.	ACE
2	stimulant	Expenditures for R&D per 1 employee [(R&D)/E] expressed in USD.	IC
3	stimulant	Percentage of intangible assets in the creation of sales value [(MV-SE)/S] expressed in %.	IC
4	stimulant	Percentage of assets abroad in the value of total assets [AVA/A] expressed in %.	IC
5	stimulant	Percentage of employment abroad in employment in general [EA/E] expressed in %.	IC

Source: own study.

On the basis of SICVA, referring to the methods of linear ordering, it was established which corporations are constantly the Top-TNCs in their industries. In the subsequent step, key pillars of developmental

strategies were studied by analysing the reports of individual corporations (480 annual reports, 2010-2021). The strategies described in the reports were analysed in terms of the significance of CSR requirements in individual subsystems that make up the IC (Rosińska-Bukowska, 2020). The conducted study applied a division into three IC layers: innovation – INNC, organisational – ORGC, institutional – INSC. In each layer, the strategy directives aimed at achieving the set developmental goals in terms of implementing the environmental, ethical, managerial, local, legal and economic aspects of CSR were analysed.

In this study, the shift from the classically researched internal and external components of CSR into recorded corporation strategies that depicted the key pillars of development and concerned CSR was a significant element. For this purpose, the specificity of IC was used, as it constitutes a multiplier of the ACE. The author assumed that the IC of TNCs in made up of three layers, encompassing:

— innovation capital (INNC) – the care for the natural environment expressed by developing products and technologies that exploit it to a lesser and lesser degree; systematic exchange of knowledge between business partners as part of innovation development and good practices in the industry; R&D systems that involve all levels of stakeholders; the diversification of the chains of value creation through their adaptation to the local conditions; the search for long-term technological alternatives; prolongation of product lifespan – pro-ecological modifications, etc.;
— organisational capital (ORGC) – management of human resources and the principles of corporate supervision taking into account the adaptation to local conditions; workplace security, including local adaptations; management of production processes (resources, services, product circulation etc.); management of the product offer, creation of diversified brand portfolios, adding local brands, emphasising the role of ecological product groups; reorganisation of structures – use of new technologies and forms of employment; diverse relations within the system of business network (ownership links – OL, strategic connections – SC and cooperative relations – CR) that evolve during an organisation's functioning and flexibly adapt to new challenges;
— institutional capital (INSC) – influence on the local community; relations with business partners, suppliers, clients, public institutions, the business environment zone, education; the inclusion of all types of stakeholders in the creation of changes within the organisation; diffusion of the available sustainable solutions on all levels of relations; social innovations that serve organisations in a non-technological way to prepare them and their stakeholders for sustainable development; participation in raising stakeholder qualifications for active participation in the vision of sustainable development; shaping necessary pro-ecological behaviours; initiatives that involve stakeholders in applying the CSR of a corporation; emphasis on the social acceptance of the new path of changes; participation in the reduction of exclusion from the new technological environment which enables adaptation to changes etc.

Finally, the results obtained in the linear ordering method were compared with the results of qualitative research on the advancement of the CSR model assessed through the IC prism.

RESULTS AND DISCUSSION

In the course of the study, the comparative analysis based on GTM always encompassed 10 TNCs within a sector. On the basis of all 40 case studies, a set of three elements was developed, reflecting the key strategy aspects in each IC subsystem. The research on CSR implementation in the strategies was qualitative in nature. The level of significance of a category in the strategy of a specific corporation was assessed on the following scale: + basic, ++ significant, +++ crucial. Table 2 presents the juxtaposition of collected analysis results for all 4 sectors in the form of a resultant of the results of 10 TNCs studied in each sector.

The conducted research made it possible to determine that there is a major concurrence of developmental priorities among the Top TNCs – these TNCs in all studied cases refer to the CSR principles. In all cases, the construction of connections with the multicultural environment is especially accentuated. As a result, the implementation of CSR in the INSC subsystem reaches maximum values in the declaration of cooperation with a wide circle of stakeholders. A slightly lower level is observed in co-

operation with the competition – although building multi-centre networks for example in the automotive sector, means that this parameter is crucial. It should be mentioned that if the study were to include Stellantis (omitted due to the merger of PSA and FCA in 2021), the index would have been much higher. The weakest point was the construction of relation networks for sharing knowledge and good industry practices. In this aspect, Tesla (automotive sector) is exemplary – as it considers the possibility of infringing upon its patent rights if it serves the wellbeing of the general public. The poor results of the pharmaceutical sector in this regard are somewhat surprising.

Table 2. The juxtaposition of research results on the implementation of CSR principles in the strategies of corporations – the sector perspective

TNCs by sector			Automotive	Electronics	Pharmaceutical	Consumer
Strategies of sector leaders		**Top TNC sin selected sectors**	Toyota Volkswagen Daimler General Motors BMW Honda SAIC Motor Hyundai Motor Volvo Group Tesla	Apple Samsung Microsoft Sony IBM Intel Dell General Electric Siemens Hitachi	J&J Pfizer Roche Novartis Sanofi Merck & Co. GlaxoSmithKline Abbott Lab. AstraZeneca Novo Nordisk	Nestle P&G LVMH PepsiCo Unilever Coca-Cola L'Oréal McDonald's Danone Henkel
Layers of intellectual capital	Implementation of CSR	**INNC**	+++	+++	+++	+++
		R&D systems, glocalisation	+++	+++	+++	+++
		diversity of value chains	+++	+++	+++	+++
		innovations, modifications	+++	+++	+++	+++
	Implementation of CSR	**ORGC**	**+++**	**++**	**++**	**+++**
		Diversification of the brand portfolio	+++	++	+++	+++
		Reorganisation of structures; strategy of internationalisation	++	++	+	+
		types of connections – OL, SC, CR and their flexibility	+++	+++	+++	+++
	Implementation of CSR	**INSC**	+++	+	++	+++
		sharing knowledge, "good practices"	++	+	++	+
		cooperation with competitors	+++	+	++	++
		circle of stakeholders	+++	+++	+++	+++

Significance (weight in the strategic concept): + basic, ++ significant, +++ crucial.
Source: own study.

What is noticeable in the organisational subsystem is the high flexibility of all types of connections (OL, SC, CR) – considered by all studied corporations. This enables dynamic adjustments, including responses to local needs or new structural challenges. The diversification of the brand portfolio has a

similar function, therefore considering this aspect crucial (with the automotive sector being the exception) is a major proof of the "personification" of offers for individual buyer groups, their regionalisation and even adaptation to the requirements of niche segments. On this level, the implementation of the strategy of network internationalisation based on the so-called unconventional approach which considers the social context (Blankenburg, 1995) is relatively low. This matter is reflected in the "significant" level of these issues in the automotive and electronics sectors and no visible changes in that area in the pharmaceutical and consumer sectors. In the innovation subsystem, each of the three categories – R&D systems, diversification of the value chains, modifications and innovations of goods and services – show visible orientation towards the implementation of CSR requirements in all 40 TNCs. This appears to be the consequence of the fact that the technological area, regardless of the sector, was longer under such pressure (even in the early models of CSR). In this zone, it is especially crucial that the corporations can smoothly use various concepts of the chains of value creation (market, modular, relational, captive and hierarchy – Gereffi *et al.*, 2005).

In conclusion, the research results made it possible to identify universal values that constitute pillars of business models of Top TNCs. These values reflect the functional implementation of the principles of sustainable development, understood as turning the leading corporations towards the CSV (in the four sectors studied). However, to make the results more general would require further, more in-depth research. Ultimately, the results obtained in the research on the advancement of the CSR model assessed by the IC prism are consistent with the results of the linear ordering method, which confirms that IC is a multiplier of ACE in the modern competitive model.

CONCLUSIONS

The objective of the article was to assess the advancement of CSR models of the Top TNCs in terms of the implementation of CSR principles in accordance with the idea of CSV. Retrospective analysis (2010-2021) confirmed that CSR was becoming an increasingly important part of the Top TNCs development strategy. However, the pace of change has varied from sector to sector. The changes in strategies are related to the social transformation ("Society 5.0") as well as new technological challenges ("Industry 4.0" and its evolution to 5.0). Changes in strategies reflect the focus on the idea of creating economic and social value (CSV). This is evidenced in strategies that relate to the innovation, organizational, and relational changes which are the base on the creation of addition value. The studies determined, that the key universal pillars of CSR strategies are: R&D systems taking into account the requirement of glocalisation; diversity of value chains; proactive innovations/modifications; diversification of the brand portfolio; reorganisation of global structures along with the company's development; strategy of internationalisation with all types of connections and their flexibility; sharing knowledge as a form of "good practices"; coopetition, and stakeholders relationships. Sectoral differences can be seen in the importance of the select elements of the various layers of the IC for the multiplication of economic capital. These values create guidelines for CSR 5.0. in accordance with the creation of CSV by companies. I attempted to find out if a level of development of CSR strategy matches the quantitative parameters which describe corporations. Further tests will be designed to determine to what extent it is possible to generalize research for the Top TNCs to other entities in a given industry. In the future, I would like to draw upon more scientific fields in order to increase the interdisciplinary nature of my research – to increase the depth of research and attempt to lower limitations.

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Conflict of Interest

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Entrepreneurship as a strategy for refugees in South Africa

Tarisai Fritz Rukuni, Eugine Tafadzwa Maziriri, Marcia Dhlamlenze, Ekaete Elsie Benedict

A B S T R A C T
Objective: The purpose of this study is to investigate how factors affecting refugee entrepreneurship influence the refugee entrepreneurship performance.
Research Design & Methods: The positivism paradigm and quantitative descriptive research design were used to operationalise this study. Data were collected, using a self-completion structured questionnaire, from 355 refugees involved in entrepreneurial operations within the City of Tshwane, South Africa. Statistical Package for Social Sciences (SPSS) Version 25 was used to carry out descriptive and multiple linear regression analysis were used to determine the relationships between variables.
Findings: Results indicated that factors affecting refugee entrepreneurship have a statistically significant influence on refugee entrepreneurial performance.
Implications & Recommendations: To increase overall refugee entrepreneurial performance, strategic interventions involving five areas (societal factors, financial and business practices, legislation, infrastructure, and market opportunities) in this study may be initiated and utilized. It may be necessary to revise or create new policies to address the demands of refugee entrepreneurs. For example, in South Africa, proper regulations governing how refugee businesses should function is critical.
Contribution & Value Added: Refugees' entrepreneurship is a profound strategy that can be adapted to deal with refugee-related problems in receiving countries. Failure to adopt an appropriate strategy towards the influx of refugees has negative consequences towards the host country. Therefore, this study makes important contributions to theory and policy within the context of refugee entrepreneurship in receiving countries.
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INTRODUCTION

An increase in the number of refugees and asylum seekers into South Africa has led to serious socio-economic problems, for example, economic pressure, unemployment, crime, and xenophobia (Gastrow, 2011; Omeje & Mwangi, 2014). South Africa attracts refugees and asylum seekers across Africa and many other parts of the world such as Asia and South America (Foley, 2010). Jurgens and Donaldson (2012) argue that the influx of refugees and asylum seekers in South Africa has contributed to socioeconomic problems. Studies in immigrant entrepreneurship by Raijman and Barak-Bianco (2015) and Wauters and Lambrecht (2008) have shown that refugee entrepreneurship is a prominent strategy that can be adopted to reduce socioeconomic problems facing refugee receiving countries. The failure to adopt an appropriate entrepreneurial coping strategy when receiving refugees and asylum seekers cascades to a socioeconomic catastrophe that can escalate into disastrous events such as xenophobia (Kloosterman, 2010). Encouraging refugee entrepreneurship is one of the solutions that can be used to create economic independence among refugees while alleviating the country from socioeconomic problems (Nell, 2015; Raijman & Barak-Bianco, 2015). It is upon this background that the current study aims to understand

factors affecting refugee entrepreneurship and the impact they have on refugee entrepreneurship performance. Extant literature shows that extensive research was conducted to understand immigration and entrepreneurship separately (Gastrow, 2011; Marieke, 2007; Omeje & Mwangi, 2014; Wauters & Lambrecht, 2008). This study combines the two concepts to develop refugee entrepreneurship strategies that are critical in a country that is susceptible to xenophobic attacks. Given the scarcity of studies that attempt to find solutions towards creating successful entrepreneurs among refugees, it was an opportunity to carry out the current study. The next section presents the problem statement.

As previously noted, an increase in the number of refugees and asylum seekers into South Africa has led to socioeconomic problems that include the rise in unemployment, crime and xenophobia (Gastrow, 2011; Omeje & Mwangi, 2014). Studies in this subject, especially by Raijman and Barak-Bianco (2015) and Wauters and Lambrecht (2008) have shown that assisting refugees into entrepreneurship is a strategy that can be adopted in dealing with refugee-related problems in receiving countries. The failure to adopt an appropriate coping strategy has negative consequences to the host country.

In view of the above, it is imperative that theprevious scholars on refugee entrepreneurship have performed their research in different contexts within the South African environment by concentrating on the literacy matters in sustainable livelihood development among refugee adults in South Africa.

(Quan-Baffour & Johnson, 2022); examining the critical interrelationships between economic, cultural and religious affiliations in the lives of Somali refugees in Johannesburg (Sadouni, 2009); comparing refugee and South African migrant enterprise in the urban informal sector (Crush & McCordic, 2017); Economic refugees in post-apartheid South Africa-Assets or liabilities (Maharaj, 2002) and risky business and geographies of refugee capitalism in the Somali migrant economy of Gauteng, South Africa (Thompson, 2016).

While these studies are informative, they did not examine how factors influencing refugee entrepreneurship affect the performance of refugee entrepreneurship. This article therefore helps to tackle the gap by using a sample of refugee entrepreneurs. Also, a study of this nature in a geographically distinct area, such as South Africa, could yield interesting results. Prior studies have been largely conducted in developed countries (Alkhaled, 2019; Harima *et al.,* 2021; Refai *et al.,* 2018). Therefore, little is known on the same from the developing parts of the world such as African countries-South Africa in particular. Hence, this lacuna deserves empirical inspection in the case of a neglected context of refugee entrepreneurs in the developing countries.

Hence, the focal purpose of the current research is to establish the extent to which factors influencing refugee entrepreneurship affect the performance of refugee entrepreneurship among refugees in South Africa. The specific research objectives of the study's aim can be formulated as follows:

− To determine the impact of societal factors on the performance of refugee entrepreneurship.
− To examine the impact of financial and business practices on the performance of refugee entrepreneurship.
− To access the impact of legislation on the performance of refugee entrepreneurship.
− To determine the impact of infrastructure on the performance of refugee entrepreneurship.
− To examine the impact of market opportunities on the performance of refugee entrepreneurship.

The refugee act, definition of asylum seeker and refugee in South Africa

The Refugee Act number 130 of 1998 of the Republic of South Africa legalise the incorporation of asylum seekers and refugees in the country (Department of Home Affairs (DHA), 2020). Thus, the South African State under its parliament became a signatory of the 1951 United Nations refugee convention which permits and welcomes asylum seekers in the signatory states. According to Business Tech (2016), South Africa is hosting about one million asylum seekers. It is reported that South Africa hosted more asylum seekers than any other country in the world by the end of 2015 amidst its high unemployment rate (Business Tech, 2016). An asylum seeker is an individual who has involuntarily fled his or her place of origin on the bases of fear of persecution due to his race, political affiliation, religion and many other motives related to oppression to seek a refugee in the host State (DHA, 2020). Most Asylum seekers in South Africa come from across Africa and Southern Asia (i.e. Somalia, Pakistan, Democratic Republic of Congo,

and Ethiopia). According to DHA (2020), a refugee is an individual who has left his or her country and has obtained asylum status in the host country for fear of oppression from the home country on the bases of religion, race, political ideology, nationality and membership of a social group.

LITERATURE REVIEW

As already mentioned, the embeddedness approach model (MEA) model assists in understanding factors that are crucial in ensuring the success of refugee entrepreneurship. According to Raijman and Barak-Bianco (2015), factors influencing the operations of businesses owned by refugees are categorised into three groupings. These include: (i) the individual and group, (ii) opportunity structures and (iii) institutional political framework (Kloosterman, 2010; Wauters & Lambrecht, 2008). Raijman and Barak-Bianco (2015) stipulate that individual and group factors include issues such as financial, human, social, and cultural. Opportunity structures describe aspects related to market conditions and access to ownership while institutional political framework dwells on laws, regulations, institutions and practices that are crucial in determining how the market operates (Kloosterman, 2010:22). The next section explores specific factors in determining the success of refugee entrepreneurship.

Societal issues

The societal issues of the hosting country are important in determining the success of refugee entrepreneurship (Callaghan & Venter, 2011). Authors such as Omeje and Mwangi (2014) and Katz and Steyaert (2004) argue that societal issues include the intimidation of refugees at the hands of local nationals. Foley (2010) alludes to the point that disgruntled local nationals in hosting countries tend to engage in stereotyping and stigmatization of refugee entrepreneurs. Reports are suggesting that law enforcement authorities, for example, the police and home affairs officers in South Africa were involved in intimidator behaviour that undermines the liberty and freedom of refugee entrepreneurs (DHA, 2020).

Financial aspects

Financial aspects are identified by various entrepreneurship authorities as important in stimulating entrepreneurial ventures (Raijman & Barak-Bianco, 2015; Rolfe *et al.,* 2010). In addition, Rolfe *et al.* (2010) posit that financial aspects include the use of business plan, budget and cash flow statements. Jurgens and Donaldson (2012) found that most entrepreneurial ventures fail in their first 24 months due to ineffective financial processes. It is also highlighted in Rolfe *et al.* (2010) seminar's work that gaining access to financial services such as bank accounts and loans is critical to entrepreneurial success.

Business practice

Another important component raised towards the success of refugee entrepreneurship includes implementation of business practice (Chebelyon-Dalizu *et al.,* 2011). Business practice refers to aspects such as record keeping facilitated through the cash book and the inventory management system (Basardien *et al.,* 2014). According to Chebelyon et al. (2011) and Frese (2007), essential business practices such as cash books assist in keep track of financial transactions while inventory management system tracks inventory of the system determines operational requirements (Frese, 2007).

Language

Official and ethnic languages within the hosting countries were found to be crucial towards the success of refugee entrepreneurial activities (Omeje & Mwangi, 2014). Callaghan and Venter (2011) state that the ability to speak languages used in the hosting country is an important aspect for entrepreneurship. Thus, language assists in communicating with customers who are local nationals. The inability of refugee entrepreneurs to speak the local language can be a barrier towards successful interaction with customers.

Support network

The success of entrepreneurial ventures relies on the strength of support network presented to refugee entrepreneurs (Omeje & Mwangi, 2014). Callaghan and Venter (2011) stipulate that support net-

works presented through the government and non-government institutions are critical in determining the success and longevity of refugee entrepreneurship. Consequently, these government and non-governmental institutions should provide monetary and non-monetary support to refugee entrepreneurs in the country (Omeje & Mwangi, 2014). Providing monetary and non-monetary support should be encouraged to guarantee the success of refugee entrepreneurship (Chebelyon-Dalizu *et al.,* 2011; Raijman & Barak-Bianco, 2015).

Infrastructure

Appropriate infrastructure is required to ensure successful operations within refugee entrepreneurial ventures (Chebelyon-Dalizu *et al.,* 2011). The infrastructure needed for successful entrepreneurial ventures includes an effective road network system, the presence of well-established marketplaces, electricity, sewer, and water system (Jurgens & Donalson, 2012). Previous studies have shown that the shortage of infrastructure is detrimental to the effectiveness and efficiency of refugee entrepreneurial operations (Nel, 2005; Richards & Mutsonziwa, 2007).

Government regulations

The presence of transparent government regulations is important in refugee entrepreneurship. (Raijman & Barak-Bianco, 2015; Williams, 2010). Wauters and Lambrecht (2008) posit that regulations related to business operations need to be transparent so that refugee entrepreneurs understand requirements. Government regulations include the required registrations and accreditations that should be in place such that it becomes easy for refugee entrepreneurs to access and comply with requirements.

Market opportunities

Market opportunities refer to the favourable conditions that exist within the marketplace of refugee entrepreneurial operations. According to Kloosterman (2010) and Wauters and Lambrecht (2008), market opportunities are important for successful refugee entrepreneurship operations. It includes income levels of people staying within the area of refugee operations, the taste of the market and the number of customers within an area.

Human capital

An important aspect considered critical is the skills possessed by refugee entrepreneurs. Raijman and Barak-Bianco (2015) and Wauters and Lambrecht (2008) posit that the importance of human capital skills within refugee operations. These skills complement business practice that has been mentioned in the previous section. Callaghan and Venter (2011) recommend four aspects as important in human capital for refugee entrepreneurship ventures, these include innovativeness, risk-taking, pro-activeness and aggressive competitiveness. The absence of these factors can result in challenges causing failure of refugee entrepreneurship. It is therefore important for this current study to understand factors influencing refugee entrepreneurship as a coping a strategy.

Empirical literature

Despite the ability to provide important insights into specific factors in determining the success of refugee entrepreneurship. It is essential to note that there is still a shortage of empirical evidence showing how societal factors, financial and business practices, legislation, infrastructure, and market opportunities would influence refugee entrepreneurial performance. Consequently, further scholarly introspections are considered necessary. Much of what is written on the subject is based on samples from developed countries such as Turkey, United Kingdom (UK), Belgium, Germany, Sweden and the Netherlands. For instance, Cetin *et al*. (2022) examined the entrepreneurial motives, entrepreneurial success and life satisfaction of refugees venturing in tourism and hospitality in in Turkey and the UK. In addition, Wauters and Lambrecht (2008) investigated the barriers to refugee entrepreneurship in Belgium. Embiricos (2020) also examined the Challenges to refugee self-reliance in Berlin, Germany. Furthermore, Sandberg *et al.* (2019) conducted a study that focused on taking a social network view on immigrants with refugee backgrounds starting transnational businesses in

Sweden. Moreover, Nijhoff (2021) investigated the experiences of barriers and needs of refugees in starting a business in the Netherlands.

Deriving from the aforementioned studies, there is a dearth of studies on similar topics in the context of refugee entrepreneurs, particularly in Africa. It would be naïve to assume a priori that findings from developed countries in Europe, or even from the newly developed countries in Asia, apply in Africa. Perhaps, research on societal factors, financial and business practices, legislation, infrastructure, and market opportunities as precursors of refugee entrepreneurial performance in the African context might yield different results from other parts of the world. Thus, in order to confirm or disconfirm the findings of previous studies, this kind of research related to refugee entrepreneurs in Africa is evidently long overdue. Hence, what this current investigation examines, by means of a proposed conceptual model, is the effect that societal factors, financial and business practices, legislation, infrastructure, and market opportunities has on refugee entrepreneurial performance operating in the City of Tshwane, South Africa.

The conceptual theoretical model

The conceptual theoretical model given in Figure 1 is grounded in the mixed embeddedness approach theory. It is conceptualised that there is a statistically significant relationship between factors affecting refugee entrepreneurship and performance of refugee entrepreneurship. Factors affecting refugee entrepreneurship are represented by five sub-constructs that include: (i) societal factors, (ii) financial and business practice, (iii) legislation, (iv) infrastructure, and (v) market opportunities. The conceptualised relationship between factors affecting refugee entrepreneurship and performance of refugee entrepreneurship is presented in Figure 1 as follows:
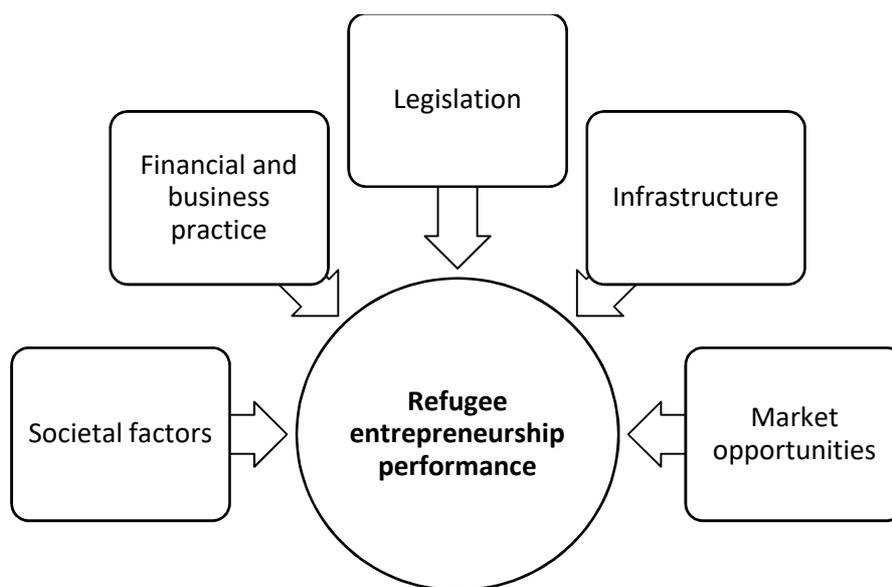
Figure 1. The conceptual theoretical model
Source: own elaboration.

Research hypotheses

Based on the conceptual theoretical model presented in Figure 1, the five research hypotheses are constructed as follows:

H1: There is a statistically significant positive relationship between societal factors and refugee entrepreneurship performance.

H2: There is a statistically significant positive relationship between financial and business practice aspects and refugee entrepreneurship performance.

H3: There is a statistically significant positive relationship between legislative aspects and refugee entrepreneurship performance.

H4: There is a statistically significant positive relationship between infrastructure and refugee entrepreneurship performance.

H5: There is a statistically significant positive relationship between market opportunities and refugee entrepreneurship performance.

RESEARCH METHODOLOGY

Grounded in the mixed embedded approach theory, this research followed a positivism research paradigm and the quantitative descriptive research design methodology (Omege & Mwangi, 2014). A self-completion questionnaire developed from literature (Omege & Mwangi, 2014; Raijman & Barak-Bianco, 2015) was administered to a sample of refugee entrepreneurs in the City of Tshwane, South Africa. As a standard measure to ensure that the data collection instrument is clear and understandable, a pilot study was carried out from 10 refugee entrepreneurs. Research assistants assisted in the distribution of the research questionnaires at the refugees' place of business. Collection boxes were placed at the administration area of the refugees' businesses so that respondents can deposit the completed questionnaires. The City of Tshwane had approximately 4 650 refugees conducting business at the time of data collection.

Using the Raosoft sample size calculator, 355 refugees were a suitable sample size for this study while maintaining at least 95 per cent confidence level and five per cent margin of error (Industrial Research Institute, 2010; Raosoft, 2020). Following a recommendation from similar previous refugee entrepreneurship studies (e.g. Omege & Mwangi, 2014; Raijman & Barak-Bianco, 2015), the snowball and convenience sampling method envisaged were deemed not to compromise the quality of research (Calder *et al.*, 1981). The Statistical Package for the Social Sciences version 25 was used to conduct descriptive and multivariate analyses including factor analysis, correlations, and regression analyses to assess how factors affecting entrepreneurship and influence refugee entrepreneurship performance. Precisely, multiple regression analysis was employed as a means of testing if societal factors, financial and business practices, legislation, infrastructure, and market opportunities have an impact refugee entrepreneurial performance. Using the enter method of multiple regression, societal factors, financial and business practices, legislation, infrastructure, and market opportunities were entered the regression model as the independent variables and regressed against the dependent variable (refugee entrepreneurship performance).

Although an instrument developed from literature (Omege & Mwangi, 2014; Raijman & Barak-Bianco, 2015;) was used, further tests of validity and reliability were conducted using Cronbach's alpha and factor analysis, respectively (Evanschitzky *et al.*, 2007).

Descriptive statistics on factors affecting refugee entrepreneurship

Table 1 presents findings on refugees' perception of factors affecting refugee entrepreneurship on each of the 29 items, each of the five sub-constructs, and the refugee entrepreneurial performance. A five-point Likert scale (1 = 'Strongly agree' and 5 = 'Strongly disagree') was used to measure each item relating to refugee entrepreneurs' perception of the factors affecting refugee entrepreneurship. Perceptions on each of the five sub-constructs were calculated as a summated average of the items used under each sub-construct. Refugees' perception of refugee entrepreneurial performance was calculated as a summated average of all its items.

Results indicate that refugees had negative perceptions on factors affecting refugee entrepreneurship that include societal factors (SF) with a mean value (2.6), legislative (L) with (3.13) and infrastructure (INF) with (2.94). On the other side, it was noted that refugees had positive perceptions on factors that include market opportunities (MO) that had a mean value (2.34) and financial and business aspects (FB) with (2.56). In terms of the items tested in this study, major issues that came up include: (L3) unfriendliness and unhelpfulness of authorities in assisting refugees to obtain legal status in the country with mean value (3.83), (INF2) poor road network making it difficult for logical organisations to reach the refugee businesses (3.33), (L4) difficulty in processing business registration (3.24), (INF5)

failure of local authorities to provide sanitary services around the business environment (2.91), (SF5) intimidation and harassment of refugee entrepreneurs (2.88), (FB5) inability of refugee entrepreneurs to make use of skills such as inventory management (2.86), (INF3) dilapidated of business facilities used by refugees for business (2.77) and (SF1) unfriendly society on refugees with mean value (2.64).

Table 1. Perceptions of factors affecting refugee entrepreneurship and performance on all respondents – descriptive (n = 355)

Code	Dimensions and items	Mean	Standard deviation
	Societal factors	2.60	1.08
SF1	Local society is supportive of my business	2.64	1.02
SF2	Local society does not create feelings of insecurity towards my business	2.54	1.08
SF3	Often, I feel disliked and looked down up by local on my business	2.50	1.04
SF4	I do not find the local language a problem when communicating with customers	2.58	1.05
SF5	Police do not intimidate and harass me on my business	2.88	1.23
	Financial and business practice aspects	2.56	1.25
FB1	I do not find opening a bank account difficult	2.33	1.34
FB2	Accessing financial services (i.e. loans, bank account) is not easy.	2.36	1.29
FB3	I understand what a cash book	2.50	1.33
FB4	I do make use of a cash book in my operations	2.55	1.36
FB5	I understand what inventory management is	2.86	1.06
FB6	I make use of inventory management	2.77	1.12
	Legislation	3.13	1.18
L1	I find the process of obtaining refugee status easy and friendly	2.81	1.23
L2	The process of obtaining refugee status did not badly influence starting my business	2.77	1.15
L3	I find authorities assisting with obtaining refugee status friendly and helpful	3.83	1.11
L4	I find the process of registration of business easy and friendly	3.24	1.20
L5	I feel authorities for business registration are friendly and helpful	3.02	1.21
	Infrastructure and support	2.94	1.10
INF1	Road network is favourable to my business operations	3.03	1.18
INF2	The conditions of roads make it easy to obtain business supplies	3.33	1.09
INF3	I find the facility that I use for business to be in the right condition	2.77	0.99
INF4	The facility that I utilise attract customers to my business	2.67	1.09
INF5	The local municipality ensures that the area for the business area is clean	2.91	1.15
	Market opportunities	2.34	1.19
MO1	I experience a good number of customers buying from my business	2.35	1.36
MO2	Customers seem in the products and services that I provide	2.36	1.06
MO3	I have a good relationship with my customers	2.27	1.12
MO4	The area that I operate in does not have many competitors	2.41	1.23
	Refugee entrepreneurial performance	3.21	1.16
EP1	Support from local society has contributed to the performance of my business	2.77	1.15
EP2	Financial services that are provided have assisted my business performance	3.83	1.11
EP3	The conditions of infrastructure are supportive of business performance	3.24	1.20
EP4	Generally, my business is doing well	3.02	1.21

0Source: own study.

This is an indication that the state of refugee entrepreneurship conditions was not favourable at the time of this study. The conditions found with refugee entrepreneurship within this study are complementary to Raijman and Barak-Bianco (2015), Omeje and Mwanji (2014), Ligthelm (2008) and Katz and Steyaert (2004) whose studies point out to the limitations in conditions favourable to refugee entrepreneurship. In their findings, Omeje and Mwangi (2014) and Callaghan and Venter (2011) found that entrepreneurial ventures fail due to inadequacy supportive legislation, shortage of infrastructure and unfa-

vourable societal factors, for example, low-income levels within the society. However, in contrast to the findings in the current study, Raijman and Barak-Bianco (2015) and Rolfe *et al*. (2010) found that most entrepreneurial activities have failed due to lack of market opportunities and financial shortage.

Validity and reliability analysis

The assessment of the validity of the measuring instrument was achieved employing confirmatory factor analysis. The 29 items of refugee entrepreneurship sub-constructs were factor analysed to test for construct validity. All 29 items had factor scores higher than 0.40, which demonstrates significant evidence about the correlation among constructs used for this study (Stangor, 2011). Table 2 presents results for validity and reliability analysis.

Table 2. Results of validity and reliability analysis on 29 items representing factors affecting refugee entrepreneurship and performance

Code	1	2	3	4	5	6
SF1	0.58					
SF2	0.54					
SF3	0.51					
SF4	0.58					
SF5	0.56					
FB1		0.36				
FB2		0.42				
FB3		0.40				
FB4		0.53				
FB5		0.74				
FB6		0.75				
L1			0.73			
L2			0.75			
L3			0.60			
L4			0.73			
L5			0.70			
INF1				0.53		
INF2				0.54		
INF3				0.64		
INF4				0.52		
INF5				0.62		
MO1					0.53	
MO2					0.74	
MO3					0.75	
MO4					0.73	
EP1						0.75
EP2						0.68
EP3						0.73
EP4						0.70
α	0.82	0.86	0.84	0.80	0.78	0.81

Source: own study.

After establishing the validity of the instrument, it was important to assess the reliability of each of the six sub-constructs. Reliability tests were carried using the Cronbach's alpha coefficient. Following standard practice, the minimum threshold of 0.7 recommended by Field (2009) and Walliman (2006) was used. In all the six subscales, the Cronbach's alpha met this threshold. Acceptable validity and reliability results provided leeway to proceed to correlation analysis in the next section.

Correlation analyses

The underlying assumptions for conducting correlation and regression analysis were well met in this study. Correlation and regression are most suitable for a study which seeks to test a relationship between variables (Pallant, 2010). They are also appropriate for large sample size, for example, 355 respondents used in this research. Response scale used in the questionnaire for this study was continuous in the form of a five-point Likert scale. Correlation analysis was used to measure the strength and direction of relationships between constructs of the study the Pearson coefficient (r-value) and the probability coefficient (p-value) (Blumberg *et al.,* 2011). It should be noted that r-value depicts the strength and direction (negative or positive) of the relationship between constructs, while p-value indicates the statistical significance of the observed relationship. In this study, a statistically significant relationship is indicated by p-value that is equal to 0.05 or less (Malhotra, 2010). Table 3 illustrates the results of the correlation analysis.

Table 3. Correlation analysis

Variables	Refugee entrepreneurial performance
Societal factors	0.48*
Financial and business practice	0.52*
Legislation	0.65*
Infrastructure	0.42*
Market opportunities	0.53*

Source: own study.

Table 3 indicates that there is an existing moderate to a strong positive relationship among factors affecting refugee entrepreneurship. It was also found that there is a statistically significant relationship between factors affecting refugee entrepreneurship and refugee entrepreneurial performance. The next section presents the regression analysis results.

Regression analysis and hypotheses test

In this study multiple linear regression analysis was performed to identify the variables that predicted or provided the best explanation for the portion of the total variance in the scores of the dependent variables (Malhotra, 2010). The results obtained in the regression analysis of the data collected from the City of Tshwane are reported in Table 4. In the Regression Model (Table 4), model fit was measured using the R-square, which is also known as the coefficient of determination. According to Friedman (2012) as well as Mafini and Meyer (2016) R-squared is a statistical measure of how close the data are to the fitted regression model and this is indicated by the percentage of variance. The higher the percentage of variance accounted for by the regression model, the closer it is to a perfect model fit of 100% (Mafini & Meyer, 2016). The adjusted R-square value was 0.650, which denotes that the factors (societal factors, financial and business practices, legislation, infrastructure, and market opportunities) considered in this study explained approximately 65% of the variance on refugee entrepreneurial performance. In other words, the remaining 35% is accounted for by other extraneous factors that were not part of this study.

Table 4. Regression analysis

Independent variables	Dependent variable: Refugee entrepreneurial performance			Hypothesis Decision
	Standardised Beta β	T values	Sig. P value	
Societal factors	0.52	6.950	0.000*	Accepted
Financial and business practice	0.34	3.941	0.000*	Accepted
Legislation	0.89	9.234	0.000*	Accepted
Infrastructure	0.65	7.523	0.000*	Accepted
Market opportunities	0.63	7.091	0.000*	Accepted

Note: * $p < 0.001$; R=0.412; Adjusted R^2=0.650
Source: own study.

EMPIRICAL RESULTS AND DISCUISION

Moreover, in this study, testing of hypotheses was conducted by path coefficient values β, as well as the t-values for the tested regression model. According to Beneke and Blampied (2012), t-values indicate whether a significant relationship exists between variables in the model and path coefficients β, demonstrating the strength of the relationships in the model. Figure 2 and Table 4 show the standardised path coefficients and their corresponding t-values. A statistically significant relationship is expected to have a t-value that exceeds 1.96 at a 5% level of significance (Chin, 1998). The empirical results are disused in the next sections.

Hypothesis 1

Based on regression analysis results (p < 0.001, β = 0.52; t=6.950), hypothesis H1 which states that there is a statistically significant positive relationship between societal factors and refugee entrepreneurship performance can be accepted at p < 0.001 significant level. From this finding, it can be noted that increase in societal factors would increase refugee entrepreneurship performance. This outcome proposes that the higher the level of societal factors, the higher the level of refugee entrepreneurship performance. Along these lines, this examination fails to dismiss H1.This finding is consistent with Raijman and Barak-Bianco (2015) and Omeje and Mwangi (2014) studies that confirm the importance of societal factors in determining refugee entrepreneurship performance.

Hypothesis 2

Based on results (p < 0.001, β = 0.34; t=3.941), hypothesis H2 which states that there is a statistically significant positive relationship between financial and business practice aspects and refugee entrepreneurship performance can be accepted at p < 0.001 significant level. Hence, it can be confirmed that financial and business practice has a relationship with refugee entrepreneurship performance. This outcome proposes that the higher the level financial and business practices, the higher the level of refugee entrepreneurship performance. Along these lines, this examination fails to dismiss H2. This is in line with Raijman and Barak-Bianco (2015), Wauters and Lambrecht (2008) and Masurel (2002)'s findings that showed that financial and business practices are statistically significantly related to refugee entrepreneurship performance.

Hypothesis 3

Based on results (p < 0.001, β = 0.89; t=9.234), hypothesis H3 which states that there is a statistically significant positive relationship between legislative aspects and refugee entrepreneurship performance is accepted at p < 0.001 significant level. There it can be stated that the legislative environment is positively related to refugee entrepreneurship. This outcome proposes that the higher the level of legislative aspects, the higher the level of refugee entrepreneurship performance. Along these lines, this examination fails to dismiss H3. This is consistent with Basardien *et al*. (2014), Foley (2010) and Hadebe (2010) whose findings indicate that the legislative environment is related to refugee entrepreneurship performance.

Hypothesis 4

Based on results (p < 0.001, β = 0.65; t=7.523), hypothesis H4 which states that there is a statistically significant positive relationship between infrastructure and refugee entrepreneurship performance can be accepted at p < 0.001 significant level. This outcome proposes that the higher the level of good infrastructure, the higher the level of refugee entrepreneurship performance. Along these lines, this examination fails to dismiss H2. This means that an increase in infrastructural development leads to an increase in refugee entrepreneurship performance which is consistent with the findings in a study by Jurgens and Donaldson (2012), Richards and Mutsonziwa (2007) and Nel (2005) who found that infrastructural development is significantly related to refugee entrepreneurship performance.

Hypothesis 5

Based on results (p < 0.001, β = 0.63; t=7.091), hypothesis H5 stating that there is a statistically significant positive relationship between market opportunities and refugee entrepreneurship performance is accepted at p < 0.001 significant level. An increase in marketing opportunities will increase the overall refugee entrepreneurship. This confirms Raijman and Barak-Bianco (2015) and Wauters and Lambrecht (2008) results that found that aspects related to market opportunities are important in determining refugee entrepreneurship performance.

CONCLUSIONS

The objective of this study was to investigate how factors affecting refugee entrepreneurship influence the refugee entrepreneurship performance. It is concluded that factors such as societal, financial and business practice, legislation, infrastructure and market opportunities had a statistically significant positive relationship with refugee entrepreneurship performance.

Recommendations

The local community must be encouraged to live in harmony with refugees within the community. Creation of a good relationship between the community and asylum seekers is important in boosting refugee entrepreneurship. Thus, a good market base is also created following a good relationship between the community and refugees. Hence, it is important for policymakers especially the local authority to intervene through programmes that lead to unity.

The South African Home Affairs Department should ensure that the process of acquiring refugee status is made easy and friendly. Thus, officials responsible in the process need to be provided with training on how to handle refugees in a sensitive and humanitarian way. The processes involved also need to be streamlined towards refugee value creation.

Local authorities, for example, the municipality need to ensure that there is continuous infrastructural development. Infrastructure is important in successful business operations. Authorities need to look at areas such as public building renovation and improvement of the road network system.

It is also important that refugees are assisted with company registration. Assisting refugees with the registration of their company will help to reduce illegal refugee business operations. Thus, registered refugee entrepreneurial activities are also crucial in boosting the national income level through taxes.

Provision of business mentorship towards refugees is an important aspect of refugee entrepreneurship. Both governmental and non-governmental organisations must sponsor business mentorship programmes towards refugees. Thus, such mentorship programmes will improve refugee business operations.

Limitations of the study

It must be noted that this study was limited to a sample of refugee entrepreneurs in the City of Tshwane, South Africa. Hence, its findings cannot be generalised to all refugee entrepreneurs in South Africa. Secondly, the data used in this study was collected over a short duration of time. Data were collected within a single month making the study cross-sectional. Collecting data within a single month excludes the capturing of data on the change of opinions that could take place over a prolonged period. Thirdly, the study was conducted using quantitative research methods. The questionnaire used could not offer respondents an opportunity to respond in their own words due to the closed-ended questions used in this study. Fourthly, only five factors (societal, financial and business practice, legislation, infrastructure and market opportunities) were only used as factors affecting the performance of refugee entrepreneurship. Factors used in this study are not exhaustive of all factors that affect refugee entrepreneurship.

Direction for future research

Future research could replicate the study by gathering data from refugee entrepreneurs in different towns and provinces across South Africa and other nations. Non-refugee entrepreneurs should also be studied to see whether there are any differences in elements that affect entrepreneurship perfor-

mance. A research comparing refugee and non-refugee entrepreneurs, on the other hand, could be advantageous and is encouraged. Future research should be conducted over a longer length of time, such as six months (longitudinal study), to identify any trends in refugee entrepreneurs' perceptions over time. It is also critical that future study employ qualitative research methodologies so that respondents can reply to their own words.

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Intrapreneurial competencies and firms' growth:
The mediating effect of perceived organizational support

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A B S T R A C T
Objective: The objective of this article is to determine the relationship between intrapreneurial competencies (IC) (i.e. opportunity promoter, proactivity, flexibility, business drive, and risk assumption) and organizational growth (OG) and to test the mediating role of perceived organizational support (POS).
Research Design & Methods: A simple random sampling technique was used to draw a sample of 408 employees from 34 small manufacturing firms. We analyzed the influence of IC on OG through a parallel mediation involving POS.
Findings: The results show that POS mediates the path through which opportunity promoter, proactivity, flexibility, drive, and risk assumption impact OG.
Implications & Recommendations: IC fosters OG, particularly with high POS by employees. Thus, employers must identify and strengthen factors that support employees to improve their abilities and enhance OG.
Contribution & Value Added: The findings of this study highlight the importance of IC in fostering OG, particularly when employees perceive that they are valued by the organization and that their well-being is of importance to the organization.

Article type:	research article
Keywords:	intrapreneurial competencies; perceived organizational support; organizational growth; intrapreneurship; entrepreneurial behaviours
JEL codes:	L21 L22, L26

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INTRODUCTION

Employees of a firm usually approach their duties with the intentions of growing their firms' assets and reducing their liabilities to enable them to compete favourably, or dominate their industries (Koch *et al.,* 2019; Ms Ginu & Binoy, 2014). Growth is the process of a steady increase in size. It is a stage in a firm's lifecycle when it expands and seeks other options to create more profit (Weinzimmer *et al.,* 1998). It can assist in reducing external risks of a firm, creating an economy of scale, diversifying, increasing protection, and increasing a firm's market influence (Rexhepi *et al.,* 2013). Shane (1996) explained that organizational growth (OG) relates to the employees' activities within the organization. Prior research studies have recounted that organizations with high employees involvement in the decision-making processes, experience growth (Alavi & Karami, 2009; Mendes, 2012), and are more prone to dominate their markets (Yaemjamuang, 2017). Farrukh, *et al.,* (2017) found that intrapreneurial behaviours were positive predictors of organizational performance, which is related to OG.

According to Dobre (2013) managers can achieve OG by identifying and incorporating the abilities, and competencies of employees to craft, detect and pursue new opportunities, and create economic values. OG refers to the increase in assets and capital of a firm as a result of employees'

activities. Also, competent employees can equip a firm with the opportunities to endure market fluctuations, increase their power and develop efficiencies from economies of scale (Alvarez & Barney, 2001; Kasser *et al.,* 1992; Kuratko *et al.,* 1990). Such abilities are usually associated with entrepreneurs (Oslon, 1985). Some employees have similar competencies to entrepreneurs and are referred to as intrapreneurs (Antoncic & Hisrich, 2001; Parker, 2009). Thus, these competencies are referred to as intrapreneurial competencies (IC), and we, argue that they might foster OG. Employees with IC may be able to promote ideas that will cause OC.

The concept of intrapreneurship focuses on creating chances for entrepreneurial employees to display their capabilities under the control of managers. It offers employees chances to innovate, promote ideas, and participate in the creation and execution of valued organizational processes. Literature has shown that intrapreneurship allows organizations to grow effectively, and manage change, it also fosters employees' growth (Hiwarkar & Vidiyapeeth*,* 2019). Dublin and Onuoha (2020) found that jobs that allow intrapreneurial behaviours changed employees' reactions to organizational tasks. Prior research also acknowledged that firms across the globe are placing a higher emphasis on employability because only employees with the abilities to promote and drive businesses, that are flexible and can assume risks, can guarantee their success (Hostager *et al.,* 1998; Klofsten *et al.,* 2020; Kuratko *et al.,* 1990; Rathna & Vijaya, 2009). However, while there is the notion that IC is steadily becoming fecund, there is sparse empirical evidence to show how they may influence OG in developing countries like Nigeria, plus, the little knowledge so far is atheoretical. Moreover, the roles that these firms play in giving support have not been captured. Thus, there is a need for an empirical understanding of the mediating role of organizational support in the relationship between IC and OG.

In Nigeria, for example, the quest for outstanding, knowledgeable, and skilful employees who can contribute to OG has been on the increase in recent times. Firms tend to be interested in employing people who have certain skills aside from their educational qualifications. They believe that this can help them succeed in their operations (Nkechinyere, 2019). But there appears to be a scarcity of these types of employees in Nigeria. Nkechinyere (2019) reported that the unemployment rate in Nigeria is increasing because the majority of employees do not meet the expectations of the labour market. Isa and Sharma (2016) also highlighted poor employees' performance as one of the major causes of employee retrenchment in Nigeria. In 2018, a University don and top employer of labour in the financial sector declared that 95% of Nigerian graduates are not employable (Iyabo, 2018). His statement was probably borne out of notions that business stagnation and failures that are plaguing the businesses in Nigeria were caused by a lack of employees' competencies. More is that employees have been observed in some cases, that they hardly promote opportunities, neither are they proactive nor flexible, they barely take a risk for the firm, nor do they take actions to drive the business. Possibly, it may be as a result of outright lack of these IC, or as a result of their perceived lack of organizational support. Perceived organizational support (POS) represents the awareness of employees about the way they feel that the firm values their input and cares about their well-being (Eisenberger et al., 1990). POS has been found to have significant impacts on employees' performance and well-being (Islam *et al.,* 2015; Maan *et al.,* 2020). Thus, the lack of organizational support might dampen the IC of employees when they sense that their contributions are not valued, or that their well-being is not considered.

This study sets out to determine the relationships the various dimensions of IC (opportunity promoter, proactivity, flexibility, drive & risk-taking) have with OG, and how POS might moderate these relationships. This study contributes to the literature in many ways. First, prior research on IC has focused on performance and not growth per se (Parada *et al.,* 2019). Moreover, constructs on the dimensions of IC are mostly lumped up in one latent construct, thus ignoring the individual impact that the respective dimensions have on organizational outcomes (e.g. Farrukh *et al.,* 2017). Thus, this research contributes to entrepreneurship literature by providing an understanding of how IC might foster OG in a developing economy. Second, this study incorporates the impact of organizational support on the IC-OG relationship. No study to the best of our knowledge has combined these variables in a single model to explain the import of IC. This is a significant contribution because it advances the tenets of two different theories: Resource Base View (RBV) and Social Exchange Theory (SET) in explaining how IC can foster OG in the existing body of literature.

In the remaining sections of this study, we proceed to review the literature on IC of employees. We then discuss the potential influence of IC on OG, both directly and indirectly through POS. We test our hypotheses with a sample of employees and discuss the implications of our results.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Intrapreneurial Competencies (IC)

In the context of this study, IC represents the combination of skills and abilities of employees, which permits them to act like entrepreneurs (i.e. promote opportunities, act proactively, be flexible, drive businesses and assume risk) while being engaged as employees. IC specifically focuses on how entrepreneurial employees can utilize their skills and knowledge to improve the outcomes of the firms. It comprises the five different dimensions: opportunity promoter: employees' ability to identify, utilize, demonstrate, and reflect diligence about opportunities for new initiatives in a company (Lombriser, 1994). Proactivity: employees' willingness to assess and support new ideas that could transform or expand their firms (Galvez, 2011). Flexibility: the ability of the employees to detach from rigid procedures and schemas (Vargas-Halabí *et al.,* 2017). Drive: the capacity of the employees to be involved in various processes to support new initiatives (Vargas-Halabi *et al.,* 2016). Risk-taking: the capacity of the employees to take risks on new ideas on behalf of the firm (Vargas-Halabi *et al.,* 2017). Prior researchers have found that IC can lead to positive outcomes such as firm performance, innovation, survival, and projects (Antoncic & Hisrich, 2003; Parada *et al.,* 2019). Albeit these positive outcomes were identified by prior researchers, the links between IC and OG appear to have received scant attention in the literature from developing economies. Little appears to be known about how IC might influence OG or the core mechanism of such effects. We consider this a theoretical and empirical gap and thus argue that there is a need for systematic study. This study intends to cover this gap by considering the mechanisms through which IC might influence OG. Thus, we conducted a systematic study on the nature of the mechanisms focusing on a parallel mediation process linking IC to growth via POS. The research applies an in-depth empirical analysis of a set of complementary hypotheses (Figure 1).
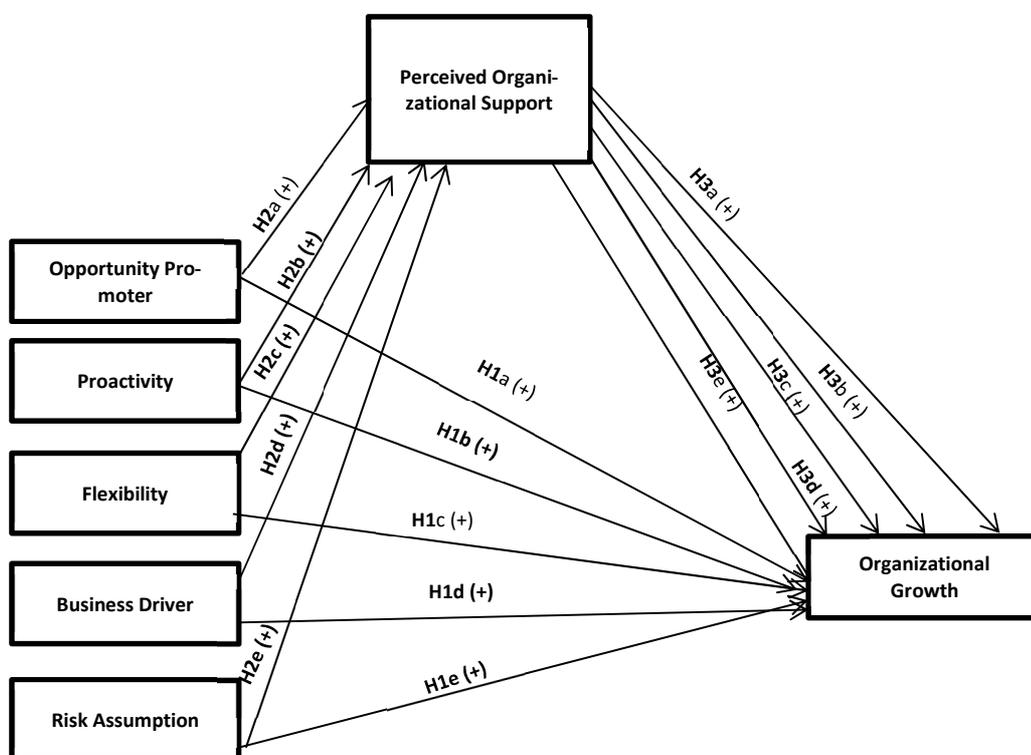

Figure 1. Hypotheses Development Model
Source: own elaboration.

Theoretical framework

This study combines resource-based view (RBV) and social exchange theory (SET) to investigate how IC via POS might foster OG. RBV explains that resources and capabilities are two factors required for a firm to be successful (Davis & Cobb, 2010). Agbenyegah and Mahohoma (2020) explained that the RBV variables such as knowledge, managerial skills, and technological and marketing skills are essential to the sustainability of firms. The RBV is essential in explaining the impact of employees' behaviour on the firms' outcome because it is premised on the tenets that the right combinations of resources, including competencies i.e. the pool of the human resources: skills, abilities behaviours, and motivation will place a firm in a strategic position to take advantages of opportunities in the marketplace for profitable earnings (Geoffrey & Christos, 2015).

SET, on the other hand, assumes that firms' support for employees can foster favourable workplace attitudes and behaviours (Kurtessis *et al.,* 2017). The variables of SET include POS, commitment, engagement, etc. which are very essential to the performance of employees (Colquitt *et al.,* 2013). SET is generally based on the tenets of reciprocity, which assumes that employees will react positively via performance if the organization furnishes them with the necessary support required to do their jobs (Gould-Williams, 2007). The linkage between these theories to this study is that firms with adequate human resources (skills, abilities, behaviours, and motivation) could enjoy various advantages in the marketplace that position them to earn profits to grow and that the support from the organization for these skills and competencies would most definitely foster growth.

IC and OG

Prior research showed that intrapreneurial behaviours are positively and significantly related to firms' performance (Dung, 2021; Farrukh *et al.,* 2017; Hashemi *et al.,* 2012). Albeit, only a few studies have examined the influence of IC on OG, since IC positively predicted firms' performance (Carter & Tamayo, 2017; Mahmoud *et al.,* 2020; Rathna & Vijaya, 2009), IC might foster organizational growth and expansion. This could be interpreted to mean that firms with employees, who can promote opportunities within the firm, act proactively, are flexible, can take a risk, and drive businesses, will most likely witness expansion and growth than firms without such types of employees. Drawing on RBV, we argue that firms with scarce and valuable resources like intrapreneurs can gain an advantage that fosters growth easily in the marketplace (Barney, 1991). Firms with the right pool of employees would most likely grow. Such firms may be able to gain a competitive advantage that would enable them to get more profit that will enable them to expand and grow (Barney, 1991). IC can help organizations innovate, rebrand, renew, reengineer and revive their operation that fosters their growth (Antoncic & Hisrich, 2003; Trujillo & Guzman, 2008; Varela & Irizer, 2009). Thus, our research model considers opportunity promoter, proactivity, flexibility, business driver, and risk assumption, as significant predictors of OG. Based on these arguments, we might expect positive relationships between opportunity promoter, proactivity, flexibility, business driver and risk assumption, and OG. Thus, we propose:

H1a: Opportunity promoter is directly and positively related to OG.

H1b: Proactivity is directly and positively related to OG

H1c: Flexibility is directly and positively related to OG.

H1d: Business Driver is directly and positively related to OG.

H1e: Risk Assumption is directly and positively related to OG.

IC and POS

Evidence is rife from prior research where POS impacts positively on employees' entrepreneurial behaviours (Meyer & Allen, 1997); this implies that opportunity promoter, proactivity, flexibility, business driver, and risk assumption will thrive in only firms that encourage them. Firms can provide adequate supervisory, emotional and material support that could encourage employees who have these competencies. It is vital to note that the nature of the relationship between intrapreneurs and their firms is

dependent on the levels of support from the firms. The more intrapreneurs perceive that their firms support them, the more likely they feel committed to engaging in the expansion and growth of the firms.

POS can contribute to explaining a variety of employees' attitudes, behaviours, engagement, satisfaction, motivations, and emotions (Islam *et al.,* 2015; Kraimer *et al.,* 2011; Maan *et al.,* 2020). Employees, who perceive that they have the support of their firms, would display positive attitudes or behaviours that would foster OG. Rhoades and Eisenberger (2002) asserted that supports are the catalyst for employees' positive attitudes, behaviours, and performance. The relationships between IC as a multidimensional construct and POS appear not to have received full study. Meyer et al. (1990) explained that POS is the positive and negative attitudes and behaviours that employees display as a result of the care, respect, and values they receive for their contributions to the firms. Prior research has reported positive links between employees' behaviours and organizational support in terms of entrepreneurial activities. POS is crucial in the SET (Eisenberger *et al.,* 1986) because it promotes the reciprocity of favourable or unfavourable behaviours. It facilitates employees' engagement, commitment, and performance (Eisenberger *et al.,* 1990; Rahman & Karan, 2016; Rhoades *et al.,* 2001). POS can assist employees to promote opportunities within the firm, embrace proactivity, act flexibly, drive businesses and take risks for the firm (Chouchane *et al.,* 2021; Lukes, 2012; Mirkamandar & Malikehbeheshtifar, 2015). We argue that the various dimensions of IC would have direct and positive effects on POS. Thus, we propose that:

H2a: Opportunity promoter is directly and positively related to POS.

H2b: Proactivity is directly and positively related to POS.

H2c: Flexibility is directly and positively related to POS.

H2d: Business Driver is directly and positively related to POS.

H2e: Risk Assumption is directly and positively related to POS.

The influence of IC on OG via POS

Organizational support among other things improves job satisfaction and positive moods of employees, commitment, performance, and fewer withdrawal behaviours for the firms (Rhoades & Eisenberger, 2002). We argue that favourable employee behaviours can encourage the firm to improve or increase their levels of support to the employees. This argument is based on the tenets of the SET, which avers that favourable actions will be replied to with favourable behaviours. Thus, if the firm perceives that employees have IC and encourage others to adopt initiatives that improve the OG, they will most likely provide support by providing rewards, a conducive workplace, and fairness. Previous studies have presented evidence that showed that entrepreneurial behaviours foster POS (Chouchane *et al.,* 2021; Jong *et al.,* 2015), and OG as well (Kellermanns *et al.,* 2008). But there appears to be a dearth of studies that have considered how various dimensions of IC might influence growth through POS. Farrukh et al., (2017) indicated that intrapreneurs who perceive support might display greater commitment. Similarly, Hecker (2017) highlighted that POS enhances entrepreneurial employees to innovate, and initiate OG. Based on the RBV and the SET, we deduce that the set of resources (human capital) within the firm, whose behaviours favour the outcomes of the firm might gain more support from the organization in exchange for their effort, which might, in turn, initiate more OG. Thus, we might expect that POS will improve the effect of IC on OG. Therefore, we propose that:

H3a: POS mediates the relationship between opportunity promoter and OG.

H3b: POS mediates the relationship between proactivity and OG.

H3c: POS mediates the relationship between flexibility and OG.

H3d: POS mediates the relationship between business drivers and OG.

H3e: POS mediates the relationship between risk assumption and OG.

RESEARCH METHODOLOGY

Employees of manufacturing firms in Nigeria made up the population of this study. This choice was based on the notion that such employees are sometimes placed in situations where they have to utilize their initiatives, which place them in positions that may involve taking a risk, being proactive, remaining flexible, and driving businesses with their ideas. Thus, we believe that a population of this kind will present the necessary responses to the variables of this study. Based on data from the National Survey of Micro Small & Medium Enterprises (2017), a total of 2277 employees of small manufacturing firms in South-East Nigeria were selected as the population of this study. A simple random sampling technique was used to draw a sample of 340 employees. We worked with the definition that small firms have between 10-49 employees, thus assuming that we randomly pick 10 employees from each firm, we would study a total of 34 firms. Albeit, we envisaged that there may be non-responses, thus we accounted for this by adopting a 20% (i.e. 68) attrition rate (Wayne, 1975). The total sample size for this study was 408 employees of small manufacturing firms in South-East Nigeria.

An authorization letter was sent to a total of 34 firms to inform them about the intended survey of their employees. A copy of the structured questionnaire that was designed for the study, and a consent note indicating that participation was voluntary and that personal data and responses would be confidential as such responses were for research purposes only were sent also. After two weeks, we received authorization from only 27 firms out of the 34 requests made. Thus, we conducted our study on the employees of the 27 firms that agreed since we were certain we would get the required number of responses from these firms. With the aid of research assistants, we administered copies of the questionnaires face-to-face to the employees The survey was done during break periods to avoid supervisors' influence on the employees' responses.

The questionnaire was divided into two: part A for the employees' demographic information and part B contained the main questionnaire. A total of 311 completed questionnaires (excluding all respondents with missing information) from 27 small manufacturing firms in South-East Nigeria were returned. 76% (236) of respondents were male employees, while 84% (261) indicated that there were below 40 years of age.

Measurements and scale development

The scales of the study were adopted from prior research. Few adjustments were made in the wording to suit the purpose and context of the current study. The scales in part B of the instrument were placed on five-point Likert scales ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The demographic information where gathered via categorical data: Gender was placed on either male = 1; female = 2; Age was placed thus; 23-27 = 1, 28-32 = 2, 33-37= 4, 38-42 = 5. The reliability of these scales was accessed through the composite reliability (CR), and only scales with alphas above .70 were utilized.

Intrapreneurial Competencies

To access the IC scale, the scale developed and validated by Vargas-Halabi, *et al.*, titled COIN_CR1 ©2017, comprising five dimensions: opportunity promoter, proactivity, flexibility, business driver, and risk assumption was adopted.

Opportunity promoter

A total of 6-item made up this scale. The scale aimed at determining the extent: to which employees agree that they never/always act diligently to avail opportunities to change or generate new initiatives for the firm, have the ability to convince others of the benefits of carrying out new initiatives for the company; encourage others to remain enthusiastic during the implementation of the new initiative of the company. Unfortunately, the items of this scale all cross-loaded under other scales, thus, they were eliminated from further analysis in the current study.

Proactivity

This scale accessed behaviours that are aimed at supporting actions and making efforts for new initiatives. The scale is comprised of 4-items that: ascertain the extent: to which employees agree that they are never/always willing to assess with others any new opportunity for the firm; to which they agree that they never/always support new ideas regardless of who puts them forward in the firm. These items all loaded together with a CR of 0.945.

Flexibility

This scale assessed those behaviours that are aimed at lack of adherence to rigid schemes and procedures. The scale comprised of 4-items that aimed to ascertain the extent: to which employees agree that they never/always have a well-defined scheme to identify opportunities to generate new initiatives in the firm; they recognize how to get the resources to fund new initiatives in the firm; they have methods to evaluate the costs and benefits of new initiatives in the firm. These items all loaded together with a CR of 0.943.

Business Drive

This scale measures employees' behaviours that reflect their ability to take interest in the progress and support new initiatives and also take actions to convince other people. 4-items made up this scale. It measures the extent to which: employees agree that they never/always monitor the progress of new initiatives in the firms; they try to clarify the importance of the new initiative for the firm to their superiors. All the items here are loaded together with a CR of 0.903.

Risk Assumption

This scale measures employees' behaviours regarding their capacities to take risks on new initiatives for the firm. The scale is made up of 3-items that sought to measure the extents to which: they agree that they never/always enjoy betting and gambling on new initiatives in the firm; are willing to take chances on new initiatives with uncertain results. All the items were loaded together with a CR of 0.915.

POS

This scale reflects the general belief that employees of a firm hold concerning the levels of values that the firm has about their membership in the firm. This scale was adopted from the scale developed by Rhoades and Eisenberger (2002). This is a one-dimensional scale that consists of 4-items that assessed the extent to which: employees perceived that their firms are fair, they perceive supervisors' support, and they perceive organizational rewards and favourable job conditions. These items are loaded together with a CR of 0.937.

Organizational Growth

This scale reflects the extent to which a firm has improved or expanded over the years based on the activities of the employees. We decided to utilize subjective measures as against objective measures because the survey was on the employees who could not be able to provide us with objective data. Thus, we assessed their perception of how they felt their firms may have increased since the last 3 years when they joined the firm. The scale was built from a scale by Alves and Gama (2019). It comprised of 6-items that sought to identify the extent to which: the employees believe that their actions have made the firm worse/better with regards to their competitors; they estimate that their sales growth was worse/better; they have gained more market share; they receive more customers' compliments. 2-items from this scale loaded below the 0.50 cut-off and were removed from the final items utilized in further analyses of the current study. The CR of the scale was 0.939.

Gender

Gender in this study reflects the sexual orientation of the employees (male or female). This was to determine whether the gender of the employees affects their IC or the growth of the firm. This was categorized thus, Male =1 and Female = 2.

Employees Age

This scale assessed the extent to which the age brackets of employees might affect their IC or ability to contribute to OG. It was categorized thus; 23-27 years =1; 28-32 years = 2; 33-37 years = 3; 38-42 years = 4.

Table 1. The Measurement Scale

Variables	Indicators (items)	Loadings	Convergent and discriminant validity check			Reliability test
			AVE	MSV	MAXR(H)	CR
Flexibility	Flx1	0.90				
	Flx2	0.90				
	Flx3	0.91				
	Flx4	0.89	0.806	0.202	0.944	0.943
Proactivity	Pro1	0.90				
	Pro2	0.93				
	Pro3	0.88				
	Pro4	0.90	0.812	0.172	0.947	0.945
Risk-Taking	Rsk1	0.89				
	Rsk2	0.90				
	Rsk3	0.86	0.781	0.276	0.916	0.915
Business Drive	Drv1	0.84				
	Drv2	0.90				
	Drv3	0.88	0.757	0.210	0.907	0.903
OG	Gwt1	0.87				
	Gwt2	0.88				
	Gwt3	0.91				
	Gwt4	0.90	0.793	0.181	0.940	0.939
POS	Pos1	0.88				
	Pos2	0.89				
	Pos3	0.88				
	Pos4	0.90	0.788	0.276	0.937	0.937

Note: AVE = Average variance extracted, MVS = Minimum Shared Variance, CR = Composite Reliability.
Source: own Calculations in AMOS V. 24.

Overall measurement model fit

To ensure a fit in the overall model of this study, we performed a Confirmatory Factor Analysis (CFA). The measurement model consisted of seven latent variables: IC (opportunity promoter, proactivity, flexibility, business driver, and risk assumption), POS, and OG. The CFA indicated that the items measuring opportunity promoter cross-loaded with other items in the model and caused the model not to be fit. However, when they were removed from the model, every other item loaded fine under their latent variable, and the overall goodness-of-fit became adequate: $\chi2$ = 231.8; df = 194; $\chi2$/df =1.19; CFI = 0.994; TLI = 0.993; RMSEA = 0.025, reflecting an acceptable model fit (Hair et al., 2010).

Convergent validity and discriminant validity

Convergent validity was attained as the indicator factor loadings were significant and exceeded the acceptable value of ≥0.6 on their corresponding constructs. The average variance extracted (AVE) is ≥0.50.

Composite reliability and Cronbach's alpha reliability

Scales with alphas and composite reliability that are ≥ 0.70 and ≥ 0.60 are considered reliable, while the factor loadings should be ≥0.50 (Hair *et al.,* 2010). Based on the outputs of the overall CFA analysis, all these criteria were met in this study (Table 1).

RESULTS AND DISCUSSION

Descriptive

The means, SDs, and bivariate correlations among the variables of the study are presented in Table 2. The table showed that proactivity; flexibility; business driver and risk assumptions were positively related to OG and POS as well.

Table 2. Descriptive Statistics and Bivariate Correlations among Variables

Variables	Mean	SD	1	2	3	4	5	6
Flexibility	12.61	5.448						
Proactivity	11.53	5.154	0.093					
Risk Taking	9.33	3.961	0.365**	0.233**				
Business Drive	9.52	3.730	0.285**	0.383**	0.217**			
POS	12.56	5.068	0.423**	0.241**	0.487**	0.422**		
OG	12.87	5.168	0.362**	0.231**	0.300**	0.398**	0.26**	

**. Correlation is significant at the 0.01 level (2-tailed).
Source: Own calcutaions in SPSS V. 25.

Hypotheses testing

The Hayes PROCESS Macro 3.5 (Model 4 – Hayes, 2018) was utilized to test the study hypotheses. These were conducted by applying bias-corrected 5,000 resample bootstraps to determine the direct, indirect, and total effects (Hayes, 2018). The results of the analysis of direct and total effects have been presented in Figure 2, whereas Table 3 was used to display the analysis of the indirect effect.

Influences of IC on OG

Every one of the proposed hypotheses under hypothesis 1 was supported as displayed on the regression model (Fig. 2). The respective direct relationships between Proactivity; flexibility; business drive; risk assumption and OG are statistically significant (β = 0.162, p<0.001; β = 0.259, p<0.001; β = 0.439, p<0.001; β = 0.241, p<0.001). These coefficients reflect the direct effects (c') of IC on OG within the path model. Similarly, the total effects (path c) of IC on OG showed significant positive relationships: proactivity, POS and OG (β = 0.233, r^2 = 0.0533, p < 0.001); flexibility POS and OG (β = 0.344, r^2 = 0.1311, p < 0.001); business driver, POS and OG (β = 0.552, r^2 = 0.1587, p < 0.001); and risk assumption, POS and OG (β = 0.391, r^2 = 0.2371, p < 0.001).

Impact of IC on POS

In the second set of hypotheses, i.e. Hypotheses 2b, c, d, and e, the direct relationships between the various IC dimensions and the mediating variable were tested. The results as indicated in Figure 2 shows that proactivity; flexibility; business drive and risk assumption respectively, are significantly related with POS (β = 0.241, p < 0.001; β = 0.393, p < 0.001; β = 0.573, p < 0.001; β = 0.623, p < 0.001). These imply that all the second sets of hypotheses developed for this study were supported.

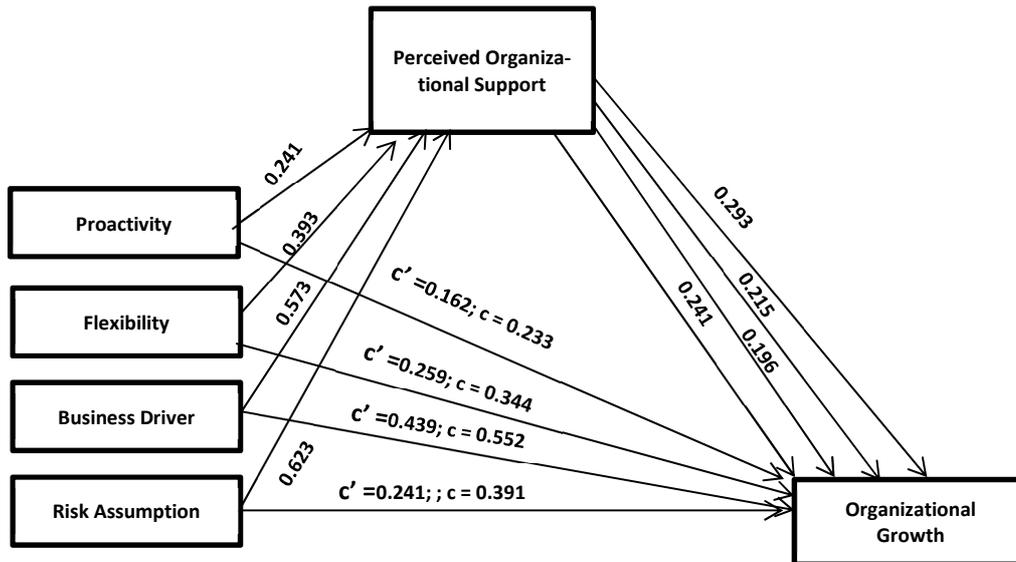**Figure 2. Results of the structural model**
Source: own elaburations, from AMOS V. 24.

Table 3. Mediation Analysis

Path			Indirect effect	Bias-correlated 95% CI	
				Lower	Upper
Proactivity →	POS →	OG	0.0695	0.325	0.1139
Flexibility →	POS →	OG	0.0846	0.0325	0.1414
Business Driver →	POS →	OG	0.1125	0.408	0.1990
Risk Assumption →	POS →	OG	0.1502	0.0653	0.2468

Note: POS = Perceived Organizational Support, OG = Organizational Growth.
Source: own calculations from PROCESS 3.

The influence of IC on OG via POS (indirect effect)

In the third set of hypotheses of this study, i.e. Hypotheses 3b, c, d, and e, the influence of the various dimensions of IC on OG through a parallel mediation involving POS was tested. With the aid of a bootstrapping method, the indirect effects were examined. Table 3 indicated positive and significant relationships between: proactivity on OG via POS; flexibility's on OG via POS; business drive on OG via POS; risk assumption on OG via POS (β = 0.0695, $p < 0.001$; β = 0.085, $p < 0.001$; β = 0.113, $p < 0.001$; β = 0.150, $p < 0.001$). The bootstrapping mediation test demonstrated that POS mediates the path through which various dimensions of IC influence OG. Thus, the third sets of hypotheses 3b, c, d, and e were supported.

Discussion

Studies examining the impact of IC on performance are rife but are scanty in the area of expansion and growth. An understanding of this impact will improve our knowledge of the growth of small firms and add to the entrepreneurship literature as well. No prior research to the best of our knowledge has combined RBV and SET in one comprehensive model to test the relationships among IC, OG, and POS. We proposed that (IC) proactivity, flexibility, business driver, and risk assumption, influence OG individually, and that POS mediated these relationships. We found that they all have positive associations with POS. These indicate that employees with IC and perceptions that they have a supportive organization would be highly motivated to continue in their entrepreneurial behaviours in other to grow the organization. This could also be interpreted to mean that intrapreneurs can display their competencies of promoting opportunities, proactivity, flexibility, business driving, and risk assumptions only because they perceived that the organization encourages them (Chouchane *et al.,* 2021). These findings suggest that IC festers in a supportive environment.

We also found that POS is associated positively with OG. This finding corroborates Hariani and Masdupi, (2019) view that firms that provide adequate encouragement, supervision, and motivation for their employees usually experience growth and expansion because their employees would be engaged in innovative activities. We also made similar findings to Butali and Njoroge (2018), that a supportive workplace that encourages employees to participate decision making usually enjoys some measures of expansion and growth. This implies that the levels of support that employees get from their firms would enable them to engage in activities that would foster growth in the organization.

Also, the results showed that the relationships between the different dimensions of IC and OG were mediated by POS. Proactivity showed a positive relationship with growth via a link with POS. Similarly, flexibility, business driver, and risk assumption also indicated positive relationships with growth through POS. These results meet expectations; given that evidence from previous studies showed that entrepreneurial behaviours and supports are good predictors of organizational success (Maan *et al.,* 2020). These findings also support the impact of support in fostering OG. Since IC fosters OG, then organizational support would encourage employees to explore behaviours that would enable the organization to exploit more profitable options. Drawing on RBV which posits that rear, valuable and hard to imitate resources can assist a firm to grow for instance (Barney, 1991), and SET, which supports the tenets of reciprocity (Kurtessis *et al.,* 2017), we can suggest that firms with intrapreneurs, who provide the necessary support to such intrapreneurs, would enjoy favourable returns like innovations and commitments from them to foster their expansions and growth.

CONCLUSIONS

This study adopts RBV and SET to examine the relationship between the dimensions of IC and OG. The results of the study stressed the importance of IC as a tool of OG. The findings of this study have implications for managers, employees, and policymakers in Nigeria and other countries. The study highlights the importance of organizational support by managers on the development of IC in the firm. For employees, the study highlights how they can benefit from developing IC, while policymakers can benefit from this study by encouraging policies that will foster IC in firms because their growth will translate into economic growth. There are practical and theoretical insights from this study. This study advances theories and contributes to how IC can foster OG in the existing body of literature. This study empirically confirms that IC has both direct and indirect influences on growth through POS. The results indicated that IC can foster employees' engagements, which would ultimately lead to OG. Also, IC can boost the reputation of a firm because it affords them rear, valuable and hard to imitate resources that would also place them in vantage positions (Barney, 1991).

The findings of the current study are not bereft of some limitations, thus, we advise that they should be taken into consideration when interpreting the result of this study. Firstly, only employees from small manufacturing firms were studied. Intrapreneurship exists in virtually all levels of firms in different sectors, thus, this limits the generalization of our findings to other firms in different levels and sectors. We call for further studies to investigate with employees of firms from different sectors and levels as well. Also, some country constraints may exist in the generalization of our findings since the current study was conducted in Nigeria. These relationships may not subsist in developed climes where the concept of intrapreneurship is at its advanced stage. We however suggest the replication of the studies in other cultures. Finally, the scale we adopted for this study may have limited our findings. We gathered responses on an OG scale from employees which are mainly perceptual. We, therefore, recommend that future studies should develop objective scales for employees.

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The influence of remote work in particular during the Covid-19 pandemic on changes in human behaviour patterns within organisations

Krzysztof Machaczka, Maciej Stopa

A B S T R A C T
Objective: The sudden occurrence of the SARS-Cov-2 pandemic, colloquially called COVID-19, brought about the necessity of redefining all the existing organisational patterns within companies. This article carried out an analysis of selected important changes in employee individual behaviour patterns and changes taking place in organisational structure in the context of the transition to remote work in the home office system. Additionally, threats stemming from that and challenges for the managerial staff were discussed. The analysis of changes in behaviour has been done on the basis of research carried out by external institutions studying changes in organisations, which have been caused by the transition to remote work mode.
Research Design & Methods: When working on this conceptual work, the Authors analysed a few selected issues concerning the organisational changes caused by the COVID-19 pandemic and implemented by external orgnisations or research departments of a company. They also performed a though analysis of the current publications concerning the change of the staff behaviour in a given organisation, and in a more general sense, the disappearance of the organisational culture.
Findings: The results of the analysis of the examined topic point out that the change of working style from an office work to a remote work will affect the organisational culture and change the staff behaviour. Some staff members who worked on a remote basis could not take part in the creation of the current artefacts, values and basis objectives of the organisational culture, which will result in the fact that new, previously unknown behaviours, will appear in an organisation.
Implications & Recommendations: As a result of the change of organisational culture and individual staff behaviours, and of the disappearance of the artefacts and organisational values caused by the outbreak of the COVID-19 pandemic, an organisation's management should strengthen the staff identification with the organisation and thus, perhaps, redefine common values shared by all the staff and organisation. In order to specify the scope of the lack of common identification and individual behaviours, some research should be carried out within an organisation, identifying the necessity of re-establishing the values and new behaviours within a company.
Contribution & Value Added: The paper presents possible changes within the area of organisational culture and individual behaviours of the staff, as these factors had never before been faced with such a great challenge of survival and had never before undergone such a large change as during the first months of the COVID-19 pandemic and also later on, when organisations continued online work. The paper is the first attempt to analyse possible changes of individual organisational behaviours and to measure the effect of remote work on organisational culture.

Article type:	conceptual article
Keywords:	remote work; behaviour patterns within organisations; organizational culture; changes in behavioral patterns; entrepreneurship; Covid-19 pandemic; teamwork, cooperation
JEL codes:	A13, A14, M14

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INTRODUCTION

A sudden transition to remote work, also called home office mode, has emphasised the important role modern technologies play nowadays. These technologies, provided one has all the necessary tools, such as access to the global computer network (the internet), a computer, and a source of power, enable the execution of numerous tasks from practically any place in the world. As a result of the event of a discontinuous character which was the worldwide SARS-CoV-2 virus pandemic, many employees were sent away from offices to their homes so they could continue their everyday professional duties in conditions that provided relative safety and, above all, limited the risk of virus transmission. At that time, we had an opportunity to observe the incredibly quick process of transition from work thus far done in a "traditional" office environment to work done remotely (Chapman, 2020; Thomas *et al.*, 2020; Wells, 2020). Apart from important issues such as ensuring adequate task organisation and control, and maintaining overall efficiency, we definitely entered not only a new dimension of organisation and work, but also a new dimension of carrying out work, connected with the place we did it from and the way we performed it. Overnight, casual conversations made while carrying out everyday duties, although not connected with them directly, disappeared and so did the atmosphere created by people undertaking their tasks within the defined company strategies, which generated so-called team spirit (see Wziętek-Staśko & Krawczyk-Antoniuk, 2020). Specific jargon – words describing situations, processes and activities, understood only by the employees of a given organisation, also started to quickly disappear from the office landscape.

It appears that if the pandemic had lasted only a few months, not much would have changed in the area of communication, cooperation or – more broadly speaking – human behaviour in organisations (Kansal, 2021). However, in the face of the protracted pandemic, it is now worth considering and conducting research into what will change or should change if the remote work model affecting a change in hierarchical systems stays with us for a longer time or – which seems highly probable – permanently. Can the office really be "transferred" to employees' homes? What will later be brought from homes to offices? What about organisational culture: can it be maintained in the "remote" mode all this time? Does an employee working from their home office still create the same organisational culture or does it change to such a degree that the very same employee now takes part in creating a new culture within their employer's organisation?

This article attempts to find an answer to the question of how working in contemporary conditions, i.e. mostly in the home office system, will affect a change in important individual human behaviour within organisations. Moreover, it is aimed at indicating the main trends pointing to major challenges organisations will have to face in order to maintain, among others, team coherence, the right employee motivation, the quality of their work, its efficiency, and, above all, those components which are included in every company's team spirit.

LITERATURE REVIEW AND THEORY DEVELOPMENT

The importance of a strong organisational culture in maintaining coherent employee behaviour

From retrospective analyses of achievements and knowledge in the scope of meaning and types of organisational culture (among others Cameron & Quinn, 2015; Collins & Porras, 1994), we know that this culture plays a major role in shaping a company's competitive advantage on the market (Barney, 1986; Muratović, 2013; Naranjo-Valencia *et al.*, 2012). Such crucial areas as strategy, a well-chosen market niche, technology, carefully selected skilled, educated and motivated staff, as well as capital, that generally speaking, all provide the potential for unique competitive advantages, are unarguably essential for the development of every company. However, it takes more than that for any given company to succeed. Of key importance is the right approach to creating an original business model for the organisation – a specific mechanism allowing for the generation of indispensable added value which, in turn, is the effect of skilfully connecting all elements making up an organisation and providing it with the necessary cohesion in activity and the ability to constantly counteract the threat of entropy. The factors indispensable for creating the aforementioned cohesion include an appropriately shaped and strong

organisational culture, as well as appropriately formed in its context human behaviours (Raghuram, 2021). Organisational culture and intra-organisational behaviour create a force which helps eliminate uncertainty by providing all participants with one system of interpretation thereby creating social order within a given organisational system through a clear definition of what is expected of people, and what the rules of communication, cooperation and participation are. Such clarity of rules guarantees the continuity of operation and attitudes, laying the foundations of basic values and principles. Around this solid framework, strong teams can identify with the organisation and engage in building a shared vision of the company's future (Cameron & Quinn, 2015). Nowadays, in the era of globalisation and the proliferation of organisations around the world, organisational culture should be understood as something more permanent than that which can be changed by the culture of a given country or its local norms and values. A healthy, permanent and universal organisational culture can represent such features, norms, attitudes and values which will always form a part of broadly understood social culture, and yet at the same time it will be open to the influence of the community in which it exists. Therefore, it will be embedded in its employees' culture and connected with it. This is how any culture should "behave" when it is thriving and consciously built by an organisation. Science and organisational practice know ways to motivate employees and to create a positive and effective internal culture within the traditional system. Now, during the pandemic, but probably also in the time after the pandemic, when most employees will still be working from home, creating a system which will continue to ensure high efficiency of the organisation and which will not, at the same time, neglect the crucial role of the human factor in creating the organisation of the future is becoming a serious challenge for organisations.

At the end of 2020, IPSOS (IPSOS, 2021) carried out a survey among organisational employees for the World Economic Forum. The survey, which was conducted in 28 countries and among 12 823 employees, shows that the pandemic has already immensely influenced the mental state of active professionals. The selected results of the survey are presented in the figure below.
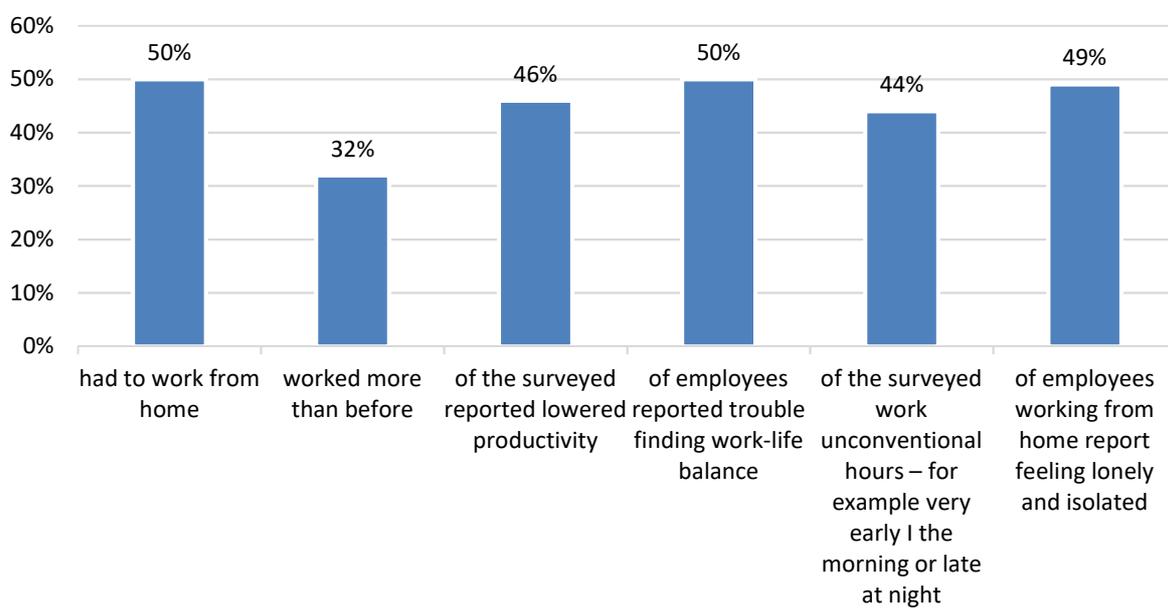
Figure 1. The results of 'Work during the pandemic' IPSOS survey
Source: own study based on survey results of (IPSOS, 2021).

Currently, thanks to intensive research, we know that because of long-term exposure to functioning solely in remote working conditions, employees have experience serious crises. They are looking for their work-life balance. They are looking for new rules which will give them solid foundations for living in this new and different reality. Therefore, how will the behaviour of employees change? Will it be possible to maintain the right level of motivation to create, among others, innovative organisations? Will the organisational culture created in the existing work system survive? And finally, should employees themselves influence the evolution of contemporary organisational culture or – looking at the

question from a different perspective – should it not be the organisations themselves who now take a particular effort to modify their systems of organisational culture to provide space for maintaining and developing the right patterns of employee behaviour?
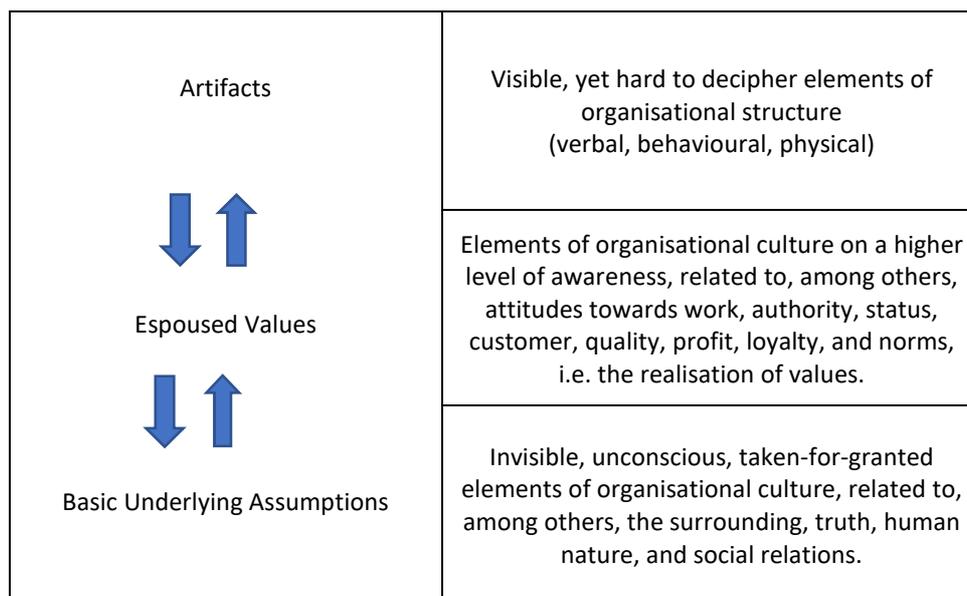
When referring to the role of organisational culture and, at the same time, looking for answers to the questions raised earlier, we should take a closer look at a definition of organisational culture, for example the one suggested by Flamholtz and Randle. According to the researchers, "it consists of the values, beliefs, and norms which influence the thoughts and actions (behaviour) of people in organisations" (Flamholtz & Randle, 2018, p. 28). The authors of this definition assume that "values are what the organisation considers to be the most critical in regard to its operations, its employees, and its customers" (Flamholtz & Randle, 2018, p. 28). Taking into consideration that not all employees stay together in one building but work from their homes for many months and contact one another only when necessary – without casual interactions, they decide about their priorities and how they achieve their targets themselves – we can firmly propose that the present behaviour of people in organisations is going to change (Vu *et al.*, 2022). Moreover, their beliefs and performance standards are going to change, and thus, organisational culture itself is going to also change. According to the definition of culture suggested by M. Bower, it is "a way we do things which surround us" (Kliber & Wyrwicka, 2012, p. 31). Therefore, the transition from offices to employees' private spaces and changing one's working environment has consequences in the form of changes in organisational culture and the basic behaviour of employees.

The groundwork for organisational culture is most frequently laid by the founders of a given organisation (Król & Ludwiczyński, 2020) – as happened in Walt Disney's studio, where, through his way of being and managing, the founder initiated a certain culture which later "spread" across the entire organisation. Organisational culture might as well form gradually through overcoming difficulties and the building of a company – as was the case with Coca-Cola. It can also by consciously developed by the management – as was seen in Google (Cameron & Quinn, 2015). Obviously, one condition is that the culture should be accepted by the company employees, as it needs to equally resonate with their own values and behaviour. If the employees only "tolerate" what the managerial staff impose on them, their behaviour will not become part of the organisational culture. However, if the culture is accepted and harmonises with what the employees think and contribute, it becomes a permanent part of the organisation and its determinant.

Let us look at another definition of organisational culture: according to Pocztowski, "it is an ingrained pattern, shared by members of a given organisation, of assumptions, values, norms, and methods of dealing with experiences which have been devised, discovered or created in the development of the culture and which are manifested in certain behaviour patterns of its members, and its components are: assumptions, values, norms, attitudes, myths, rituals, symbols, and a language" (Pocztowski, 2018, p. 44). Schein presented those components of organisational structure on three levels, shown in the figure below.

Analysing the three areas of realising organisational culture, we can observe that it includes permanent elements (basic cultural assumptions) as well as those which can change more quickly over time (artifacts and values). During the time when employees meet regularly and can form formal and informal relationships, their language, behaviour, and habits (physical artifacts), including language, behaviour and habits connected with the culture of a given organisation, are formed and enhanced, and all new and regular interactions will support those behaviour patterns. The culture of the entire organisation will form and develop thanks to those interactions. Thanks to those organisational behaviours and all employees' attitudes, which are indicative of their values, organisational culture will emanate and create a competitive advantage on the market. Physical artifacts also include dress code (Koźmiński *et al.*, 2014), which is the way of dressing in each organisation. Dress code is applicable in the office of a given organisation and in formal meetings. However, what will happen if all employees are locked up in their houses for many months? When employees only meet online, frequently with their web cameras turned off, the dress code will probably not be followed in accordance with the organisation guidelines because, after all, the employee is at home, not in the office. Natural sustaining and escalation of a given artifact and part of the culture of the company will cease. Eventually, also behavioural artifacts related to certain behaviours in meetings, for example, shaking hands, will also no longer be applicable. When

a business moves meetings into an online space, organisations lose space for presenting their culture to other organisations. Organisational culture until now emanating through those artifacts and behaviours (verbal, behavioural, physical), will begin to disappear. The present living organisational culture – made so by employees' personal values and behaviours – will cease to intermingle with values represented by individual employees; the values written down by the organisation will become mere words which will not be enacted in space or in relationships between organisations. It should also be emphasised that the lack of regular office meetings will bring to an end all symbolic aspects of organisational culture artifacts understood in the context of a given organisation. Moreover, an informal "network of meanings", formed by the employees of a given organisation and described in a broader context of the entire culture by Geertz (see Wąchal, 2010), will cease to be created.

Artifacts	Visible, yet hard to decipher elements of organisational structure (verbal, behavioural, physical)
Espoused Values	Elements of organisational culture on a higher level of awareness, related to, among others, attitudes towards work, authority, status, customer, quality, profit, loyalty, and norms, i.e. the realisation of values.
Basic Underlying Assumptions	Invisible, unconscious, taken-for-granted elements of organisational culture, related to, among others, the surrounding, truth, human nature, and social relations.

Figure 2. Levels of organisational culture according to E.H. Schein
Source: own study based on (Schein, 2004).

Schein emphasises that organisational culture is created in the process of adapting an organisation to its surrounding and in the process of internal integration (Pocztowski, 2018); therefore, as each day passes without the process of internal integration and escalation, there will be more and more attitudes and values represented by individual employees in organisational culture, and fewer and fewer of those distinguishing the given organisation.

RESULTS AND DISCUSSION

The importance of work conditions and organisation for generating the behaviour patterns of employees

Norms and behaviours presented by employees in an organisation stem directly from what a given community appreciates and treats as appropriate and valuable (Koźmiński *et al.*, 2014). Nevertheless, if employees do not meet frequently enough and have no opportunity to share their experiences, emotions and opinions because online meetings are limited to current tasks and duties, then it is virtually impossible to bring out what is really important and valuable for these people. Everyday reality is limited to carrying out current tasks, but the space for expressing oneself and presenting what one values and respects and, by extension, what one lives by and what one's values are, is lacking. Due to the fact that the world of business has moved from offices to the online space, diversity is fading; electronic mail and virtual conversations (without webcams) resemble meetings of two robots acting similarly and having the same personalities, needs and attitudes. Differences in spontaneity, openness to challenges, communication, or ways of preforming the same tasks are impossible to be found, as everyone

carries them out individually and does not share their methods and adopted solutions with others. Therefore, with every week of working in the home office system, organisation-specific behaviours disappear. Everyday briefings, during which employees used to find out about their tasks for the day, also practically disappear. The manager does not need to say who was absent because the group can easily see that. In remote work, the team does not know who is in front of their computer and can actively participate in ongoing projects on a given day.

The table below shows selected areas of changes in behaviour patterns as a result of employees' transfer from offices to working in the home office system.

Table 1. Changes in employees behaviour after switching to the remote work system

Source	Change in employee's behaviour pattern
lack of experiencing organisational culture by the employee every day	decrease in organisation culture awareness and identification
lack of contact with other employees in the office	lack of business behaviour models, dress code style, benchmark for the risk taken, models of behaviour conducive to getting a promotion and pay rise
onboarding of new employees in isolation from behaviour and relationships with the employees in the team and without interactions with other departments	lack of opportunity to get to know the organisation culture, close relationships and other employees' attitudes to their duties
lonely remote work from home	losing life-work balance, working extreme hours (early morning and late at night) - loneliness-induced stress
cutting costs in the organisation (because of the pandemic)	stress connected with the risk of losing one's job

Source: own study.

Looking closely at the changes which have and still are taking place in employees' everyday behaviour as a result of converting their work to the dominating or sole model of remote work, we can see considerable challenges in this area for company management. One such challenge for managers will undoubtedly be maintaining the right balance of creativity and innovativeness in employees. A lack of office face-to-face meetings, a lack of feeling of solidarity and group strength, decreased trust (particularly towards people who have just joined the organisation and whom other employees have not had the chance to meet in informal circumstances apart from online meetings) will, beyond doubt, negatively affect growth in teams' innovativeness (Łużniak-Piecha & Bobrowska, 2020). Extensive research entitled Polish business in times of pandemic, concerning the behaviour of employees in organisations, was carried out by Obłój and his team (Obłój *et al.*, 2021). The research clearly shows that over the long-term, remote work may lead to "the erosion of intra-organisational bonds, a decrease in creativity and innovativeness, a reduction of motivation and a limitation of learning possibility" (Obłój *et al.*, 2021). Unfortunately, most companies are not optimistic about their future and for many leaders the pandemic has turned out to be one of the most difficult professional experiences. Numerous companies observe the situation (the wait-and-see attitude) and do not take any significant strategic decisions which affect the employees' fears about the future of their organisation. At the same, the surveyed emphasise the fact that they miss having a physical presence in the company and the social interactions associated with that. The attitudes mentioned above translate directly or indirectly into a decrease in the level of creativity and innovativeness in employees.

Another challenge for the managerial staff will be maintaining the right level of motivation in employees (Becker *et al.*, 2022). It is obvious that previously just the presence of a superior in the office was enough to keep the employees ready to carry out their duties. During the pandemic, "the boss" only shows up during a phone call or video call scheduled in advance. A major proportion of employees certainly work full time, although we can presume that not all of them do. This phenomenon arises from different levels of employee motivation. On the other hand, redundancies in companies, resulting from the poor financial situation brought about by the pandemic, make some employees work longer hours and with greater engagement.

The behaviour of employees in an organisation stems from their mental and physical condition. An employee in a corporation or a big company can look after their physical health by taking advantage of gym or swimming pool (provided they are not closed due to epidemiological reasons) membership as well as access to private medical health care offered as part of the company's benefit's package. In times of pandemic, mental health turns out to be equally, if not more important than physical well-being. All possible forms of employee integration have disappeared; celebrating birthdays, team's successes or other important events in the organisation used to provide the opportunity for relaxation, joy and spontaneity. They allowed stress levels to be lowered, private interests to be shared, and often provided an opportunity to meet members of employees' families. Not to mention going to the office and coming back home: every day, during the commute, employees experienced numerous social interactions. Going to work through a park or going out to lunch with colleagues was natural. All these elements of everyday reality were eliminated overnight when the switch to remote work became necessary. In times of pandemic, it is down to an employee's self-discipline whether they go for a walk, engage in a physical activity (e.g. running), go to a park or riverside etc. so as to lower their level of stress through exercise and contact with nature. If they do not do that, their mood will worsen, willingness to work will decline, stress will increase and extreme fatigue can and does occur, perhaps even accompanied by mental illnesses such as depression and sleeping problems. In an obvious way, those behaviours and challenges for the managerial staff will change in the course of time in the context of the ongoing pandemic and the employees being separated from the organisation.

Every year, PwC Poland conducts surveys on employees' feelings of happiness. As the recently collected data shows (PwC, 2021), employees are already aware of certain deficiencies in working only remotely, therefore 77% would choose hybrid work as a better form for their work in the future. Only 14% would like to permanently go back to the office as it was before the pandemic. Interestingly, the World Happiness Report 2021 (Report, 2021) indicates that in the context of feeling happy, we are globally immune to the influence of the pandemic. The level of happiness in Poland has even increased and Poland has moved from 36th to 39th position in the list of surveyed countries. This probably results from being closer with families and spending more time with children, which, however, does not apply to all employees.

Will culture in every organisation change to the same degree and always lose its identity? In a social sense, culture is formed for generations and cannot be permanently changed during a pandemic. Is this similar when it comes to organisational culture? To quote Sathe (Sathe, 1983), the strength of organisational culture can be measured with the degree of intensity of the following aspects: how clear, how universal and how deeply embedded it is. These three features will determine whether culture in an organisation is susceptible to periodical changes in the company or not.

Clarity defines how desirable certain behaviours are in an organisation. As Sikorski writes: "the less doubt about their own cultural beliefs members of a given community have, the clearer those beliefs are" (Sikorski, 2008, p. 40). The degree of universality is the level of agreement in a group on the type of culture defined and accepted in the organisation. The more shared behaviour patterns and ways of thinking there are in a given company, the stronger its culture is (Sikorski, 2008). And lastly, the depth of embedding is the degree to which cultural patterns have been internalised. The better employees internalise those patterns, the more firmly organisational culture is fixed within a given company.
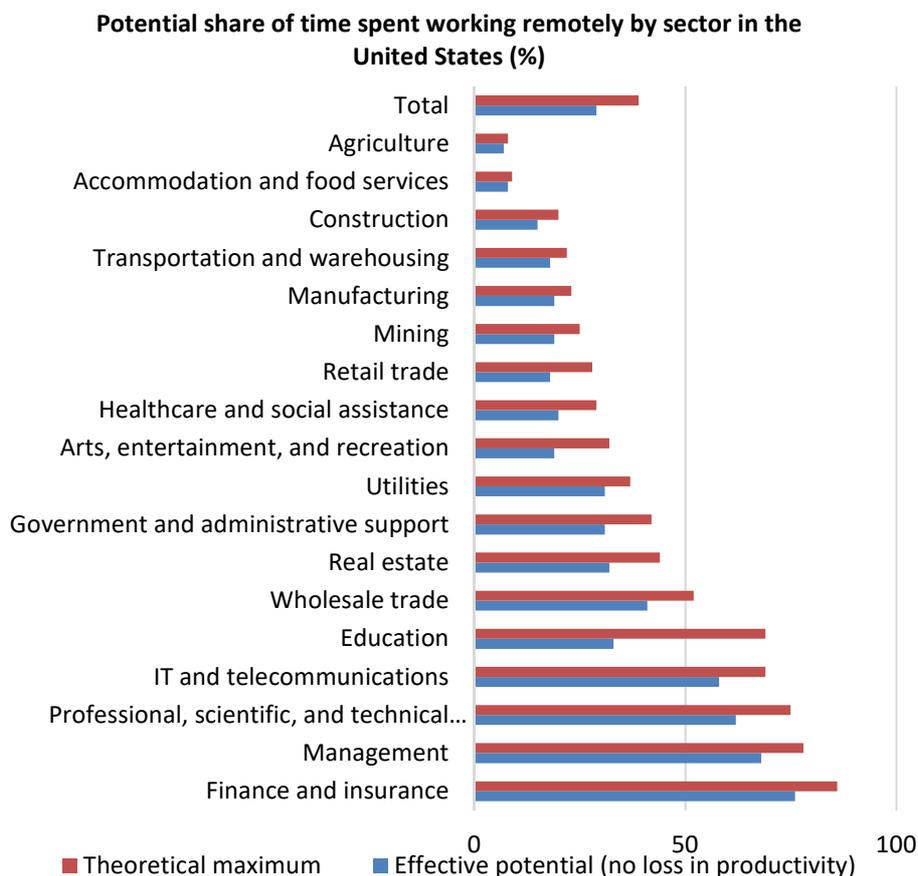
Based on the analysis of those feature, we can assume that not every culture in an organisation will be strong and deeply rooted among its employees, and neither will their behaviour. Therefore, not every culture will be equally susceptible to changes in an organisation (Li *et al.*, 2021). Consequently, there will be organisations which, through working in home office mode, will lose their culture and behaviour patterns after a short time. However, there will also be companies whose culture, despite the several-month-long "separation" of employees from the company office, will still be strong and deeply embedded in the awareness, way of working, activities and behaviour of their employees (Spicer, 2020).

In February 2021, nearly a year after the pandemic started, Ricoh Group published a survey entitled The pandemic and the organisational culture of a company, conducted among 632 European office workers of firms employing between 250 and 999 employees (Ricoh, 2021). The survey included questions about changes in the organisational culture and how much the pandemic was

changing everyday work. Nearly half of those surveyed (42%) felt their company culture had suffered during the pandemic. Employees miss working with colleagues face-to-face (65%), and 30% of European workers are feeling pressure to be online more while working remotely. 31% of the surveyed experience difficulties staying motivated due to a lack of good communication in the team and technological shortfalls. The study clearly shows that changes in employees' current behaviour patterns are imminent, supposing they have not already started.

Challenges and directions of changes in the sphere of employee behaviour in the context of the increasing role of the home office model

How will employee behaviour develop after such a sudden dispersal and the transition to home office mode? It seems inevitable that an organisation, and employee behaviour with it, should include many more elements brought in by workers themselves – there should be more values, attitudes, habits and ways of communicating contributed by employees, and fewer elements imposed by an organisation with its culture and accepted customs. Definitely, not all organisations are ready to adopt only full-time remote work. According to a study conducted by McKinsey Global Institute on 2000 activities, and 800 professions in 9 countries, over 20% of workers were able to work remotely from 3 to 5 days a week as efficiently as they would in the office. Remarkably, this does not depend on the profession, but on tasks to be carried out and on specific forms of activity (Lund *et al.*, 2020).

Potential share of time spent working remotely by sector in the United States (%)

■ Theoretical maximum   ■ Effective potential (no loss in productivity)

Figure 3. Results of McKinsey Global Institute research into percentage share of time spent working remotely by sector in the United States
Source: own study based on research (Lund *et al.*, 2020).

As can be seen in the Figure 3, the sectors with the greatest potential for remote work are finance and insurance, management, professional and scientific technical services and the IT/telecommunications sector. Fewer prospects for remote work are in the following sectors: agriculture, accommodation and food services and construction.

Therefore, the future probably lies in so-called hybrid work, which allows working from the office on some days of the week. Nevertheless, depending on their sector, some teams will be able to remain working at their "private offices/desks" at their employees' homes. These new employees, changed, different, will come back on some days to the offices in their organisations. Will they find the same organisation they left before the pandemic, and will the organisation recognise the employees it has not "seen" for such a long time? Employees with new behaviour patterns will not only create the atmosphere in the company, but also its new culture. Thanks to the synergy of current behaviour accepted in the organisation and new ones brought in by workers coming back to their offices from time to time as well as natural amalgamation, this culture will probably become better and more efficient; employee bonding within a given organisation will be reinforced as every employee will have their own measurable contribution to creating the company's values through creating its culture. In the case of a poorly developed organisational culture, the direct and stronger influence of employee behaviour could result in positive changes. The culture of an organisation will become more coherent and more closely connected with its creators – in this case employees – and with the right steering by the management it could become part of a great asset for the company. In deeply rooted cultures, it will be important to listen carefully to employees, and to whatever new they have brought into the company after the pandemic; to understand and identify their values or the expected new behaviour patterns, as well as to implement them into the organisation's culture.

Summing up, it should be emphasised that the time of the pandemic shall greatly influence changes in organisational culture. The magnitude of that influence will depend on how strong the culture was to start with in a given company. Where the organisation was only beginning to form, its culture – fresh and newly implemented – will be considerably modified and the influence of the employees' values and beliefs will be strong. On the other hand, in companies with a robust culture created over decades, the only values which will change might be those which evolved among the employees. That said, bigger or smaller changes will undoubtedly come. Those managers who closely watch how values and beliefs change in their employees, will find it easier to implement those changes.

Changes in organisations during and after the pandemic will probably be indispensable. As C. Sikorski writes: "in order for an organisation to react flexibly to changes in its surrounding, its culture should be flexible and open, or, in short -weak" (Sikorski, 2008, p. 46), as it is precisely culture, according to Schein, that is responsible for resisting changes (Mycielska, 2020). This is good news for those organisations which have not yet built a strong and deeply rooted culture.

Due to the worldwide pandemic, many new challenges and tasks have appeared directly connected with organising employees' working time (Iwashita, 2021). The managerial staff will most likely be faced with challenges concerning motivating those members of the organisation who work remotely, and creating space and opportunity for innovative teams whose members know and trust one another. Moreover, it should be emphasised that during and after the pandemic, not every sector of the economy will be able to move to working online; yet, each of them is capable of singling out some tasks and forms of activity which can be done remotely. Organisational culture, especially if not strongly embedded and still in the process of maturing, should undergo a transformation, as a result of which it will be founded more on employees' values, and less on the occasionally imposed values of the organisation. Some individual employees' behaviour will also change. There will be fewer artifacts and behaviour from the organisational space, and many more brought in by individual employees. The managing staff should take special care to create a coherent organisational culture directed at the values of employees and the organisation itself.

CONCLUSIONS

The worldwide pandemic connected with the spread of the SARS-CoV-2 virus already has and still will strongly influence individual employee behaviour and culture in organisations. Some employees working remotely will not be able to participate, in person, in creating previous artifacts, values and basic assumptions of organisational culture, which will result in the appearance of new, previously unknown behaviour patterns in the organisation, as they will be contributed individually by the em-

ployees. New challenges for organisations will include looking for new and more effective ways of motivating employees, creating a space for meeting new people, and building trust in order to foster innovative teams. Analysing the research concerning the influence of remote work on employees presented in the article, it seems that it will be essential to take care of employees' wellbeing, perhaps through offering them an opportunity to do sport or voluntary work during office hours, so that they can be relieved of their monotonous work and everyday routine tasks employees need to cope with alone, and consequently, encourage them to contact other people and give them space and motivation to leave their home offices.

The article pointed to some selected changes in the area of individual staff behaviours and their effect on organisational culture. Some further empirical research in this field will be necessary as it will definitely show the areas which have changed and will also change further under the influence of the long period of remote work.

The managers of organisations should re-attempt to analyse the relevance of the values with which an organisation and its staff identify. Even a larger challenge will be posed by the identification of the changes necessary to be introduced into the previous organisational culture, i.e. probably its re-defining, taking into consideration the new values and priorities brought into a company by the staff after their partial return to company offices after a long period of home office. At the times of lifting the restrictions resulting from the pandemic, it will definitely be necessary to introduce more flexibility, once the staff return to work in the companies' offices. All these changes require extensive and profound empirical studies in specific organisations and economy sectors. It seems also that probably some of these sectors, such as financial or managerial (Lund *et al.*, 2020) , and, first of all, the IT sector (Nickson & Siddons, 2012) have not been significantly affected by these changes, as these branches have been working on a remote basis for many years, whilst pandemic did not mean any greater changes in everyday work for the staff of the organisations active in this field. It must be also assumed that the remote work models, worked out in specific companies will become a permanent solution in the working model of the employee teams. Therefore, remote work and its specifics, together with the necessary changes in the field of the values, culture and human relations will pose a significant challenge for the effectives for the management of organisations.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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The role of institutional support structure in shaping social entrepreneurial intention

Le Thi Loan

A B S T R A C T
Objective: The present study aims to investigate the role of institutional support structure in shaping intention to form a social business using the model of Mair and Noboa (2006).
Research Design & Methods: This study utilized Structural Equation Modelling with a sample of 516 students in Vietnam to examine the hypotheses.
Findings: The finding shows that institutional support structure is positively associated with empathy, social entrepreneurial self-efficacy and perceived social support. In addition, institutional support structure also increases social entrepreneurial intention through enhancing empathy, social entrepreneurial self-efficacy and perceived social support.
Implications & Recommendations: Policymakers need to develop a complete legal framework, and policies to support potential social entrepreneurs to start a business such as tax support, competitiveness, and loans... to help increase self-efficacy, empathy and perceived social support for those who wish to become social entrepreneurs.
Contribution & Value Added: This study highlight the interesting role of institutional support structure in increasing intention to form a social business. The results of this study contribute to the social entrepreneurship literature in understanding factors that lead to social entrepreneurial intention.

INTRODUCTION

Nowadays, rapid social development leads to many negative impacts such as environmental pollution, climate change, natural disasters, epidemics, unequal access to public health and education, and income inequality. Therefore, social enterprises are established as a way to help society deal with these hazards. Social enterprises are a mixed model using business activities to achieve social goals. Its mission is to solve social problems and drive social change (Bui Ngoc Tuan & Pham, 2020; Zaremohzzabieh et al., 2019). It creates new products and new markets, meets the needs of marginalized groups in society, or solves socio-environmental issues. For these reasons, social entrepreneurship is a topic which attracts more and more attention from academics and politicians, as the entrepreneurial ecosystem, the widely understood business and political environment, should be in favour of stimulating entrepreneurship (Nowiński et al., 2020; Wach & Bilan, 2021).

Studying entrepreneurial intention is a key issue to understand entrepreneurship (Doanh & Bernat, 2019; Fayolle & Liñán, 2014; Wach & Bilan, 2022). Thus, the entrepreneurial intention is the most discussed topic in entrepreneurship in the past decades. However, Gawell (2012) argues that there is a difference between the factors that form the intention to establish commercial enterprises and social

enterprises. Furthermore, there are also significant differences in motivation to establish social enterprises between countries, especially between developed and developing countries. One of the reasons is that developed countries have more active institutional and cultural support compared to developing countries (GEM, 2019). Therefore, it is necessary to produce social entrepreneurial intention research in various contexts to have a holistically understanding of social entrepreneurship (Lacap et al., 2018). In addition, current studies have not yet fully explored the determinants of social entrepreneurship, so factors (both individual and contextual) that affect social entrepreneurial intentions still need to be explored further (Canestrino et al., 2020; Kedmenec & Strašek, 2017).

The current study contributes to social entrepreneurship literature by examining social entrepreneurial intention of students in emerging economies, taking Vietnam as a case. Vietnam is a developing country with the 4th largest economy in Southeast Asia in terms of GDP. Besides, currently, Vietnam has more than 22.1 million people between the age of 16-30, accounting for about 22.5% of the country's population. This young generation is strongly inclined towards entrepreneurship because they are risk-free, deeply interested in innovation, and need achievement (Altinay et al., 2012).

This study examines the factors shaping intention to establish a social enterprise and investigates the linkage between institution support structure, empathy, moral obligation, social entrepreneurial self-efficacy, perceived social support and social entrepreneurial intention. The results of this study would be helpful for both academicians and politicians to promote social entrepreneurship.

LITERATURE REVIEW AND HYPOTHESES

Mair and Noboa (2006) are known as pioneers in providing a theoretical perspective on factors affecting intention to form a social business. Their argument was developed on the Entrepreneurship Event Model of Shapero and Sokol (1982) and especially the theory of planned behaviour of Ajzen (1991). Ajzen (1991) argued that an individual's intention is influenced by three determinants: attitude toward behaviour (ATB), subjective norm (SN) and perceived behavioural control (PBC). *Attitude toward behaviour* refers to the degree to which a person has a good or bad assessment of performing a specific behaviour. *Subjective norm* reflects the perceived social pressure in terms of executing or not executing a particular behaviour. *Perceived behaviour control* refers to a person's perception of easiness or difficulty in carrying a behaviour. In addition, Ajzen (2002) stated that perceived behavioural control includes two types of internal and external behavioural control, the first of which is generally known as a person's self-efficacy while the last refers to the belief of a person about the support or objection they will face in the environment (Hockerts, 2015). Due to some specific and distinctive features of social entrepreneurship, Mair and Noboa have adjusted the traditional measures used in the TPB by using the variables empathy, moral obligation, social entrepreneurial self-efficacy and perceived social support as proxies for attitude toward behaviour, subjective norm, internal behavioural control and external behavioural control, respectively.

Empathy is a factor that substitutes the first component of Ajzen's (1991) TPB. While attitude towards behaviour relates to actual behaviour, empathy is considered as an attitude towards another person. Particularly, empathy can be seen as an instinct to understand others' feelings and emotions through witnessing his/her situation or simply visualising it (Decety & Jackson, 2004). Mair and Noboa (2006) also defined empathy as the capacity to acknowledge and share the emotions or feelings of others.

Moral obligation is proposed as a proxy for subjective norms. Moral obligation refers to the degree to which a person feels morally obligated to address the problems of socially marginalized groups (Hockert, 2018). Haines et al. (2008) stated that after making a moral judgment, moral obligation occurs as a secondary decision-making process before forming a moral intention.

Social entrepreneurial self-efficacy refers to his/her perception of the ability to solve societal problems (Hockert, 2017). Mair and Noboa (2006) argue that a person with high self-efficacy will find it feasible to create a social venture, thus positively influencing behavioural intention formation. In addition, Hockert (2015) stated that people often see social issues as something so massive that they cannot solve at all, so self-efficacy plays a very important role in promoting them to establish a social enterprise.

Perceived social support refers to a person's beliefs about the support he or she will receive from the surrounding environment when performing a particular behaviour. The support from society is another essential factor of intention formation (Birley, 1985; Honig & Davidsson, 2000). Mair and Noboa (2006) also emphasize that "social support is needed […] to trigger the formation of an intention to start a social enterprise".

Factors influencing social entrepreneurial intention (SEI) – the antecedents from Mair and Noboa's (2006) model

Up to now, there have been many empirical studies demonstrating the relationship between the four antecedents in Mair and Noboa's model (2006) on the intention to start a social venture (e.g. Hockerts, 2017; Lacap et al., 2018; Sousa-Filho et al., 2020). Mair and Noboa (2006) argued that empathy and moral obligation are known as necessary conditions for a person to form an intention to start a social enterprise. It has also been suggested that high moral obligation (Lacap et al., 2018) and rich empathy are qualities of social entrepreneurs. In addition, self-efficacy and social support are sufficient conditions to establish intention to become a social entrepreneur. A person who has high self-efficacy and finds positive support from around will have a high intention to form a social business (Mair & Noboa, 2016). However, the impact magnitudes of four antecedents from the model of Mair and Noboa were inconsistent. The results of these relationships depend on the particular research context. Therefore, this article applies Mair and Noboa's model in the context of a developing country – Vietnam. We expect to see the positive linkage between these antecedents and intention to establish social enterprise as suggested by Mair and Noboa. Thus, the following hypotheses were proposed:

H1: Empathy has a positive impact on social entrepreneurial intention.

H2: Moral obligation has a positive impact on social entrepreneurial intention.

H3: Social entrepreneurial self-efficacy has a positive impact on social entrepreneurial intention.

H4: Perceived social support has a positive impact on social entrepreneurial intention.

Institutional support structure

It is argued that the institutional theory is of great relevance to social entrepreneurship because social entrepreneurship is seen as an economic behaviour associated with the institutional environment of society, communities or nation (Aldrich & Fiol, 1994). And behaviour of social entrepreneurs can be affected by many social, economic, cultural and political factors. The institutional theory assumes that the public and private institutional structures of a country create the rule of the game for an organization and shape individual behavioural processes and beliefs (North, 1990).

Institutional support structure refers to various policy support systems, including support from national and financial institutions, and rapid access to needed information and resources (Nicholls, 2010). The institutional support structure effects to individual's willingness, self-efficacy and vision. Therefore, it plays an important role in fostering social entrepreneurship. Many studies have found that a supportive institutional environment can make a person have a positive attitude toward entrepreneurship and social norms, enhance their knowledge about entrepreneurship and self-efficacy, and therefore improve their intention to form a business venturing (Mustafa et al., 2016). In terms of social entrepreneurship, we expect a similar effect of institutional support structure on four antecedents: empathy, moral obligation, social entrepreneurial self-efficacy and perceived social support. Therefore, the following four hypotheses were proposed:

H5a: The institutional support structure has a positive impact on empathy.

H5b: The institutional support structure has a positive impact on moral obligation.

H5c: The institutional support structure has a positive impact on social entrepreneurial self-efficacy.

H5d: The institutional support structure has a positive impact on perceived social support.

The proposed conceptual framework is described in Figure 1.
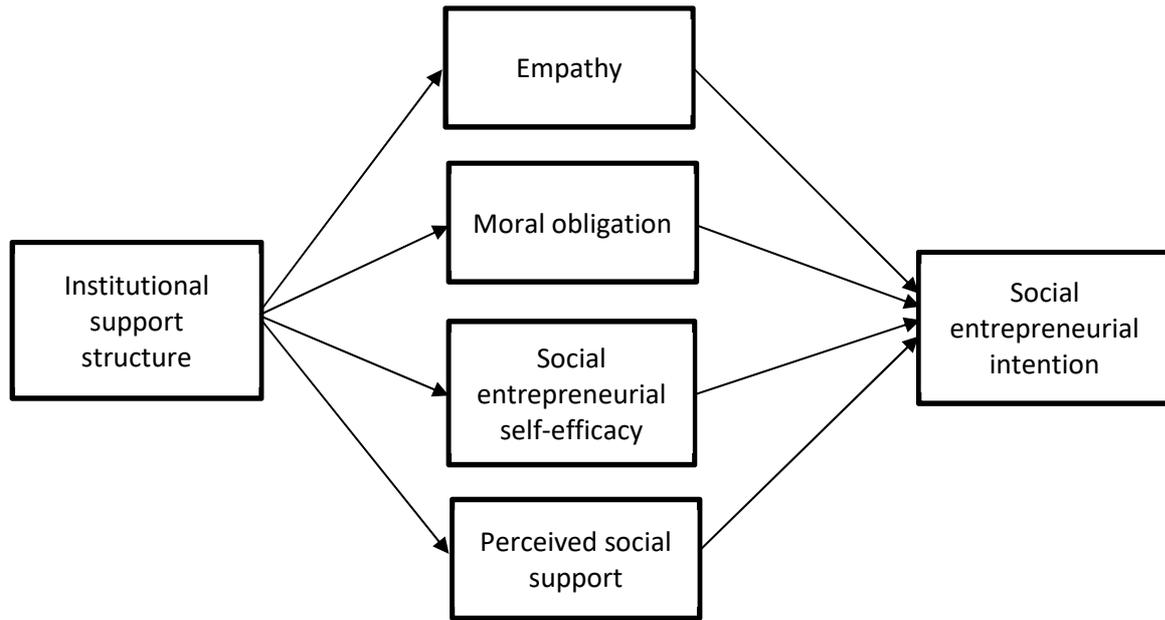
Figure 1. Conceptual framework
Source: own elaboration.

RESEARCH METHODOLOGY

Data collection and sample

It has been suggested that undergraduate students tend to prefer entrepreneurship and are the ones with the highest intention to start a new business (Guerrero et al., 2016; Reynolds et al., 2002), so the data set used in this study was collected from university students in Viet Nam. The method of convenience sampling was utilized to collect data through online-based survey. After distributing 550 questionnaires to the students, we obtained 516 qualified questionnaires to be used for further analysis. In our sample, there are more males (54.3%) than females (45.7%). The main range of respondents' age was between 21 and 24 years old, accounting for 76.7%. More than 50% of respondents study economics, and 74.8% of respondents have not taken part in any entrepreneurial course.

Table 1. Demographic statistics

Variables		Frequency	Percent (%)
Gender	Male	280	54.3
	Female	236	45.7
Age	18-20	53	10.3
	21-24	396	76.7
	>24	67	13
Fields of study	Economics	253	49
	Non-economics	263	51
Did you used to take part in an entrepreneurship course	No	386	74.8
	Yes	130	25.2

Note: N=516, F: Frequency, %: Percent
Source: own study.

Analyses

To test the hypotheses, we use structural equation modelling (SEM). A three-step process was utilized to analyze the data supported by IMP SPSS AMOS 22.0 software. Firstly, the scales are preliminarily evaluated through two main tools (1) Cronbach's alpha and (2) exploratory factor analysis (EFA). Cronbach's alpha was utilized first to remove inappropriate variables. Variables with item-correlation

less than 0.3 or Cronbach's alpha value less than 0.6 will be eliminated. Next, EFA was employed to examine the total variance explained (>50%) and remove variables with factor loading less than 0.5 (Gerbing & Anderson, 1988). Secondly, we implemented confirming factor analysis (CFA) to access the construct validity. Finally, the correlation coefficients for hypotheses were estimated by SEM. Furthermore, we employed the PROCESS macro approach to estimate the indirect effect of the institutional support structure on social entrepreneurial intention. Bootstrapping method with a 5,000 sample and 95% confidence interval was implemented. Bootstrapping is understood as an iterative-replaced sampling method, where the initial sample acts as the crowd. In terms of practice, the study of mediating effects is the study of the influence of an independent variable on a dependent variable through one or more mediators. When the study sample is large, the Sobel test method can be applied to test such intermediate effects (Sobel, 1986). However, if the original data is available, bootstrapping is a much better alternative (Preacher & Hayes, 2008).

Measures

This study examines six variables: empathy, moral obligation, social entrepreneurial self-efficacy, perceived social support, institutional support structure, and social entrepreneurial intention. All scales used in this study were adapted from previous research. To measure the responses, we used a five-point Likert scale for all the measures, starting from "strongly disagree" to "strongly agree". Specific, the measure of empathy, including three items, was adopted from Hockert (2017). The scales of moral obligation (three items), social entrepreneurial self-efficacy (three items) and perceived social support (three items) were also inherited from Hockert (2017). These scales have been used and tested experimentally in many previous studies (eg. Sousa-Filho et al., 2020, Lacap et al., 2018). In addition, the four-item scale measuring institutional support structure was borrowed from Farashah (2015). And the measure of social entrepreneurial intention was adopted from Mair and Noboa (2006) (the first three items) and Liñán and Chen (2009) (the last item).

RESULTS AND DISCUSSION

Cronbach's alpha and exploratory factor analysis (EFA)

Firstly, the reliability of the scales was assessed through Cronbach's Alpha. The results show that all scales were higher than 0.687, so all scales were within accepted values. Thus, the internal consistency reliabilities of all constructs were confirmed (Browne & Cudeck, 1993). After that, we conducted EFA to test the convergence and discriminant validity of variables. The result of EFA exhibits that KMO = 0.819, Sig. (Bartlett's Test) = 0.000 < 0.005, Eigenvalues = 1.104. The rotation matrix results show that 20 observed variables are grouped into 6 factors, all observed variables have Factor Loading greater than the cut-off value of 0.5. The results of Cronbach's alpha, EFA and descriptive analysis are illustrated in the following table.

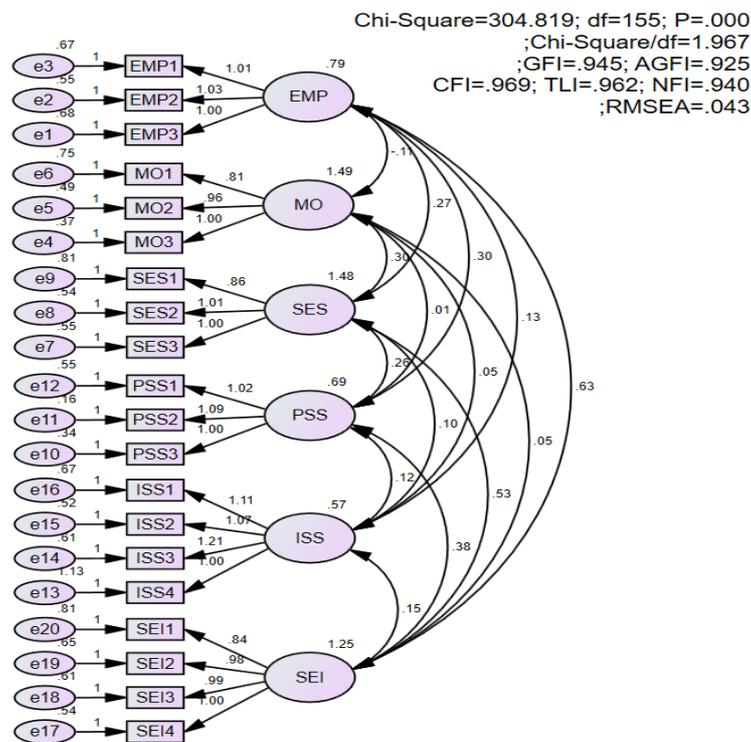### Confirmatory factor analysis (CFA)

After assessing the reliability and validity of scales, the measurement model was analyzed by performing the confirmatory factor analysis (CFA). The full measurement model included six latent variables and all 20 indicator variables. The analysis result generally shows a good level of fit: $\chi2$ (155) =304.819, $\chi2$/df = 1.967, p = 0.000 < 0.001. Other fit statistics were CFI = 0.969, GFI = 0.945, TLI = 0.962 > 0.9, RMSEA = 0.043.

In addition, Gerbing and Anderson (1988) suggested that construct reliability should be reassessed after confirmatory factor analysis. Whereby the estimated loadings for each indicator, composite reliability (CR) and average variance extracted measure (AVE) were assessed. The results show that all the CRs values were higher than 0.7 (Hair et al., 2010), and almost the AVE values of variables were higher than 0.5 which is within the accepted level (Hair et al., 2010). Although the AVE of ISS only achieved 0.494, Ertz et al. (2016) suggested that this value could be accepted.

Table 2. The results of Cronbach's alpha, EFA and descriptive analysis (n = 516)

Constructs and the scale items	Mean	SD	Cronbach's alpha	Factor loadings
Empathy (EMP)			**0.793**	−
EMP1	3.69	1.216	0.754	0.701
EMP2	4.07	1.181	0.687	0.814
EMP3	3.80	1.211	0.713	0.826
Moral obligation (MO)			**0.872**	−
MO1	2.37	1.313	0.868	0.866
MO2	2.54	1.365	0.802	0.891
MO3	2.50	1.366	0.785	0.899
Social entrepreneurial self-efficacy (SES)			**0.862**	−
SES1	2.56	1.385	0.848	0.826
SES2	2.76	1.431	0.789	0.865
SES3	2.78	1.423	0.779	0.889
Perceived social support (PSS)			**0.863**	−
PSS1	3.98	1.127	0.855	0.837
PSS2	4.09	0.994	0.761	0.877
PSS3	4.05	1.016	0.810	0.863
Institutional support structure (ISS)			**0.786**	−
ISS1	4.01	1.169	0.733	0.793
ISS2	4.17	1.083	0.732	0.812
ISS3	3.69	1.197	0.697	0.820
ISS4	3.60	1.306	0.784	0.687
Social entrepreneurial intention (SEI)			**0.872**	−
SEI1	3.52	1.303	0.863	0.701
SEI2	3.21	1.363	0.826	0.840
SEI3	3.41	1.355	0.834	0.803
SEI4	3.39	1.338	0.820	0.852

Source: own study.

Figure 2. The results of confirmatory factor analysis (standardized estimates)
Source: own elaboration.

Table 3. Construct validity

FACTOR	CR	AVE	MSV	MaxR(H)	ISS	EMP	MO	SES	PSS	SEI
ISS	0.795	0.494	0.039	0.806	**0.703**					
EMP	0.794	0.562	0.403	0.795	0.197	**0.750**				
MO	0.874	0.699	0.041	0.890	0.059	-0.105	**0.836**			
SES	0.864	0.680	0.151	0.872	0.105	0.250	0.202	**0.825**		
PSS	0.869	0.690	0.168	0.893	0.197	0.408	0.007	0.260	**0.831**	
SEI	0.874	0.634	0.403	0.879	0.181	0.635	0.039	0.389	0.410	**0.796**

Source: own study.

Structural model analysis

The estimated results of the theoretical model are reported in. table 4. Although the research model has $\chi 2$ = 418.5162 with 162 degrees of freedom (p= 0.000 < 0.001), and CMIN/df= 2.583, the other indicators show that the model achieve a good level of fit: GFI= 0.925, CFI= 0.948, TLI=0.938 and RMSEA = 0.055. These indicators have proved that the research model provided a profound understanding of factors that lead to social entrepreneurial intention. Thus, the initial model was used to examine the hypothesized linkages.

Table 4. The results of hypotheses test

Hypotheses				Estimate	Standard Error	Critical Ratios	P	Label
H1	EMP	->	SEI	0.640	0.062	10.276	***	Supported
H2	MO	->	SEI	0.036	0.037	0.979	0.328	Not supported
H3	SES	->	SEI	0.215	0.038	5.672	***	Supported
H4	PSS	->	SEI	0.250	0.055	4.562	***	Supported
H5a	ISS	->	EMP	0.264	0.068	3.902	***	Supported
H5b	ISS	->	MO	0.095	0.084	1.138	0.255	Not supported
H5c	ISS	->	SES	0.209	0.086	2.433	0.015	Supported
H5d	ISS	->	PSS	0.242	0.059	4.119	***	Supported

Note: N=516; *** < 0.001
Source: own study.

The estimated results support six hypotheses and do not support other two hypotheses. First, the results confirmed that all antecedents from Mair and Noboa's model were positive predictors of intention to form a social venture, except for moral obligation. Especially, social entrepreneurial intention was most strongly affected by empathy *(β = 0.640; p = 0.000 < 0.001)*, thus, H1 is supported from the data. Perceived social support also positively impacts on social entrepreneurial intention *(β = 0.250; p = 0.000 < 0.001)*; lending support to H4. The results also provided support for *H3* confirming that social entrepreneurial self-efficacy was positively associated with intention to start a social business *(β = 0.215; p = 0.000 < 0.001)*. The path from moral obligation to social entrepreneurial intention is 0.036, as our expectation for *H2*, however, this path is not significant *(p = 0.328 > 0.05)*. Therefore, *H2* is not supported.

Second, as expected, empathy was positively influenced by institutional support structure *(β = 0.264; p = 0.000 < 0.001)*. Thus, *H5a* is supported by the data. Besides, the results also show that institutional support structure had a significantly positive impact on social entrepreneurial self-efficacy, lending support for *H5c*. In addition, the results also confirmed that institutional support structure was positively associated to perceived social support *(β = 0.242; p = 0.000 < 0.001)*. Therefore, *H5d* is strongly supported. Meanwhile, unlike our expectation, institutional support structure was not significantly positive related to moral obligation *(β = 0.095; p = 0.255 > 0.05)*. Thus, *H5b* is not supported by the data.

The bootstrapping method with a 95% confidence interval was utilized to estimate the indirect coefficients. The results are shown in table 5 which indicated that institutional support structure has an indirect impact on social entrepreneurial intention via empathy *(βindirect effect = 0.0822, p < 0.05)*.

In addition, institutional support structure also increases intention to start a social business by improving social entrepreneurial self-efficacy (*βindirect effect = 0.0263, p < 0.05)* and perceived social support (*βindirect effect =0.0314, p < 0.05*). However, there is no statistical evidence that moral obligation mediates the effect of institutional support structure on social entrepreneurial intention (*p > 0.05*).

Table 5. Indirect effects

Indirect paths	Indirect effects	Standard errors	95% confidence interval	
			Lower level of confidence interval	Upper level of confidence interval
ISS -> EMP -> SEI	0.0822*	0.0247	0.0749	0.2139
ISS -> MO -> SEI	0.0030	0.0039	-0.0033	0.0125
ISS -> SES -> SEI	0.0263*	0.0124	0.0046	0.0532
ISS -> PSS -> SEI	0.0314*	0.0127	0.0103	0.0595

Note: *p < 0.05.
Source: own study.

CONCLUSIONS

The present study extends the Mair and Noboa's model (2006) by including institutional support structure as an additional variable affecting antecedents. Through this study, the author expects to contribute new knowledge to social entrepreneurship literature and practices. Firstly, students' intention to form a social enterprise in Vietnam is influenced by empathy, social entrepreneurial self-efficacy and perceived social support. However, there is no evidence that moral obligation has an impact on social entrepreneurial intention. This finding contrasts with the original statement of Mair and Noboa (2006) but is in line with the results of Hockert's study (2017). Secondly, the results of our study also show that institutional support structure has a direct positive impact on empathy, social entrepreneurial self-efficacy and perceived social support. Third, this study found that institutional support structure affects indirectly social entrepreneurial intention through empathy, social entrepreneurial self-efficacy and perceived social support. In other words, when institutional structure supports social entrepreneurship, it will increase empathy, self-efficacy and perceived social support of a person, thereby increasing the intention to form a social business.

Along with the efforts to develop the country's economy, many socio-environmental problems have arisen. The countries face many social challenges such as poverty, income inequality, pollution, and so on. Therefore, social enterprises are established as a way to help governments deal with these burdens. Several researchers have suggested that it is necessary to create studies about intention to form a social business in Asia context to have a holistic knowledge of social entrepreneurship (Lacap et al., 2018; Liang et al., 2017). Thus, this article was produced in an emerging economy context which is quite different when compared to previous studies. This study provided a new point about the role of institutional support structure in shaping students' intention to establish a social venture. This finding could be useful for politicians. It implies that policymakers need to develop a complete legal framework, and policies to support potential social entrepreneurs to start a business such as tax support, competitiveness, and loans… so that social enterprises can operate more effectively as well as increase self-efficacy, empathy and perceived social support for those who wish to become social entrepreneurs.

Despite providing new knowledge to social entrepreneurship literature, this study remains some limitations that may take several directions for further studies. First, this study did not include demographic factors like age, education background, … which have been demonstrated to have effects on students' entrepreneurial intention. Further studies could incorporate these variables into the research model to test the linkage between institutional support structure and intention to start a social enterprise. Second, the convenience sampling method could not determine sample error, thus further research could utilize a random sample approach to increase the significance level of data. Finally, further research should extend the research model by examining new factors to enrich the knowledge about social entrepreneurship.

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Conflict of Interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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