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State Antiquity and Early Agricultural Transition as Deep Roots of Economic Development in Africa

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The study seeks to provide insights into the deeper causes of differences in income levels amongst African countries by examining whether state history and agricultural transition, as proposed deep roots of economic development, can explain modern income levels in Africa. We estimated cross-sectional growth regressions between modern per capita GDP levels, deep root factors and other controls for a sample of 49 countries. We further estimate two-staged least squares (2SLS) regressions to examine whether early technology serves as a possible transmission channel from early states and agricultural history to modern growth. Our results show a U-shaped relationship between agriculture history and income levels in which countries that transitioned more than 4,000 years ago were able to take advantage of early technology to gain a development head start. Countries which transitioned at later dates could not take advantage of early technology and experienced a ‘reversal-of-fortunes’ effect.

Keywords: state history, agricultural transition, early technology, per capita GDP, Africa

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Introduction

The origins of current failures and successes of economies can be traced far back in their histories. Economic historians are principally interested in understanding the deep roots of economic growth and the evolution and impact of institutions, as well as the historical origins of current economic problems (Hibbs and Olsson 2004). Some academics have noted

that certain historical events such as the Neolithic transition, which gave birth to agriculture and the states of antiquity, can better explain the varying levels of modern development worldwide. For instance, Diamond (1997) conceptually argues that historical factors such as state antiquity and early agricultural transition, account more for present-day development patterns compared to growth factors prescribed by neoclassical and endogenous growth theories. Olsson and Hibbs (2005) present a formal theoretical description of how patterns in population growth, technology and income progressively evolve from the pre-historic era of hunting and gathering to the recent industrial era. However, the empirical support for these propositions is scanty, with some studies finding that historical variables can only predict growth before 1500AD but not in more recent periods (Chanda and Putterman 2007; Putterman 2008; Putterman and Weil 2010). Moreover, the geographical dummies used in some of these studies to distinguish regional effects tend to produce insignificant estimates on the 'African dummy' (Bockstette, Chanda, and Putterman 2002), hence warranting further investigation exclusively for African countries.

The purpose of this study is to examine whether state antiquity and agriculture history are significant predictors of modern-day growth patterns for a sample of 49 African countries. On the one hand, we measure state history using the State Antiquity Index of Bockstette, Chanda, and Putterman (2002) and Putterman and Weil (2010). The index is constructed by dividing the period 1 – 1950AD into 39-half centuries, and for each half century, attaining information from the Encyclopaedia Britannica for three questions relating to i) the type of supra-tribal government a country historically had, ii) whether the geographical scope of government was foreign or locally based, and iii) how much of the territory of the modern country was ruled by this government. The scores on the three questions were standardized over 50-year periods, such that a country today has a score of 50 if it was an independent republic, 0 if it had no government above the tribal stage, 25 if the entire territory was ruled by another country, and so forth (Bockstette, Chanda, and Putterman 2002). On the other hand, we capture early agriculture using the Agriculture Transition Index coded by Putterman (2008), which measures the number of years elapsed since an economy transitioned from reliance on hunting and gathering to reliance on agricultural farming.

To motivate our study, we plot two figures using coded data from Bockstette, Chanda, and Putterman (2002) and Putterman (2008), with Figure 1 (Figure 2) showing the relationship between state history (agricultural

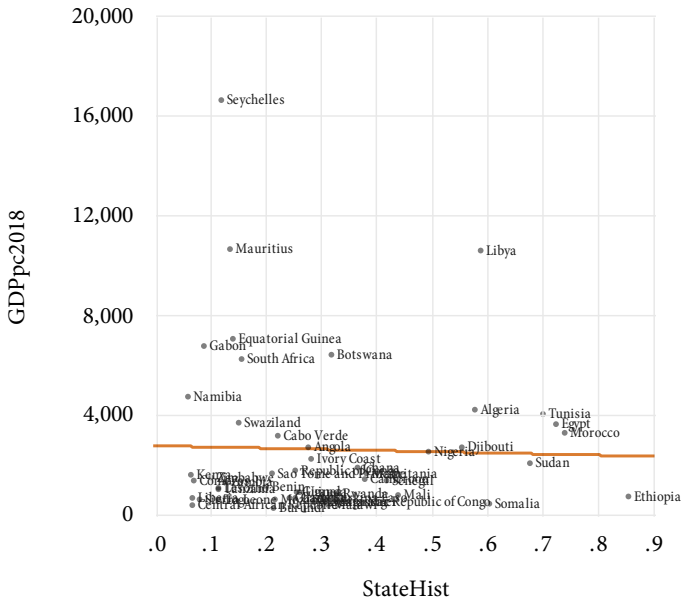


FIGURE 1 State Antiquity and 2018 Per Capita GDP in African Countries
 NOTE GDPpc is GDP per capita in constant 2015US\$. The StateHist variable is the index measure of the strength of early states ranging from 0 (no government structure above tribal level) to 1 (independent government structure).

transition) and 2018 per capita GDP (constant 2015 US\$) in 54 African countries. Figures 1 and 2 show that Ethiopia and Sudan (Mauritius and Botswana) have Africa’s strongest (weakest) early states, longer (shorter) historical transitions to agriculture and yet have the lowest (highest) per capita GDPs in the continent. Other anomalies include countries such as Libya (South Africa, Namibia and Eswatini) with higher (lower) state history and agricultural transitions, yet which mutually boast relatively high per capita GDPs. For a bulk majority of the remaining countries the relationship between state history and growth is not clear as countries with either lower or higher state history and agricultural transitions are mutually plagued by low per capita GDP levels. Moreover, the ordinary least squares (OLS) line fitted on the data reveals a positive but very weak correlation for state history–growth (Figure 1) whilst a negative relationship is observed for agriculture history (Figure 2). Overall, it is difficult to tell whether state history and agriculture transition are significant predictors of present-day growth patterns for African countries, an observation which warrants formal empirical investigating into the subject matter.

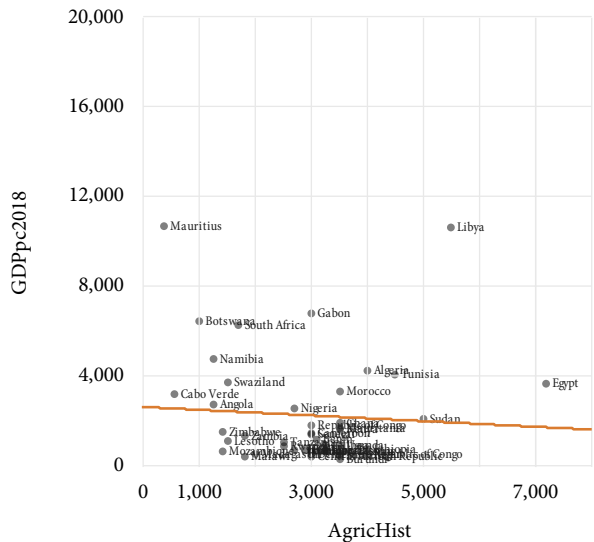


FIGURE 2 Agriculture Transition and 2018 Per Capita GDP in African Countries
NOTE GDPpc is GDP per capita in constant 2015US. The AgricHist variable is the number of years elapsed since a country transitioned from hunting and gathering to agricultural farming.

We contribute to the literature by investigating the influence of state history and agricultural transition on economic growth in Africa. The closest study to ours is presented by Cinyabuguma and Putterman (2011), who find that state history significantly explains SSA economic growth between 1960 and 1995. Our study refines their work in three ways. Firstly, we include agricultural transition as a proxy of the Neolithic revolution, which is considered an important turning point in human civilization that enabled technological change and income to grow independent of initial biogeographical conditions (Olsson and Hibbs 2005). According to conventional literature, state history and agriculture transition should be able to predict patterns in modern growth. Secondly, we examine the impact of state history and agricultural transition on more recent economic growth. This is important since Africa has experienced much development since the 2000s, which some authors refer to as the ‘African miracle’ (Young 2012; McMillan and Harttgen 2014; Rodrick 2018) and it would be interesting to know if Africa’s deep historical structure is relevant for more recent growth patterns. Lastly, in line with Comin, Easterly, and Gong (2010), we explore the possibility of early technology as a transmission mechanism of early state development towards modern economic growth.

Our findings are at odds with those presented in the conventional literature in two ways. Firstly, whilst the previous studies either advocate for a positive or nonlinear relationship between state antiquity and economic growth before the 2000s (Cinyabuguma and Putterman 2011; Borcan, Olsson, and Putterman 2018), our study fails to find any significant linear or nonlinear relationship in the post-2000 period, implying that state antiquity matters less as the global economy transitions into the 4th industrial revolution. Secondly, whilst previous studies find a positive impact of agriculture transition on growth (Bockstette, Chanda, and Putterman 2002; Hibbs and Olsson 2004; Chanda and Putterman 2007; Putterman 2008; Bleaney and Dimico 2011; Borcan, Olsson, and Putterman 2018), our study reveals a U-shaped cross-sectional relationship between agriculture transition and economic growth, with countries which experienced the Neolithic transition before 1500AD tending to have higher modern economic growth rates. Our two-staged least squares analysis further identifies early adoption of technology as a possible transmission channel through which agricultural transition influences present-day economic growth.

Overall, our study shows that agricultural transition, as opposed to the formation of early states, is a significant predicator of modern economic growth in Africa through the transmission of early technology. African countries which lagged in adapting to the Neolithic revolution did not benefit from the use of earlier technology in terms of influencing modern growth. Therefore, African policymakers can learn from these findings the importance of early evolutionary adaption to technology as key to fostering development, not only for the 20-50 year long-run periods as commonly planned by global policymakers (i.e. 2050 United Nations Sustainable Development Goals), but for influencing growth in the coming centuries.

We structure the rest of the study as follows. The literature review is presented next. The third section outlines the data and methods. The fourth section presents the empirical findings of the study. The fifth section concludes.

Literature Review

In one of the most remarkable accounts of human history, Diamond (1997) provides a detailed historical account of human evolution since the Ice Age and covers over 13,000 years of development in different regions in the world. Diamond (1997) argues that the Neolithic revolution, describing the transition from hunter-gather to agricultural farm-

ing through domestication of wild plants and animals, led to the rise of human civilization and conferred a developmental head start on nations which experienced early transitions through written language, science, military technologies, and statehood. Thus, Diamond (1997) hypothesizes that differences in agricultural transition and early institutions explain the variation in present-day incomes, although he did not provide any measurable data or conduct formal analysis to confirm this hypothesis.

Bockstette, Chanda, and Putterman (2002) and Olsson and Hibbs (2005) were the first to devise formal measures of state history and agricultural transition, respectively, which were used to test Diamond's (1997) hypothesis on cross-sectional data. On the one hand, Bockstette, Chanda, and Putterman (2002) find that state history has a stronger impact on economic growth between 1960-1995 compared to other growth determinants like education, investment and population, although the regional dummies produce insignificant estimates for East Asia, Latin America and Africa. On the other hand, Olsson and Hibbs (2005) provide a formal theoretical model in which countries with favourable initial biogeographical conditions experienced early agricultural transition, giving them a 'head start' in transitioning into the industrial revolution through faster diffusion of endogenous knowledge. The authors then construct a dataset of 'years elapsed since agricultural transition' and 'biogeographical endowments' and use this data to prove that initial biogeographical conditions and Neolithic transition are significant predictors of modern income.

Following the contributions of Bockstette, Chanda, and Putterman (2002) and Hibbs and Olsson (2004), several studies have used their presented datasets to investigate the deeper roots of economic growth for different cross-sectional samples. For instance, Bleaney and Dimico (2011) use the Hibbs and Olsson (2004) dataset to investigate the relationship between biogeographical conditions (agricultural transition) and 2000 per capita income and find an insignificant (positive and significant) relationship between the variables. Further analysis reveals that the impact is weaker for ex-colonies, implying that colonialism deteriorated the economic advantages enjoyed by early colonies which had early agricultural transition and helped foster development in poorer colonies which had late agricultural transitions. Cinyabuguma and Putterman (2011) include the state history dataset of Bockstette, Chanda, and Putterman (2002) amongst a group of geographic, institutional and disease-related factors for 33 African countries and examine the effects of these variables on half-decade growth rates between 1960 and 2000. For all

sub-periods, the authors find that state history and colonization explain modern growth more significantly than geographical and disease factors (i.e. malaria). Chanda and Putterman (2007) use both datasets of Bockstette, Chanda, and Putterman (2002) and Hibbs and Olsson (2004) to study the effects of state antiquity and Neolithic transition on economic growth between 1500 and 1998. Whilst the authors find a positive impact of agriculture history on growth in all years, a negative state history–growth relationship is found between 1500 and 1960, which turns negative or insignificant afterwards, i.e. ‘reversal of fortunes’ effect.

Some other literature also sought to refine the original datasets for empirical purposes. Putterman (2008) assembles a new dataset of agricultural transition for 117 countries which, unlike Hibbs and Olsson’s (2004) data, assigns a unique date of transition for each of the observed countries. Nonetheless, Putterman (2008) finds little difference in the effect of both measures of agricultural transition on economic growth, which is significant in 1950 and insignificant for 1997 income levels. Putterman and Weil (2010) further construct a migration matrix in order to create an ancestry-adjusted dataset of state history and agricultural transition for 117 countries. The authors find that the predictability of agricultural transition improves substantially once adjusted for the location of current populations’ ancestors in 1500 AD, suggesting that cross-border migration influenced early state development through the dissemination and exchange of knowledge. Murphy and Nowrasteh (2018) create the ancestry-adjusted indices of state history and agriculture history of Putterman and Weil (2010) for the case of 50 US states and find that both variables are related with modern growth. Further analysis reveals that these growth effects are transmitted through non-economic institutions such as social capital and government corruption. Borcan, Olsson, and Putterman (2018) employed Putterman and Weil’s (2010) ancestry-adjusted dataset to analyse the impact of state history and agricultural history on growth. The authors find a linear and positive (humped-shaped) relationship between agricultural transitions (State history) and 2000 GDP growth.

As previously mentioned, our study extends this line of literature for African countries in three directions. Firstly, we examine the impact of state history and agricultural transition on economic growth in Africa for more recent periods of economic growth. Secondly, we follow Bockstette, Chanda, and Putterman (2002) and Borcan, Olsson, and Putterman (2018), and account for asymmetries in the empirical specifi-

cations to investigate the ‘reversal of fortunes’ hypothesis. Lastly, we build on previous studies and explore early technology as a possible transmission channel from of early historical antiques to modern growth.

Empirical Specifications and Data

We use three sets of regressions for our empirical analysis. Firstly, we use the baseline regression of Bockstette, Chanda, and Putterman (2002) to examine the impact of state history (*StateHist*) and agriculture history (*AgricHist*) on per capita GDP level in constant 2015 US\$ (*GDPpc*), i.e.

$$GDPpc_i = \alpha + \beta \text{StateHist}_i + X \text{Controls}_i + \text{error}, \quad (1)$$

$$GDPpc_i = \alpha + \beta \text{AgricHist}_i + X \text{Controls}_i + \text{error}, \quad (2)$$

where we expect $\beta > 0$ as hypothesized by Diamond (1997).

Secondly, we follow Borcan, Olsson, and Putterman (2018) and incorporate squared terms on the state antiquity variables in the baseline regressions, i.e.

$$GDPpc_i = \alpha + \beta \text{StateHist}_i + \lambda \text{StateHist}_i^2 + X \text{Controls}_i + \text{error}, \quad (3)$$

$$GDPpc_i = \alpha + \beta \text{AgricHist}_i + \lambda \text{AgricHist}_i^2 + X \text{Controls}_i + \text{error}, \quad (4)$$

where a humped-shaped relationship exists if $\beta > 0$ and $\lambda < 0$, whereas a U-shaped relationship exists if $\beta > 0$ and $\lambda < 0$. In either case, the turning points are computed as $\partial GDPpc / \partial \text{StateHist} = 0$ and $\partial GDPpc / \partial \text{AgricHist} = 0$, respectively, which gives a solution of $-\beta/2\lambda$.

Lastly, we estimate two-stated least squares regression to test for early technology (Tech 1500) as a plausible transmission channel of the effects of state antiquity on modern growth. The first-stage regression, for state history, is given as:

$$\text{Tech1500}_i = \alpha + \beta \text{StateHist}_i + X \text{Controls}_i + \text{error}, \quad (5)$$

whereas that for agricultural transition is given as:

$$\text{Tech1500}_i = \alpha + \beta \text{AgricHist}_i + X \text{Controls}_i + \text{error}, \quad (6)$$

TABLE 1 Descriptive Statistics

	Mean	Standard deviation	Minimum	Maximum	Jarque-Bera	Probability
<i>Outcome Variables</i>						
<i>GDPpc</i> 2000	1956.65	2474.70	258.87	11178.15	124.12	0.00
<i>GDPpc</i> 2005	2260.67	2904.83	286.11	12674.01	79.78	0.00
<i>GDPpc</i> 2010	2483.89	3108.53	297.79	12925.67	72.04	0.00
<i>GDPpc</i> 2015	2563.40	3018.43	289.36	15157.53	95.57	0.00
<i>GDPpc</i> 2020	2414.56	2820.79	263.36	15551.56	194.91	0.00
<i>Deep root Variables</i>						
StateHist	0.33	0.23	0.03	0.96	5.76	0.06
AgricHist	2879.34	1277.61	362.00	7200.00	8.30	0.02
Tech1500	0.35	0.19	0.16	0.78	8.40	0.01
<i>Covariates</i>						
Landlocked	0.29	0.46	0	1	10.43	0.00
Climate	0.83	0.77	0	3	26.28	0.00
Dum_British	0.35	0.49	0	1	8.52	0.01
Dum_French	0.41	0.49	0	1	8.21	0.02
Dum_Portuguese	0.08	0.28	0	1	186.23	0.00

NOTE Authors own computation results obtained from EViews.

and the second-stage regressions for equations (5) and (6) are given by the nonlinear regression:

$$GDPpc_i = \alpha + \beta Tech1500_i + \lambda Tech1500_i^2 + X Controls_i + error. \quad (7)$$

In selecting appropriate control variables used in regressions (1)–(7), availability of data is a major concern for African countries. To this end, we follow Murphy and Nowrasteh (2018) and Putterman and Weil (2010) and use climate/precipitation, landlocked dummies, and colony dummies (i.e. British, French, and Portuguese) as control variables, which are notably available for all 49 African countries. We collect the empirical data from various sources. Firstly, the main outcome variable *GDPpc* is the GDP per capita at constant 2015 US\$, which is sourced from the World Bank Development Indicators (WBDI), <https://databank.worldbank.org/source/world-development-indicators>. Secondly, the deep root variables state history, agricultural transition and early technology in 1500BCE are sourced from the papers of Borcan, Olsson, and Putterman (2018), Putterman (2008) and Comin, Easterly, and Gong (2010), respectively.

Thirdly, the precipitation average as a measure of climate is sourced from the CIA *World Factbook*, <https://www.cia.gov/the-world-factbook/>. Lastly, the landlocked and colony dummies are the authors' own creation.

The descriptive statistics of the variables used in our study are summarized in Table 1 and present some stylized facts for African countries.

Firstly, from Panel A we find that '*GDPpc*' has, on average, increased between 2000 and 2010, and yet decreased thereafter following the global recession period. It is also interesting to note that whilst the averages have changed over time, the rankings of the countries have not changed that much over the last two decades, with Burundi, CAR and DRC (Mauritius, South Africa and Botswana) consistently occupying the bottom (top) rankings of *GDPpc* amongst African countries.

Also, from Panel B, the 'StateHist' average of 0.33 implies that most African countries either had no government above the tribal stage or were ruled by other countries. It is only a few outliers like Ethiopia (0.96), Morocco (0.82), Egypt (0.79), and Tunisia (0.73) which developed more independent early states and, judging from their associated 'Tech1500' estimates, were also more technologically advanced centuries ago, i.e. Tunisia (0.78) and Egypt (0.76). Furthermore, the average agricultural transition for African countries occurred 2,880 years ago, with Egypt (7,200), Libya (5,500) and Sudan (5,000) having the earliest transitions, whilst islands such as Mauritius (362) and Cape Verde (538) have the most recent transitions.

From Panel C, the lower (higher) averages on landlocked and Portuguese colonial dummies (climate, French, and British colonial dummies) reflect the stylized fact that most African countries have humid temperatures, access to the sea and are former British or French colonies.

Empirical results

BASELINE RESULTS

We present our baseline estimates in Table 2, with panel A (panel B) showing our findings for the state history (agricultural transition) variable. Note that we estimate 5 versions of the baseline regression, each using different values of *GDPpc* in 5-year intervals between 2000 and 2020.

Whilst the landlocked and climate variables produce their expected negative and statistically significant estimates, the colonial dummies, state history and agricultural transition variables produce insignificant estimates. Generally, these findings contradict the positive state history–growth and agricultural history–growth relationships found in previous literature (Bockstette, Chanda, and Putterman 2002; Hibbs and Olsson 2004; Ols-

TABLE 2 Baseline Estimates

	2000	2005	2010	2015	2020
	GDPpc	GDPpc	GDPpc	GDPpc	GDPpc
<i>Panel A</i>					
StateHist	-0.34 (0.65)	-0.18 (0.81)	-0.04 (0.97)	-0.06 (0.94)	0.09 (0.90)
Landlocked	-1.07 (0.00)***	1.05 (0.00)***	-0.97 (0.00)***	-0.91 (0.00)***	-0.88 (0.00)***
Climate	-0.0002 (0.00)***	-0.0002 (0.00)***	-0.0002 (0.00)***	-0.0002 (0.00)***	-0.0003 (0.00)***
Dum_British	0.37 (0.36)	0.32 (0.44)	0.36 (0.37)	0.18 (0.67)	0.27 (0.49)
Dum_French	-0.15 (0.69)	-0.22 (0.59)	-0.24 (0.55)	-0.32 (0.45)	-0.22 (0.59)
Dum_Portuguese	-0.47 (0.48)	-0.39 (0.53)	-0.23 (0.71)	-0.28 (0.67)	-0.23 (0.71)
Constant	7.65 (0.00)***	7.71 (0.00)***	7.69 (0.00)***	7.82 (0.00)***	7.67 (0.00)***
R ²	0.24	0.21	0.22	0.20	0.21
Obs	49	49	49	49	49
<i>Panel B</i>					
AgricHist	-0.0002 (0.18)	-0.00016 (0.18)	-0.00015 (0.21)	-0.00019 (0.15)	-0.0002 (0.23)
Landlocked	-1.13 (0.00)***	-1.12 (0.00)***	-1.07 (0.00)***	-0.96 (0.00)***	-0.92 (0.00)***
Climate	-0.00006 (0.01)**	-0.0006 (0.00)***	-0.0006 (0.00)***	-0.0005 (0.01)**	-0.0005 (0.01)**
Dum_British	0.20 (0.63)	0.22 (0.58)	0.21 (0.59)	0.11 (0.77)	0.16 (0.65)
Dum_French	-0.16 (0.76)	-0.13 (0.79)	-0.21 (0.67)	-0.19 (0.65)	-0.16 (0.68)
Dum_Portuguese	-0.77 (0.18)	-0.65 (0.24)	-0.59 (0.29)	-0.62 (0.26)	-0.59 (0.23)
Constant	8.31 (0.00)***	8.44 (0.00)***	8.56 (0.00)***	8.61 (0.00)***	8.44 (0.00)***
R ²	0.33	0.34	0.34	0.27	0.27
Obs	45	45	45	46	46

Notes ***, **, * represent the 1%, 5%, and 10% critical levels, respectively. P-values reported in ().

son and Hibbs 2005; Cinyabuguma and Putterman 2011). However, they do complement the findings of Chanda and Putterman (2007), Putterman (2008) and Murphy and Nowrasteh (2018), who argue that state antiquity on mattered for growth during early periods and not in later periods.

TABLE 3 Nonlinear Estimates

	2000	2005	2010	2015	2020
	GDPpc	GDPpc	GDPpc	GDPpc	GDPpc
Panel A					
StateHist	-1.68 (0.49)	-1.09 (0.66)	-1.32 (0.58)	-2.01 (0.37)	-1.96 (0.36)
StateHist ²	1.69 (0.53)	1.15 (0.68)	1.64 (0.53)	2.47 (0.31)	2.61 (0.26)
Landlocked	-1.05 (0.00)***	-1.04 (0.00)***	-0.96 (0.00)***	-0.89 (0.00)***	-0.86 (0.00)***
Climate	-0.0003 (0.25)	-0.0002 (0.34)	-0.0001 (0.44)	-0.0001 (0.47)	-0.0001 (0.49)
Dum_British	0.39 (0.32)	0.34 (0.42)	0.39 (0.34)	0.22 (0.60)	0.32 (0.43)
Dum_French	-0.09 (0.83)	-0.17 (0.70)	-0.18 (0.69)	-0.23 (0.59)	-0.12 (0.76)
Dum_Portuguese	-0.38 (0.60)	-0.34 (0.62)	-0.15 (0.83)	-0.15 (0.81)	-0.09 (0.86)
Constant	7.78 (0.00)***	7.79 (0.00)***	7.82 (0.00)***	8.01 (0.00)***	7.86 (0.00)***
Turning point					
R ²	0.24	0.22	0.21	0.19	0.20
Obs	49	49	50	51	51
Panel B					
AgricHist	-0.001116 (0.00)***	-0.0011 (0.00)***	-0.0011 (0.00)***	-0.0013 (0.00)***	-0.0012 (0.00)***
AgricHist ²	1.43E-7 (0.00)***	1.41E-7 (0.01)**	1.45E-7 (0.00)***	1.61E-7 (0.00)***	1.67E-7 (0.00)***
Landlocked	-1.01 (0.00)***	-1.01 (0.00)***	-0.96 (0.00)***	-0.87 (0.00)***	-0.83 (0.00)***
Climate	-0.0004 (0.08)*	-0.0004 (0.05)*	-0.0004 (0.05)*	-0.0003 (0.08)*	-0.0003 (0.11)
Dum_British	0.02 (0.94)	0.04 (0.89)	0.03 (0.92)	-0.06 (0.84)	-0.005 (0.98)
Dum_French	0.07 (0.89)	0.09 (0.85)	0.02 (0.97)	0.05 (0.90)	0.08 (0.82)
Dum_Portuguese	-1.07 (0.04)*	-0.95 (0.05)*	-0.90 (0.05)*	-0.97 (0.02)**	-0.94 (0.02)**
Constant	9.45 (0.00)***	9.56 (0.00)***	9.71 (0.00)***	9.92 (0.00)***	9.72 (0.00)***
Turning point	3,902	3,900	3,793	4,037	3,592
R ²	0.46	0.47	0.47	0.45	0.45
Obs	45	045	45	46	46

NOTES ***, **, * represent the 1%, 5%, and 10% critical levels, respectively. P-values reported in ().

Against these findings we proceed to examine for possible nonlinearities in the estimated regressions.

NONLINEAR RESULTS

We now test for possible nonlinearities in the estimate baseline regressions and present our findings in Table 3.

From Panel A, the inclusion of the squared term produces insignificant estimates on the state history variables across all periods. Conversely, the estimates of the agricultural transition (squared term of agricultural transition) produce statistically significant negative (positive) coefficients, implying that countries with earlier agricultural transition benefitted until a 'certain period' after which countries with earlier transition experienced lower modern growth rates. We estimate a turning point of '4,000' which is consistent across all time periods. Whilst these findings are reminiscent of the 'reversal of fortunes', we establish the effect to be driven by early agricultural transition such that countries which transitioned into agricultural farming less than 4,000 years ago were only fortunate if they experienced a later Neolithic transition (Bockstette, Chanda, and Putterman 2002; Chanda and Putterman 2007). For instance, countries such as Algeria, Ethiopia and Sudan which experienced the agricultural transition approximately 4,000 years ago advanced more slowly compared to other countries like Mauritius, South Africa and Botswana which experienced the Neolithic revolution less than 2,000 years ago but are more prosperous in modern days. Conversely, only African countries such as Egypt and Libya, which transitioned more than 4,000 years ago, benefitted from earlier transitions in terms of modern growth performance.

2SLS RESULTS

Lastly, we examine possible channels through which state history and agricultural transition could have affected modern income levels. We test Diamond's (1997) hypothesis that countries which had earlier development made use of early technology to foster faster industrial development over several centuries. We employ 2SLS estimates to test whether countries with dominant early states or those which experienced faster transition into agricultural farming were able to use early technology to gain a developmental head start which influences modern growth patterns.

Our findings reported in Tables 4 and 5 reveal that whilst early technology does not affect modern growth through state history (Table 4) there

TABLE 4 2SLS Estimates (state history)

	2000 GDPpc	2005 GDPpc	2010 GDPpc	2015 GDPpc	2020 GDPpc
<i>Panel A: 2nd stage estimates</i>					
Tech	-6.14 (0.82)	1.09 (0.97)	-2.23 (0.94)	-5.76 (0.82)	-7.19 (0.78)
Tech ²	6.07 (0.85)	-2.08 (0.96)	2.22 (0.95)	6.58 (0.83)	8.72 (0.76)
Constant	9.26 (0.01)**	8.38 (0.04)*	8.81 (0.02)**	9.21 (0.01)**	9.13 (0.01)**
Controls	✓	✓	✓	✓	✓
Turning points	n/a	n/a	n/a	n/a	n/a
R ²	0.41	0.40	0.41	0.41	0.42
Obs	38	38	38	38	38
<i>Panel B: 1st stage estimates</i>					
StateHist	-1.68 (0.49)	-1.09 (0.66)	-1.32 (0.58)	-2.01 (0.37)	-1.96 (0.36)
StateHist ²	1.69 (0.53)	1.15 (0.68)	1.64 (0.53)	2.47 (0.31)	2.61 (0.26)
Constant	7.78 (0.00)***	7.79 (0.00)***	7.82 (0.00)***	8.01 (0.00)***	7.86 (0.00)***
Controls	✓	✓	✓	✓	✓
R ²	0.24	0.22	0.21	0.19	0.20
Obs	49	49	50	51	51

Notes ***, **, * represent the 1%, 5%, and 10% critical levels, respectively. P-values reported in ().

is a significant effect from early transition to early technology adoption to economic growth in the post-2000 era (Table 5).

Note that the 2nd stage estimates point to a nonlinear, U-shaped relationship between early technology and modern income, with an estimated break point of 0.48 – 0.52, and countries with early technology coefficients above these turning points have relatively higher present income levels, i.e. Egypt, Libya and Tunisia. Therefore, in differing from previous literature which finds a positive impact of early technology on modern growth (Ang 2013; 2015; Comin, Easterly, and Gong 2010), we find that only African countries which had early agricultural transition more than 5,000 years ago were able to take advantage of early technology to gain a developmental head start whose effects have lasted for thousands of years. For the remaining economies, a ‘reversal-of-fortunes’ effect holds as countries with longer agricultural transition could not take advantage

TABLE 5 2SLS Estimates (agricultural transition)

	2000 GDPpc	2005 GDPpc	2010 GDPpc	2015 GDPpc	2020 GDPpc
<i>Panel A: 2nd stage estimates</i>					
Tech	-24.04 (0.00)***	-21.17 (0.00)***	-20.20 (0.00)***	-17.41 (0.00)***	-17.16 (0.00)***
Tech ²	24.62 (0.00)***	20.58 (0.00)***	20.08 (0.00)***	17.38 (0.00)***	16.33 (0.00)***
Constant	12.12 (0.00)***	12.27 (0.00)***	12.42 (0.00)***	11.73 (0.00)***	12.07 (0.00)***
Controls	✓	✓	✓	✓	✓
Turning points	0.48	0.51	0.50	0.50	0.52
R ²	0.45	0.48	0.44	0.41	0.45
Obs	38	38	38	38	38
<i>Panel B: 1st stage estimates</i>					
AgricHist	-0.001116 (0.00)***	-0.0011 (0.00)***	-0.0011 (0.00)***	-0.0013 (0.00)***	-0.0012 (0.00)***
AgricHist ²	1.43E-7 (0.00)***	1.41E-7 (0.01)**	1.45E-7 (0.00)***	1.61E-7 (0.00)***	1.57E-7 (0.00)***
Constant	9.45 (0.00)***	9.56 (0.00)***	9.71 (0.00)***	9.92 (0.00)***	9.72 (0.00)***
Controls	✓	✓	✓	✓	✓
R ²	0.46	0.47	0.47	0.45	0.45
Obs	45	045	45	46	46

Notes ***, **, * represent the 1%, 5%, and 10% critical levels, respectively. P-values reported in ().

of early technology whilst poorer states with later transitions benefitted from the technological pass-through effects of colonization by Western nations.

Conclusions

The African continent is known to be the cradle of mankind and yet is one of the most underdeveloped regions in the modern world. Our study investigates whether state history and agricultural transition, as deep roots of economic development, can explain differences in modern income levels in African countries. Our findings reveal that agricultural transition predicts present income levels, although the effect is nonlinear, with a negative (positive) effect found for countries which transitioned more than (less than) 4,000 years ago. Further investigations reveal that this effect is transmitted through the sophistication of early technology

and only a few economies such as Egypt and Libya were able to take advantage of these early civilizations. Most African countries which experienced agricultural transmissions less than 4,000 years ago were not able to take advantage of early technology for development purposes. Notably, some islands like Mauritius and Southern African states (South Africa, Botswana, Namibia, Eswatini), which experienced late Neolithic transitions, have higher modern income levels due to the spillover effects of colonization on these 'late developers' and their low exposure to slave trades.

Overall, our study verifies Diamond's (1997) hypothesis by demonstrating that patterns in modern income levels can be explained by the timing of the Neolithic revolution. We particularly verify the 'reversal of fortunes' hypothesis as we find that African countries which experienced very early or very late agricultural transitions have higher present-day income levels. However, only African countries with very early transitions used early technology for a developmental head start, whilst those with very late transitions seemed to benefit from colonial transfers of knowledge and technology. Therefore, an importance policy lesson to be learnt from this study is the need for African countries to quickly adapt to newer evolutionary phases such as the 4th industrial revolution (4IR), since delayed adaptation to evolutionary changes makes African countries more vulnerable to dependency on Western economies for economic development.

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Examining the Determinants of Renewable Energy Consumption in the Southern African Power Pool

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The main factors influencing the Southern African Power Pool's (SAPP) usage of renewable energy are examined in this article. The 12 nations that constitute the SAPP are the sources of the data from 1988 to 2018. The effect of GDP, gross fixed capital formation, labour, trade, and non-renewable energy on renewable energy in SAPP is estimated using the panel ARDL method. The empirical findings suggest that, in the long run, all coefficients of explanatory variables have positive signs, except for gross fixed capital formation and non-renewable energy, which have negative signs. Furthermore, all results were statistically significant at one to five percent. This implies that the reduction in renewable energy in the SAPP is caused by non-renewable energy and gross fixed capital formation in the long run, but not by any other explanatory variable. The results also showed that each SAPP member country's impact on renewable energy was varied. The SAPP could, therefore, encourage the adoption of renewable energy sources through the results presented in this report. Based on these findings, the study suggests that economic policies that hasten economic development and growth will increase renewable energy consumption.

Keywords: energy, electricity, sustainability, renewable energy, SADC, SAPP, income

JEL classification: C23, O11

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Introduction

There has been a notable shift towards using more renewable energy sources in recent years. This change has come about due to the harmful impact of non-renewable energy sources on the environment (Kumar 2020). As a result, global policies have been introduced to promote the use of renewable energy (Rajesh Kumar and Majid 2020).

This shift facilitated different policies, including the Paris Agreement. This agreement aims to limit global temperature rise to 1.5°C due to the fact that 65% of the carbon dioxide budget allowed to stay within the 2°C limit has already been used (Intergovernmental Panel on Climate Change 2018). According to the Obonyo (2021), to achieve this target, countries must make significant changes to their energy mix, to include an increase in renewable energy.

Apart from policies, sustainable development goals (SDGs) have also been formulated, with some focusing on development, sustainable energy, and climate change (Adewuyi and Awodumi 2020). One such goal is SDG 7, which aims to provide affordable, reliable, sustainable, and modern energy to all. Power pools reduce electricity generation and investment costs, enhance system reliability, and play a crucial role in achieving SDGs.

The Southern African Power Pool (SAPP) is Africa's most liquid market, fulfilling 3.5% of the demand for energy share (Yang et al. 2022). The Southern African Power Pool is a partnership among national electricity companies in Southern Africa, operating under the Southern African Development Community (SADC) guidance. The member countries include Angola, Botswana, the Democratic Republic of the Congo, Eswatini, Lesotho, Mozambique, Malawi, Namibia, South Africa, Tanzania, Zambia, and Zimbabwe (Southern African Power Pool n.d.).

As the economies within the SAPP continue to grow, the energy demand also increases. According to Bowa et al. (2021), regional electricity demand is expected to grow at an average rate of 3 to 6 percent per year, in line with economic growth. According to the International Renewable Energy Agency (2015), the region's electricity demand is expected to double from 280 Terawatt-hours (TWh) in 2010 to 570 TWh by 2030. This poses a challenging question about how much non-renewable energy can be used and how much renewable energy can be substituted.

Africa contributes little to global CO₂ emissions, with many countries producing almost zero. In the SAPP, all member countries except for South Africa have lower CO₂ emissions per capita due to South Africa's greater reliance on fossil fuels (specifically coal) for electricity. However, South Africa is responsible for 48% of the CO₂ emissions from the region and is the world's fourteenth largest CO₂ emitter, with a per capita emission of 8.98 tonnes of CO₂ (Bowa et al. 2021). Addressing climate issues within the SAPP is closely tied to reducing South Africa's and the region's reliance on coal. The World Bank's (2018) report on emissions per capita

shows that Botswana is the second-highest emitter at 3.642 metric tons per capita, followed by Namibia at 1.736 and Eswatini at 0.9593 tonnes of CO₂ per capita. However, the Democratic Republic of the Congo and Malawi had the lowest emissions per capita in the SAPP at 0.03 and 0.09, respectively.

The use of renewable energy sources such as biomass, wind, hydro, geothermal, and solar power is becoming increasingly popular (Bowa et al. 2021). A plan was set in 2012 to increase the share of renewable energy in the grid to 39% by 2030, up from the current 29%, and to achieve a 7.5% share of off-grid energy by the same year (South African Development Community 2016). As a result, the installed capacity of renewable energy in the region has grown from 11,821 megawatts (MW) in 2008 to 20,673 MW in 2017, and mid-2018 capacity increased to 21,760 MW (South African Development Community 2018), with hydropower remaining a vast source, then bioenergy, followed by wind and solar. According to IRENA's (International Renewable Energy Agency 2015) report, there is a planned yearly production capacity of 800 TWh from wind and solar energy combined, with 219.5 TWh from solar PV and 109.3 TWh from concentrated solar power. The report also predicts that the region's electricity generation capacity from renewable energy sources will be 62,781MW for consolidated energy systems and 24,725MW for decentralised off-grid projects between 2010 and 2030.

Bowa et al. (2021) report that new incentives and policies supporting renewable energy have increased investment in the sector. The China Exim Bank (CHEXIM), the Brazilian Development Bank (BNDES), and the Development Bank of Southern Africa (DBSA) are among the investors who have contributed approximately \$10.1 billion (Muñoz Cabré et al. 2020).

In light of this, Akizu-Gardoki et al. (2018) contend that using renewable energy is essential for environmental preservation, but it also serves additional purposes. Kumar (2020) agrees, stating that renewable energy sources offer the best solution for economic growth, energy security, job creation, and poverty reduction, particularly for those who depend on natural resources.

Although there has been considerable research on the causes of non-renewable energy consumption, further investigation is needed to understand the factors that influence renewable energy consumption fully.

To understand the factors influencing the adoption of clean energy in economies within the SAPP, it is vital to conduct academic

research and establish links between them. Policymakers may accelerate the adoption of clean energy in SAPP by finding these links. Additionally, no prior research has attempted to explore the factors of SAPP's expanding renewable energy. Furthermore, Olanrewaju et al. (2019) proposed that understanding the drivers behind renewable energy can protect against potential price increases in traditional fuels by broadening their energy options, assisting in maintaining stable trade and budget deficits.

It is in this view that the present study is commissioned to examine the determinants of renewable energy consumption in the SAPP. Furthermore, the study seeks to empirically investigate whether the determinants are uniform across the SAPP countries. With this aim, the study uses the Panel Autoregressive Distribution Lag (ARDL) to estimate the coefficient of each variable's short- and long-run.

This article is structured as follows. The second section reviews the existing literature. The third section describes the data used and sources, as well as the methodology used. The fourth section analyses the empirical models and results, while the fifth section concludes the article.

Literature Review

Numerous studies have been done on energy (both non-renewable and renewable). However, these studies have been centred around their impact on economic growth, such as Koçak and Şarkgüneşi (2017), Ntanos et al. (2018), and Wang and Lee (2022).

These studies often categorised their results into four hypotheses. The growth hypothesis explains that a rise in energy consumption causes the elevation of economic growth. Studies such as Mutumba et al. (2021) conducted a meta-analytic investigation of energy consumption and economic growth from 1974 to 2021. The study used a survey method to profile related literature on the energy consumption-economic growth nexus. The results indicated that the growth hypothesis is the most dominant outcome for country-based studies, accounting for 43.8%. At the same time, feedback was 18.5%, conservation 27.2%, and the neutrality hypothesis 10.5% for country-specific studies. Similarly, Caraiani, Lungu, and Dascălu (2015) found the long-run relationship between various sources of energy consumption and GDP per capita for emerging European countries supported the growth hypothesis. This hypothesis has a significant implication: a reduction in energy consumption would jeopardise the growth trajectory.

Conversely, the conservative hypothesis maintains a one-way causal relationship between economic growth and energy consumption. This assumption implies that policymakers' efforts to reduce energy consumption would have no adverse effect on economic growth. The works of Gorus and Aydin (2019) investigate the causal relationship between energy consumption, economic growth, and CO₂ emission. The study sampled eight oil-rich MENA countries, i.e. Algeria, Egypt, Iran, Iraq, Oman, Saudi Arabia, Tunisia, and the United Arab Emirates, from 1975 to 2014. Utilising single and multi-country Granger causality analysis, the results indicated that energy conservation policies do not harm economic growth in the short and intermediate run. However, at the same time, their long-term effects are adverse. Comparable results by Rahman and Velayutham (2020) explored the relationship between renewable and non-renewable energy consumption and economic growth for a panel of five South Asian countries from 1990 to 2014 using panel fully modified ordinary least squares and panel dynamic ordinary least squares estimation techniques. Their study found a positive impact of energy consumption (renewable and non-renewable) and fixed capital formation on economic growth. In addition, results showed a unidirectional causality from economic growth to renewable energy consumption, proving the conservation hypothesis was valid for the South Asian countries sampled.

The feedback hypothesis considers a two-way causal relationship between energy consumption and economic growth. Al-Mulali et al. (2013) investigated a bi-directional long-run relationship between renewable energy consumption and GDP growth for high-income, upper-middle-income, and lower-middle-income countries. They were using the fully modified OLS. The results showed that 79% of the countries in the sample had a positive bi-directional long-run relationship between renewable energy consumption and GDP growth, representing the feedback hypothesis. On the other hand, 19% of the countries showed no long-run relationship between the variables, and 2% showed a one-way long-run relationship from GDP growth to renewable energy consumption. A similar result by Raza, Shahbaz, and Nguyen (2015) investigated the energy-growth-trade nexus in Pakistan for the period from 1973 to 2013. Their results proved that Pakistan favoured the feedback hypothesis because they found a bi-directional causality between gross domestic product and energy consumption. They also revealed the presence of a long-run relationship between energy consumption and trade performance, a positive impact of GDP, exports, and imports on energy con-

sumption, and a bi-directional causal relationship between exports and energy consumption.

Finally, the neutrality hypothesis advocates no causal relationship between energy consumption and economic growth. Yildirim, Sukruoglu, and Aslan (2014), using the bootstrapped autoregressive metric causality approach, confirmed the causal relationship between economic growth and energy consumption in Bangladesh, Egypt, Indonesia, Iran, Korea, Mexico, Pakistan, the Philippines, and Turkey. Their results found that all countries in the sample favoured the neutrality hypothesis except Turkey. Ozcan and Ozturk (2019) also found that 16 out of 17 emerging countries favoured the neutrality hypothesis when they conducted a study to analyse the relationship between renewable energy consumption and economic growth in 17 emerging countries from 1990 to 2016 using the bootstrap panel causality test.

The empirical studies discussed above emphasise the ambiguous agreement on the relationship between economic growth and energy. However, it is critical to observe that the relationship between these variables varies across nations and periods. Regardless, it is worth noting that energy usage has become an essential component of increasing economic activity worldwide.

The negative impact of environmental externalities within this context has prompted researchers to separately investigate the effects of renewable energies, in order to contribute to the literature and assist policy-makers in developing policies that can reflect on this energy type in the interests of economic growth and environmental quality.

Sadorsky (2009) investigated renewable energy consumption, CO₂ emissions and oil prices in the G7 countries. The FMOLS and DOLS estimation methods were utilised in this study. The results yielded that increases in real GDP per capita and carbon dioxide emissions per capita are major drivers behind per capita renewable energy consumption. The elasticities estimate shows that a one percent increase in real GDP per person increases per capita renewable energy consumption by 8.44%, while a single percent increase in carbon dioxide emissions per person increases per capita renewable energy consumption by 5.23%.

Chen, Pinar, and Stengos (2021) studied the determinants of renewable energy consumption. They sampled 97 countries from the period 1995 to 2015. Using the dynamic panel regression (DPRM) analysis, results suggested that the previous growth rate of renewable energy is negatively associated with the current growth rate, meaning the overall growth of

renewable energy consumption declined over time for all their samples. Furthermore, results indicated that higher economic growth rates are negatively related to the growth of renewable energy consumption in the whole sample, but developed countries showed a positive relationship to renewable energy when economic growth increased. On the other hand, countries with relatively higher economic growth in less democratic countries experience relatively lower growth rates in renewable energy consumption, suggesting that the increase in energy consumption in these countries was mainly from non-renewable energy sources. With regard to an increase in CO₂ emissions per capita, it leads to increased use of renewable energy consumption for the sample. Similarly, the growth of oil prices and the growth of renewable energy consumption were positively associated. Finally, increased trade openness lowered the growth of renewable energy consumption in developing countries, but increased the growth of renewable energy consumption in developed countries.

Zhao and Luo (2017) explored the development of renewable energy in China using the ARDL estimation method for the period 1978 to 2013. Their results indicated a quadratic relationship between renewable energy and income. Furthermore, they could not prove that renewable energy generation is a job creator when the lagged unemployment rate is included as an explaining variable; however, they did indicate that employment can promote the development of renewable energy.

Omri, Daly, and Nguyen (2015) analysed the drivers of renewable energy consumption for a panel of 64 countries, using both the static (pooled OLS, panel fixed and random effects) and dynamic (difference and system GMM) panel data estimation approaches. Results indicated that increases in per capita CO₂ emissions and per capita trade with foreign partners mainly drive the changes in per capita renewable energy consumption. There was also evidence of oil price effects on renewable energy consumption, which reflects the fact that renewable energy is just a complement and not a perfect substitute for crude oil, at least in the short run.

This type of investigation done on African countries is limited. However, this study recognises studies such as that of Kwakwa (2021), that determined renewable energy consumption in Ghana. The regression and variance decomposition techniques were used to analyse the data, for the period 1971 to 2014. Results of the study indicated that Ghana's renewable energy consumption is positively influenced by industrialisation, but negatively influenced by price, income, and financial development in the

long run, while in the short run, industrialisation and financial development affect renewable energy consumption.

Ergun, Owusu, and Rivas (2019) studied the determinants of renewable energy consumption in Africa. They used fixed- and random-effects estimators for the long-run equilibrium relationships, while using Dumitrescu and Hurlin causality to investigate the direction of causality in a bi-variate relationship. The study showed an increase in the human development index, which reduces renewable energy consumption. They also observed that economic growth reduces renewable energy consumption, while the causality test results revealed a bi-directional causality between GDP per capita, human development index, trade openness, the level of democracy in a country and the share of renewables in energy consumption, except for foreign direct investment, which shows a unidirectional causality with renewable energy. A similar study by Olanrewaju et al. (2019) investigated the determinants of renewable energy consumption in Africa. The study employed panel data analysis involving five economies in each of the five regions of Africa, namely Nigeria (West), Egypt (North), Ethiopia (East), DR Congo (Central) and South Africa (South), with annual data from 1990 to 2015. The results showed that oil rent, coal rent and carbon intensity yield a significant and negative relationship with renewable energy consumption, excepting natural gas rent, which revealed a positive and significant relationship with renewable energy use in Africa.

The empirical studies discussed above plainly demonstrated that every study has been done on the determinants of renewable energy in general, but that there is no existing literature on renewable energy determinants in SAPP in particular. However, given the increasing significance of power pools in an environmentally conscious region, energy policymakers and government officials need to understand the drivers of renewable energies.

As a result, these problems motivate the current study to conduct empirical research on the determinants of renewable energy in the Southern African Power Pool. The findings of this research will lead to constructive policy recommendations for the SAPP to improve energy security in the region and ensure the countries' long-term economic development.

Data and Methodology

The study employs annual data from 1988 to 2018 of countries within the Southern African Power Pool (SAPP). The empirical objectives of the current study are pursued through an econometric analysis conducted using the *EVIEWS 13* computer software program.

To analyse the determinants of renewable energy, this study models the problem using existing literature, such as Zhao and Luo (2017) and Erugun, Owusu, and Rivas (2019), where their studies considered the environmental Kuznets curve (EKC) hypothesis.

According to the EKC hypothesis (inverted U-shaped) proposed by Grossman and Krueger (1991) and named by Panayotou (1993), an increase in GDP per capita leads to a rise in environmental pollution in the developing stages of an economy. Still, pollution decreases over time as the country's economy grows further (Erugun, Owusu, and Rivas 2019). Therefore, this study considered a quadratic model to illustrate the EKC hypothesis:

$$EQ = f(GDP, GDP^2, Z), \quad (1)$$

where EQ denotes environmental quality indicator, GDP is real gross domestic product, GDP^2 is the square of real GDP, and Z is the control variables that may affect environmental quality. For example, EKC theories typically examine ecological contamination such as CO₂, nitrogen oxide, sulphur dioxide emissions, and water pollutants. Zhao and Luo's (2017) study uses renewable energy instead to measure environmental quality, because renewable energy is developed toward environmentally friendly, clean energy supply. This paper contributes to the EKC theories by using the renewable energy generation as a metric for environment quality. Therefore, by replacing EQ with renewable energy (REN), the new equation is expressed as:

$$REN = f(GDP, GDP^2, Z). \quad (2)$$

Other variables considered for the model include gross fixed capital formation (CAP), which, according to Azam et al. (2023), influences energy consumption through higher accumulation and deployment of gross fixed capital formation for more production of goods and services, leading to faster income. Sheikh, Kocaoglu, and Lutzenhiser (2016) discovered that renewable energy has the potential to play a substantial role in meeting the employment criterion, thus total labour (LAB) as a proxy for labour is included in this model. Because the sample under research is a Power pool, an energy trading platform, trade openness (TRAD) as a proxy for trade is included in the model, as is a fossil fuel (FF) proxy for non-renewable energy, which according to the literature assumes that it increases the ecological footprint.

TABLE 1 Variable Acronym and Definition

Variable	Description	Measurement	Data source
LNREN	Renewable energy	Quadrillion Btu	United States Energy Information Administration
LNGDP	GDP	Constant 2015 US\$	World Development Indicators
LNCAP	Gross fixed capital formation	Percentage of GDP	African Development Bank
LNLAB	Labour force	Total labour	World Development Indicators
LNTRAD	Trade	Percentage of GDP	World Development Indicators
LNFF	Fossil fuel	Quadrillion Btu	United States Energy Information Administration

With all variables considered, the model framework for ‘examining the determinants of renewable energy consumption in the Southern African Power Pool’ using EKC theories is shown as follows:

$$\log REN = \alpha_0 + \beta_1 \log GDP_t + \gamma \log (GDP_t)^2 + \beta_2 \log CAP_t + \beta_3 \log LAB_t + \beta_4 \log TRAD_t + \beta_5 \log FF_t + \mu X_t + \varepsilon_t. \quad (3)$$

Table 1 summarises the variables used in the study, including their abbreviations and sources from which they were obtained.

Following the possibility of asymmetries in response to the SAPP’s determinants of renewable energy, this research employs the panel autoregressive distributed lag (ARDL) estimation approach to empirically analyse the functional forms above. The method demonstrates the long-run relationships and dynamic interactions between the variables of interest. It calculates the co-integrating accommodating regressors that are stable at levels $I(0)$, or first difference, $I(1)$. Furthermore, the long-run and short-run model parameters are calculated concurrently. Hence, the panel linear autoregressive distributed lag (ARDL) specification is written as:

$$\begin{aligned} LNREN = Y_0 + \sum_{j=1}^m \gamma_{1j} LNREN_{t-j} + \sum_{j=0}^m \gamma_{2j} LNGDP_{t-j} \\ + \sum_{j=0}^m \gamma_{3j} LNCAP_{t-j} + \sum_{j=0}^m \gamma_{4j} LNLAB_{t-j} \\ + \sum_{j=0}^m \gamma_{5j} LNTRAD_{t-j} + \sum_{j=0}^m \gamma_{6j} LNFF_{t-j} + \mu_t, \end{aligned} \quad (4)$$

TABLE 2 Descriptive Statistics: Summary

	REN	GDP	CAP	LAB	TRAD	FF
Mean	0.0428	35,115,642,208	21.88473	7,534,592	77.0942	0.4367
Median	0.0203	11,347,684,667	19.38000	5,526,160	71.3550	0.0316
Maximum	0.249	358,429,917,588	64.96000	28,829,943	204.8600	5.5122
Minimum	0.0002	861,149,140	1.110000	221,812	4.05000	6.08E-5
Std. Dev.	0.0481	71,406,246,304	10.8504	7,267,959	37.62094	1.3051
Skewness	1.401	3.1315	1.1224	0.9447	0.7039	3.1239
Kurtosis	4.378	12.0315	4.583941	2.850872	3.157683	11.038
Jarque-Bera	151.1803	1872.345	116.999	55.68758	31.11209	1606.473
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	15.911	13,063,018,901,684	8141.120	2.80E+9	28679.06	162.462
Sum Sq.Dev.	0.8589	1.899E+24	43678.49	1.96E+16	525089.2	631.937
Observations	372	372	372	372	372	372

$$\begin{aligned} \Delta \text{LNREN} = & \delta_0 + \sum_{j=1}^m \delta_{1j} \Delta \text{LNREN}_{t-j} + \sum_{j=1}^m \delta_{2j} \Delta \text{LNGDP}_{t-j} \\ & + \sum_{j=0}^m \delta_{3j} \Delta \text{LNCAP}_{t-j} + \sum_{j=0}^m \delta_{4j} \Delta \text{LNLAB}_{t-j} \\ & + \sum_{j=0}^m \delta_{5j} \Delta \text{LNTRAD}_{t-j} + \sum_{j=0}^m \delta_{6j} \Delta \text{LNFF}_{t-j} + \mu_t, \end{aligned} \tag{5}$$

$$\begin{aligned} \Delta \text{LNREN} = & \delta_0 + \sum_{j=1}^m \delta_{1j} \Delta \text{LNREN}_{t-j} + \sum_{j=1}^m \delta_{2j} \Delta \text{LNGDP}_{t-j} \\ & + \sum_{j=0}^m \delta_{3j} \Delta \text{LNCAP}_{t-j} + \sum_{j=0}^m \delta_{4j} \Delta \text{LNLAB}_{t-j} \\ & + \sum_{j=0}^m \delta_{5j} \Delta \text{LNTRAD}_{t-j} + \sum_{j=0}^m \delta_{6j} \Delta \text{LNFF}_{t-j} \\ & + \theta \text{ECM}_{t-j} + \mu_t. \end{aligned} \tag{6}$$

Empirical Estimation and Discussion of Results

DESCRIPTIVE STATISTICS

To initiate the analysis process, this study begins with descriptive statistics (Table 2). For this study, the focus will be on the skewness, kurtosis and the Jarque-Bera, which is important for data investigation.

Skewness helps determine how symmetrical the distribution of a series is around its mean. The variables analysed in a series do not have normal skewness, indicating irregular symmetry. This is evident by looking at the skewness figures in the table for all observed variables. All figures

TABLE 3 Cross Sectional Dependence Test Result

Test	Statistics	d.f	Probability
Breusch - Pagan LM	503.7576	66	0.0000
Pesaran scaled LM	38.10191		0.0000
Pesaran CD	10.33915		0.0000

are greater than zero, indicating positive skewness, meaning all variables have a long right tail. The kurtosis measures the peakedness or flatness of the distribution series. Table 2 shows variable kurtosis values are greater than three, which indicates all data is leptokurtic, meaning that all data used have a peaked distribution, except Labour at 2.85, which is less than three, making it platykurtic, signifying the distribution is flat. Lastly, the Jarque-Bera asserts what is known based on the results from the skewness and the kurtosis test that the variables within the series are not normally distributed. With the Jarque-Bera p-values, all less than the 5% significance level, the study rejects the null hypothesis of a normal distribution.

CROSS SECTIONAL DEPENDENCE TEST

Results for the different panel cross sectional dependence test values and their corresponding probability values are summarised in Table 3.

Results for the different panel cross sectional dependence tests show all values of the variables in the study are significant at a 1% level, thus the study rejects the null hypothesis of cross-sectional independence, implying that there is sufficient cross-sectional dependency amongst variables across all countries sampled. Therefore, the study utilises the Panel ARDL estimation, which, according to Rahman and Alam (2021), accounts for cross sectional heterogeneity through the short term parameter and facilitates both long-run and short-run causality interferences.

UNIT ROOT

Unit root testing is a process where the panel series are analysed for the presence of unit roots or the absence thereof. The raw data is transformed to natural logarithms to convert all the variables to the same scale of measurement and reduce data variation before the test is undertaken. The summary of the result is reported in Table 4.

TABLE 4 Unit Root Test Results

Variables	LLC		IPC	
	Level	First difference	Level	First difference
LNREN	1.26866	-6.27258***	0.808	-8.04046***
LNGDP	0.40545	-3.69849***	2.91997	-5.96292***
LNCAP	-0.98834	-10.7679***	-0.65440	-11.5091***
LNLAB	5.0755	-6.701531***	8.96504	-7.22381***
LNTRAD	-0.94130	-7.562***	-1.64330**	
LNLEFF	0.73623	-7.67935***	3.59860	-9.65218***

NOTES Data from WDI (<https://databank.worldbank.org/source/world-development-indicators>), AFDB (African Development Bank Group 2018) and US Energy Information Administration (EIA) (<https://www.eia.gov/>);
*, **, *** signify significance at 10%, 5% and 1% levels, respectively.

TABLE 5 Optimal Lag Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	2179.623	NA	0.029137	13.49150	13.56151	13.51945
1	1694.987	7581.799	$1.49e^{-12}$	-10.20362	-9.713528	-10.00801
2	1826.249	251.9912	$8.29e^{-13}$ *	-10.79166*	-9.881484*	-10.42837*

NOTE * indicates lag order selected by the criterion. LR: sequential modified LR test statistic (each test at 5% level). FPE: final prediction error. AIC: Akaike information criterion. SC: Schwarz information criterion. HQ: Hannan-quinn information criterion.

Table 4 indicates that, except for trade (LNTRAD), which showed stationarity at a level for IPC (unit root estimation), all variables gain stationarity only after the first difference for both LLC and IPC.

In conclusion of the unit root test, the series indicates that all variables are integrated of order I(1), except trade, showing integration at level I(0) for IPC, and none are integrated in the order I(2) – these compelling outcomes support the use of Panel ARDL.

The next step is to determine the appropriate optimum lag length for all the variables that would be used in the Panel ARDL estimation. To determine the optimal lag, the study uses the optimal lag selection criteria.

OPTIMAL LAG SELECTION

Having verified that the series has a mixed order of integration, the next step is to test for the best lag length. Table 5 summarises the test of which lag 2 of the Akaike information criterion (AIC) is selected as suitable for the study.

TABLE 6 Panel Cointegration Test

Alternative hypothesis: Common AR coefficients (within-dimension)				
	Statistic	Prob.	Weighted	
			Statistic	Prob.
Panel v-statistic	-0.153	0.561	-1.586	0.944
Panel rho-statistic	1.029	0.848	1.949	0.974
Panel PP-statistic	-1.971	0.024	-1.635	0.051
Panel ADF-statistic	-0.018	0.493	-1.327	0.092
Alternative hypothesis: individual AR coefficients (between-dimension)				
			Statistic	Prob.
Group rho-statistic			2.611	0.996
Group PP-statistic			-2.552	0.005
Group ADF-statistic			0.0825	0.533

PANEL COINTEGRATION

The cointegration test is an estimation technique used to determine whether there is a long-run relationship between variables. The cointegration test is the next step in the study to see whether the variables have a long-term relationship. The Pedroni cointegration test is used in the study to arrive at this conclusion. The null hypothesis indicates that cointegration is not present. However, H_0 will not be rejected if the calculated test's probability value is greater than 0.05, indicating that the variables are cointegrated.

The result of the estimation shows that four of the 11 statistical tests, as shown in the results in Table 6, demonstrate that variables used in this study are cointegrated and sustain a long-term relationship. The panel PP-Statistic has a probability of 0.024. The weighted panel PP-Statistic and panel ADF-Statistic are 0.051 and 0.092, respectively. The second category, the group PP-Statistic, denotes 0.005.

This result then allows the Panel ARDL estimation to calculate both the long-run and short-run coefficients for this study.

PANEL AUTOREGRESSIVE DISTRIBUTED LAG (ARDL) TEST

The panel autoregressive distributed lag (ARDL) test is used to estimate the coefficients of the series. Table 7 presents the results of the panel ARDL estimation method. With a fixed lag length of 2 (as suggested after the calculation of the optimal lag length selection as seen in Table 5), renewable energy is the dependent variable, and GDP, investment (gross capital formation), labour, trade, and non-renewable energy represent the explanatory variables.

TABLE 7 Panel Autoregressive Distributed Lag (ARDL) Estimation

Long-term coefficient				
Dependent variable: LNREN				
Variable	Coefficient	Std. error	t-Statistic	Prob.
LNGDP	0.390751***	0.040809	9.575065	0.0000
LNCAP	-0.036041**	0.015963	-2.257802	0.0246
LNLAB	0.790818***	0.047153	16.77116	0.0000
LNTRAD	0.085440***	0.019573	4.365294	0.0000
LNFF	-0.045097***	0.017075	-2.641111	0.0086
C	-18.81223***	0.893510	-21.05431	0.0000
Short-term coefficient				
Dependent variable: LNREN				
Variable	Coefficient	Std. error	t-Statistic	Prob.
COINTEQ01	-0.274415**	0.127533	-2.151712	0.0321
D(LNREN (-1))	0.192044**	0.078912	2.433665	0.0155
D(LNGDP)	0.639329	0.528771	1.209085	0.2275
D(LNGDP(-1))	-0.038969	0.491689	-0.079256	0.9369
D(LNCAP)	-0.080039	0.109792	-0.729009	0.4665
D(LNCAP (-1))	0.090670	0.137234	0.660699	0.5093
D(LNLAB)	-3.063742	3.541251	-0.865158	0.3876
D(LNLAB(-1))	3.089313	2.605469	1.185703	0.2366
D(LNTRAD)	0.048083	0.148343	0.324137	0.7460
D(LNTRAD(-1))	-0.200720	0.171146	-1.172803	0.2417
D(LNFF)	-0.262968	0.169096	-1.555139	0.1209
D(LNFF(-1))	0.002129	0.162873	0.013074	0.9896
C	-0.274415**	0.127533	-2.151712	0.0321
Log-likelihood	272.5414			

NOTE *, **, *** signify significance at 10%, 5% and 1% levels, respectively.

Results observed for the long run show that all coefficients of explanatory variables are statistically significant at 1% to 5%. The variables' parameters all indicate positive signs, except for gross fixed capital formation and non-renewable energy, which have negative signs. This result implies that an increase in the variables will positively impact renewable energy in the long run; meanwhile, an increase in gross capital formation and non-renewable energy harms renewable energy in the long run in the SAPP. These results are similar to those of Sadorsky (2009) and Salim and Rafiq (2012): their results also indicated a positive impact between GDP and renewable energy consumption. While Rasoulinezhad and Saboori (2018) found that trade openness impacted renewable ener-

gy consumption positively, Azretbergenova *et al.* (2021) also found that renewable energy has a positive effect on employment in the long run.

On the other hand, gross capital formation (CAP) has a negative and significant effect on renewable energy consumption, pointing to a lack of investment in renewable energy sources. Matei (2017) made a similar discovery. Non-renewable energy consumption's negative impact on renewable energy was identical to that of Omri, Ben Mabrouk, and Sassi-Tmar (2015).

The short-term result yielded some interesting observations. Firstly, the value of the error correction model (ECM) indicated minus 0.274415, and this is denoted as the speed of adjustment, which showed a 5% degree of significance and was correctly signed. This suggests that the convergence speed of equilibrium is 27.4%.

The short-term dynamic model indicates that none of the explanatory variables in the series, i.e. GDP, investment (gross capital formation), labour, trade, and non-renewable energy, have an impact on SAPP renewable energy. This conclusion is realised due to the probability values of the explanatory variables all being above the 10%, 5% and 1% significance levels.

Results from the individual countries' short-term coefficients show that an increase in GDP for Malawi and Zambia causes a rise in these countries' renewable energy, whereas an increase in GCF positively increases renewable energy in the DRC and Eswatini.

Countries such as Malawi and Tanzania (one-year lag (−1)), Mozambique and Lesotho (current) indicated a rise in their labour force, causing renewable energy to increase.

Countries where an increase in their trade caused a rise in their renewable energy included Mozambique (one-year lag (−1)).

Lastly, the Democratic Republic of the Congo (currently) is the only country that exhibits that an increase in their non-renewable energy increased their renewable energy. A summary of the results are presented in Table 8.

Conclusion, Recommendations and Limitations

While there have been numerous studies on the determinants of non-renewable energy consumption, few have considered the determinants of renewable energy consumption. In addition, very little research has been conducted on power pools in the Southern African region. As a result, this article contributes to that field by investigating the factors

TABLE 8 Summary of the Short-term Cross-section Coefficient for Individual countries

Countries	LNGDP	LNCAP	LNLAB	LNTRAD	LNFF
Angola	NS	NS	NS	NS	NS
Botswana	NS	NS	NS	NS	-1.410591**
Democratic Republic of the Congo	NS	0.060098***	NS	-0.070679 **	0.060730***
Eswatini	NS	0.666288***	NS	NS	NS
Lesotho	NS	NS	9.981155**	NS	NS
Mozambique	-0.834675	NS	1.895082***	0.426090(-1)**	NS
Malawi	5.236360***	NS	-1.272986(-1)* -14.79774*** 10.84552(-1)*	NS	NS
Namibia	NS	NS	NS	NS	NS
South Africa	NS	NS	NS	NS	NS
Tanzania	NS	NS	-37.43503** 28.80026(-1)*	NS	NS
Zambia	0.747934(-1)**	NS	NS	NS	NS
Zimbabwe	NS	NS	NS	NS	NS

NOTES ***, **, * signify 1%, 5% and 10% significance level, respectively. (-1) = one-year lag & NS = Not Significant (for both current and one-year lag (-1)).

that influence renewable energy consumption in the Southern African Power Pool (SAPP) between countries that trade electricity in the region.

The impact of GDP, gross capital formation (investment), labour, trade, and non-renewable energy on renewable energy consumption in SAPP was investigated using the panel ARDL estimation method.

The study aimed to identify various determinants that impact renewable energy within the SAPP, of which the empirical findings suggest that, in the long term, the explanatory variables gross domestic product, renewable energy, labour force and trade all have a positive impact on renewable energy – all except gross capital formation (investments) and non-renewable energy, which harm renewable energy. All coefficients were statistically significant at 1 to 5 percent.

The study also wanted to discover whether the determinants are uniform across the individual countries within the SAPP. The empirical results from the respective countries’ short-term coefficients indicated that an increase in GDP increased renewable energy in Angola, Zambia, and Mozambique’s GDP with a one-year lag (-1). Similarly, a rise in gross fixed capital formation (investments) increased renewable energy in seven countries in the SAPP. A positive impact of labour on renew-

able energy was established in the Democratic Republic of the Congo and Mozambique (one-year lag) and the same applies to Zambia's labour (one-year lag). An increase in trade increased renewable energy in Angola and Tanzania. At the same time, current trade impacted renewable energy consumption in three countries. According to the results of Botswana, the Democratic Republic of the Congo, Eswatini and Zambia (one-year lag), when there was an increase in their non-renewable energy, an increase was observed in their renewable energy. This, therefore, indicates differential impact on renewable energy for the individual countries within the SAPP.

This article identified channels that the SAPP could use to promote renewable energy consumption and the impact thereof. Based on these findings, it is recommended that economic policies that accelerate economic growth and development should be implemented, which will enhance renewable energy use.

As a ripple effect through the economy, the acceleration of economic growth will also increase the creation of employment. An increase in labour will result in the rise of renewable energy consumption. Similarly, policies that stimulate trade should be encouraged to increase the switch to renewable energy consumption in the SAPP in the long run.

Centred on the results, since an increase in non-renewables reduces renewable energy consumption, it is logical to infer that the SAPP policies should be targeted at reducing non-renewable energy so that renewable energy may increase.

This study also recommends economic policies that address the growth and expansion of the renewable energy sector, which concurrently finance research and development activities aimed at promoting renewable technologies and related infrastructure to enhance renewable energy sources (Matei 2017). Concerning Gross fixed capital Investment, its negative impact on renewable energy implies that investment toward renewable energy is weak, and therefore this study recommends that policies to encourage investments toward renewable sources should be introduced and advanced.

This study only examined determinants of renewable energy for the period 1988 to 2018 due to the unavailability of data for some countries in the region, and the study also acknowledges that some variables identified in the literature were not included due to the unavailability of data. However, this study is not exhaustive, meaning that it also gives insight into areas of further research.

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Work-Related Alcohol Consumption: An Analysis of Motivators and Responses across Cultures

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While research into alcohol abuse is abundant, the science of how differing cultures view and respond to mild work-related alcohol consumption has been scientifically neglected. This article displays results from surveys conducted over a 7-year period and pivots around the cultural dimensions 'Power distance', 'Individualism', 'Indulgence' and 'Interpersonal trust' which are correlated with motivators, responses and acceptance levels of mild work-related alcohol consumption. The strongest motivator for participating in mild work-related drinking was 'To celebrate with colleagues', which achieved significance with all cultural dimensions except power distance, which in contrast, achieved significance with the motivator 'To bring out the real character' of the counterpart. Power distance also correlated strongly with negative emotions regarding the refusal of a drink when offered by a senior. Altogether, 52 correlation tests were conducted of which 18 achieved significance. We believe that a better understanding of this topic will increase the likelihood of obtaining a harmonious workplace that lessens employee misunderstandings and conflict.

Keywords: culture, alcohol, workplace, power distance, individualism, trust, indulgence

JEL Classification: F23, I31, J81, M14, M84, Z10

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Introduction

The consumption of alcohol is a widespread and socially accepted behaviour in most societies around the world. Its consumption is linked to a plethora of individual, social and cultural reasons that typically pivot

around an attempt to enhance enjoyment and promote a more relaxed and casual atmosphere. While the negative health and social repercussions of alcohol consumption have been thoroughly researched and modelled, global studies examining the impact of cultural variances on the motivation and acceptance of mild work-related alcohol consumption are lacking.

The negative health and psychological consequences of alcohol abuse are clear and are widely documented in countless medical journals. Research pertaining to alcohol consumption is thus strongly biased towards exploring the damaging physical and psychological effects of alcohol consumption. This is warranted: it is estimated that alcohol consumption kills more than three million people annually and is associated with general health loss and increased propensity for psychological deterioration (World Health Organization 2018). In contrast to alcohol abuse, the relationship between moderate alcohol consumption and health deterioration is complex (Panza et al. 2012), with varying results spanning from mild health deterioration to some studies suggesting small levels of alcohol consumption can have some social and mental benefits (Fairbairn et al. 2015; Moore et al. 2005) and some health benefits, e.g. lowering the risk of cardiovascular diseases and type 2 diabetes (for a systematic review of studies pertaining to alcohol consumption in relation to health, see: Luitgaarden et al. (2022) and Dadras et al. (2022)). While these avenues exploring health-related implications of alcohol consumption remain dominant in literature and medical research today, much less is known about the social constitution implicit within the context of alcohol consumption patterns, especially in an environment of multiple cultures. For employees active in international organizations, being able to know how to navigate correct corporate behaviour in situations where alcohol is served may not be straightforward. For instance, when is it okay to say yes to an alcoholic beverage and when is it okay to refuse an alcoholic beverage when offered within the work domain?

These questions become increasingly relevant in an ever-globalizing world where company activity across borders and interaction between culturally diverse people rise in frequency. The challenges that accompany a transition from a mono-cultural organization to a multi-cultural global entity are plentiful. When it comes to the human capital within the organization and the norms and rituals they adhere to, the variances between culturally diverse employees manifest themselves in a plethora of ways (Gulev 2009b). Managing such global transitions resides in the ability to know which cultural origins lend themselves to certain behavioural tendencies and preferences.

The current article assists the global multi-faceted company, and its stakeholders, in better understanding how one of these societal norms may be interpreted very differently by varying cultural origins, namely, how mild work-related alcohol consumption is perceived differently across cultures. This research avenue, exploring the characteristics of drinking occasions that lead to feelings of subjective wellbeing and social cohesiveness in the workplace, remains largely unexplored compared to the literature on drinking occasions that lead to alcohol abuse (Peele and Grant 1999). The topic of alcohol abuse and its facilitators has formed much of our understanding of the problems associated with alcohol mis-handling and lays the foundation for alcohol policy issues in various cultures around the world (Alfred, Limmer, and Cartwright 2021; Roche et al. 2019). This literature is relevant and helps us understand how to deal with the negative repercussions of alcohol addiction and find suitable remedies in cases of abuse. However, it does not apply to the vast majority of situations where humans are consuming alcohol in a responsible and communal manner in the interest of facilitating social cohesion, nor does it apply to work-related drinking occasions.

The overarching aim of this article is to explore the varying reasons behind why some employees may be motivated to consume alcohol at work and under which conditions they are accepted by some but rejected by others. Further, what may be the social responses of employees that deem a colleague to be participating in inappropriate work-time drinking and under which conditions is it acceptable to refuse an alcoholic beverage when offered by a superior? These questions can be explored through various channels of observation, e.g. departmental variances, seasonal celebrations, corporate norms, age differentiations, etc. that may all influence the acceptance and frequency with which alcohol consumption occurs within the workplace. For instance, it is plausible that a sales department may engage in more regular alcohol consumption with potential clients than would an IT department. Similarly, medical practitioners may adhere to very different corporate norms regarding alcohol consumption compared to corporate consultants. These channels of observation are relevant and can help further contextualize work-related drinking behaviour. However, for the current study, the acceptance levels of work-related alcohol consumption are limited to the prism of cultural variances that categorize our respondents into organized groups of shared traits, thus discounting peripheral influences such as gender biases, departmental inclinations and age variations. The goal of the research is to better un-

derstand why some cultures consider alcohol consumption at the workplace acceptable and desired while others consider it undesirable and potentially damaging. Further, it is intended to gain insight into the social responses that may be triggered when alcohol is consumed during a work event and when the refusal of a drinking occasion can be perceived negatively by management and peers. Such insights will help individuals in a multicultural workspace better understand how to behave and react during a work-related event that is loaded with pre-set judgements and perceptions on right and wrong work-related behaviour.

In accordance with this thought-line, the remainder of this article is structured as follows. The second section presents a short literature review of the status-quo regarding alcohol consumption and its consequences on health and social wellbeing as well as an overview of findings relating alcohol consumption to cultural studies. The third section explains the methodological framework that lays the foundation for the analysis of the accumulated data while the fourth section reveals the results in the form of correlation coefficients. The fifth section discusses the meaning of the significant correlations and attempts to contextualize why some correlations that were expected to achieve significance failed. Finally, the conclusion sums up the main findings and highlights the limitations that this study suffers from.

Literature Review

Research pertaining to alcohol usage is overwhelmingly focused on risk factors, spanning from societal levels to personal levels (Sudhinaraset, Wiggelsworth, and Takeuchi 2016). These risk factors pivot around the destructive association between alcohol consumption and a variety of health deteriorating indicators such as accelerated cellular ageing (e.g. Carvalho et al. 2019; Boule and Kovacs 2017) and the link between alcohol consumption and Alzheimer's disease (Matloff et al. 2020). A plethora of similar studies examining longitudinal patterns and effects of alcohol consumption point in the same direction and document alcohol's addictive nature, damaging health and mental consequences and associated negative stigma (e.g. Ulrich et al. 2022; Judkins et al. 2022; Higgins-Biddle and Babor 2018).

These risk factors and negative effects are serious and research agendas along these tracks are valuable as they help us understand how alcohol can become destructive and the social costs associated with regular abusive drinking. However, along some peripheral research tracks, the use of alcohol is not associated with negative social and health consequences

but rather associated with an exploration of how alcohol consumption can enhance a socially conducive environment; an environment that promotes subjective wellbeing and communal cohesiveness among diverse people and creates social bonds that may otherwise not have been formed (Moore et al. 2005). Research into this less negatively laden avenue of alcohol consumption is less common but also very valuable to further understand and contextualize.

Rudnev and Vaclair (2018) explore the frequency with which alcohol is consumed in various recreational situations following three main motives for consuming alcohol: 1. Enjoyment and sensation seeking, 2. Social motives, and 3. Coping motives. They find that personal motives are strong predictors of the specific kind of drinking behaviour individuals will participate in. Hebden et al. (2015) explore university students' alcohol consumption patterns in tune with online drinking activities and find that while heavy drinking is a real risk concern, 'pleasurable consumption' of alcohol also leads to increased socialization and networking among university students.

Similarly, a symbiotic link is explored between moderate drinking behaviour and evoking positive emotions where it is proposed that while positive emotions may lessen drinking behaviour, the reverse is also true. As such, in the long run, a positive cycle of low alcohol consumption can be combined with sustained positive emotions (Previte, Russel-Bennet, and Parkinson 2015). Complementing this thought-line, Cooper et al. (2015) argue that people consume alcohol to manage internal feelings and to obtain valued social outcomes, thereby obtaining some social benefit through communal alcohol consumption.

In the workplace, the majority of studies on alcohol in relation to employee conduct tend to pivot around alcohol abuse often leading to efficiency losses mostly measured through poorer performance and extended sick leave. Blum, Roman, and Martin (1993) find that heavy drinkers score lower on work-performance skills such as self-direction and conflict avoidance abilities. These findings are complemented by numerous studies that arrive at similar conclusions. Mangione et al. (1999) show that heavy drinkers typically display more work performance problems than their lesser drinking counterparts, Thorrisen et al. (2019) demonstrate a link between higher levels of alcohol consumption and impaired work performance, and Sullivan, Edgar, and McAndrew (2019) calculate the average cost of lost productivity per employee that engages in heavy drinking by calculating absenteeism costs and inefficiency costs when present.

For a systematic review of alcohol-induced performance losses and absenteeism rates at the workplace see Hashemi et al. (2022), and for interventions that can be employed see Elling et al. (2020) and Lee et al. (2014).

This research, pertaining to how a minority of people consume alcohol at excessive levels, continues to receive the majority of academic and scientific scrutiny. Conversely, research into how the majority of people consume alcohol, in a mild and non-abusive fashion, has received comparatively little academic scrutiny, especially within the work realm.

In relation to how alcohol consumption varies across national cultures, research tends to focus on the amount of alcohol consumed in terms of frequency and extent of consumption. Moyo (1999) explores 'dry' versus 'wet' cultures, examining cultures where comparatively little alcohol is consumed overall but when drinking, it is extensive, leading to drunkenness, and contrasts it to cultures that are 'wet', where drinking occurs more regularly but in milder formats. She clusters Canada, the United States and the Scandinavian countries in the former group and Mediterranean and Latin cultures in the latter. Other studies that have followed claim the clarity with which 'wet' and 'dry' cultures can be made distinct is being blurred as overall alcohol consumption has increased in the North while decreasing in the South (Leifman 2001; Allamani et al. 2000). In more recent studies, the distinction at a national level has faded further, with no major distinctions between large clusters of countries but rather large distinctions within sub-cultures of those countries (Clements, Lan, and Liu 2020). Similarly, in a systematic review of over 80 articles on the topic of cultural difference in alcohol consumption, Aresi and Bloomfield (2021) conclude that it is problematic to define drinking habits at the national level as the broader cultural context is missing. This warrants the focus shifting from a national, country-specific analysis to a value-based cultural analysis that may measure cultural norms of individuals relinquished of national identity.

A few research initiatives seek to explore how differing values and norms, as measured by, for example, the World Values Survey (for viewing the latest World Values Survey data, please see wvs (World Values Survey 2022)), influence alcohol consumption. Assuming cultural variances can be measured on bipolar scales, a popular method adopted by many contemporary researchers, perhaps most notably Geert Hofstede and his six bipolar cultural dimensions (Hofstede, Hofstede, and Minkov 2010), we can start forming questions about which values may influence specific alcoholic drinking tendencies at the workplace.

TABLE 1 Summarization of Key Cultural Terms

Cultural dimension	Short definition	Typical country manifestations*
Power distance (Hofstede, Hofstede, and Minkov 2010)	Measures inequality and unequal distribution of power	Low: The Netherlands, the Nordic countries High: China, France, Malaysia
Individualism (Hofstede, Hofstede, and Minkov 2010)	Measures the extent to which people primarily look after themselves	Low: Malaysia, Portugal High: USA, Australia
Indulgence (Hofstede, Hofstede, and Minkov 2010)	Measures the degree of freedom that societal norms give to citizens in fulfilling their desires	Low: South Korea, Russia, Japan High: Argentina, Chile, Canada
Interpersonal trust (Evans 2016)	Expectancy that others can be relied upon and being willing to quickly trust strangers	Low: Serbia, Bulgaria High: Denmark, Finland

NOTE *The correlation tests pertaining to this study purposely omit national portrayals as the survey data includes individual cultural profiles that are more specific than broad country portrayals. However, to help contextualize the cultural dimensions and better link which countries likely embody the people that express the upcoming views on work-related alcohol consumption, a brief country manifestation list is included.

In a recent study, Simha et al. (2022) examine stigmas regarding alcohol use in various cultures using several of Hofstede's cultural dimensions. They find a significant positive correlation between stigmas regarding alcohol use and institutional collectivism as well as assertiveness, but a negative association with future orientation. Albeit not related directly to the workplace, for the former, this suggests that cultures exhibiting high institutional collectivism and assertiveness levels are prone to negatively judge alcohol consumption whereas cultures high on future orientation appear to be more acceptant of this.

Further studies explore other cultural dimensions and their relative-ness to alcohol consumption. Wells et al. (2014) assert that masculinity, as expressed through higher acceptance of risk and aggression as well as a 'playboy' mentality for males, is significantly linked to heavy episode drinking. Mackinnon et al. (2017) find that individuals that rank high on individualism, in contrast to collectivism, more strongly endorsed social and enhancement motives that lead to increased alcohol consumption. Equally interesting, in a study conducted over a 15-year period, the manner in which authority is asserted, as measured through power distance, was found to be positively linked to wine consumption in 90% of wine consuming countries in the world (Agnoli and Outreville 2020).

These findings are valuable as we begin to understand how the values of an individual, as measured through the use of bipolar cultural spectrums, influence alcohol consumption. However, when relating this plot to the employment sector, little attention has been given to how the workplace setting interacts with the motivation and responses of individuals with respect to their work-related alcohol consumption patterns (Pidd 2005). It is this void in literature concerning the acceptance and rejection of mild consumption of alcohol in the workplace, measured through cultural variations, that the current study seeks to remedy. To accomplish this, Table 1 summarizes short definitions of the cultural dimensions that are probed and ultimately correlated with the motivators, responses and opinions pertaining to work-related alcohol consumption.

Methodology

Data collection started in 2015 and lasted until the beginning of 2022. Within this timeframe, eight independent studies focusing on cultural influences on work-related alcohol consumption were conducted by separate research teams at two different universities of applied sciences in Germany that collaborated on this project.

The results from the studies were compiled and recalculated into one large overarching data pool that could be used for composite analysis. This involved identifying a comparable metric, in our case, rank orders for the data in each study that could be processed through a correlation analysis using Spearman rank correlation tests.

The surveys were conducted entirely in English and targeted employed individuals in companies based in Europe, North America and East Asia. Survey respondents that did not match this profile were excluded from the analysis. Within this narrowed demographic scope, randomized sampling was performed where the surveyed respondents were randomly included for analysis from the population pool limited by the aforementioned geographic location, employment status and linguistic aptitude. However, as the surveys were performed on a voluntary basis, only those that were inclined to devote their time to the surveys participated. As such, some level of convenience sampling is apparent as complete population randomness, within the narrowed demographic scope, could not be assured. While direct generalizations to the larger population may thus be mildly compromised, we are confident that the results are not sample specific or biased as the respondents participating on a voluntary basis are not expected to differ along the probed cultural dimensions or alco-

hol predilections compared to those that had time constraints and did not participate in the study. We feel the results from our survey respondents can thus responsibly be termed reflective of the larger population.

As individual cultural profiles were conducted for each survey respondent throughout the eight studies, the national location of the people being probed and its cultural connection were omitted from the analysis. Despite the researchers agreeing that national and corporate cultures are often isomorphic (Gulev 2009a), this omission was important in order to increase the accuracy of the data obtained directly from the survey respondents who could more precisely depict their cultural biases, values and traits compared to the broad depictions given by generic national-based cultural portrayals.

From the eight studies a total of 980 returned survey questionnaires were accepted for analysis. The data was collected using online questionnaires disseminated through social media tools with 5- and 7-point Likert scales measuring variances in motivation for drinking and variances in cultural bias towards the cultural dimensions. The data collection process was not conducted in a uniform manner and was led by differing research groups that shared the same research goal but pursued mildly different data accumulation methods as is evidenced by the non-conformity of the Likert scales as well as variances in the sample sizes of each study. The collected data from the surveys that went into the eight studies was thus initially not compatible and could not be directly compiled into a common data pool. In order to achieve uniformity with the data, the different composite datasets from the studies were recalculated using percentages for each subsection of the surveys from which the data came and subsequently recategorized into different subcategories that each independent research endeavour could be matched with. As such, the data from the pooled surveys from the different research teams pertaining to motivators for drinking were resorted and ranked into 14 levels, ranging from high to low, and matched to its specific motivator, for example, 'drinking in order to break the ice'. Similarly, the data pertaining to the cultural values of the respondents were reorganized and ranked from the 5- and 7-point Likert scale into 14 levels matching each analysed cultural dimension, for example 'Interpersonal trust levels'. In doing so, the data from each data collection endeavour were primed for analysis as the different data sets became compatible. This important step ensured that the research data was usable for analytic purposes; however, it came at the cost of some accuracy. As the individual data sets

were resorted into rank orders they lost their absolute values, which deprives this analysis of some precision. However, by utilizing 14 rank orders for each subsection of analysis, some precision was recovered; the smaller the gap in between the rank orders, the lower the variance in the recalculated percentage values between each data point. With this intermediate step accomplished, the data sets, reorganized into rank orders, could be collectively analysed using Spearman rank correlation tests.

Throughout the questionnaire, the method of triangulation was used for each topic of analysis, repeating the notion of the topic in subsequent sections, thereby testing for consistency in the responses. The first section of the survey questionnaires dealt with the cultural traits of the respondents that initially probed the dimensions 'Power Distance', 'Indulgence', 'Individualism', 'High Context', 'Secular Oriented' and 'Interpersonal Trust'. These six cultural dimensions were chosen for their suspected affiliation and influence on potential variances pertaining to alcohol consumption that may occur at the workplace and were loosely based on Hofstede's (2001) cultural dimensions questionnaire as well as questions inspired by the World Value Survey (Inglehart et al. 2014) probing interpersonal trust levels and secularism. This suspected affiliation was based on results that were obtained from an academic workshop where multiple mainstream cultural dimensions were discussed and predictions were expressed as to which cultural dimensions may possess the most potential for a fruitful analysis of work-related alcohol consumption across cultures. Only four of the cultural dimensions, namely 'Power Distance', 'Indulgence', 'Individualism' and 'Interpersonal Trust' were used for the composite analysis as they revealed the most interesting results worthy of further analysis. It is these four cultural dimensions that are included and referenced in this article. The subsequent section probed motivators behind work-related alcohol consumption and social response of employees that deem a colleague to be participating in inappropriate work-related alcohol consumption. These motivators and responses were gathered from the same workshop where predictions were made as to why alcohol may be consumed at the workplace. A final section dealing with opinions related to alcohol at the workplace was included as it was deemed interesting to probe three peripheral tangents that did not fit directly into the motivators or responses categories, yet were predicted to yield interesting results that vary according to the selected cultural dimensions.

To test the strength of the correlations between our cultural traits and opinions about work-related alcohol consumption, Spearman rank cor-

relation tests fitted with confidence intervals for 14 datasets were conducted. This involved 52 tests (the results of which are shown in the following section) that were conducted by calculating the Spearman rank correlation coefficient (ρ) as:

$$\rho = 1 - \frac{6 \times \sum d_i^2}{n(n^2 - 1)},$$

where d = the difference in the rank values (i) for n (14) observations.

Results

The Spearman rank correlation tests calculated coefficient results between the cultural profiles our respondents expressed and their attitudes on several topics pertaining to work-related alcohol consumption. The results are summarized in Table 2.

TABLE 2 Spearman Rank Correlation Results

	Power Distance	Individualism	Indulgence	Interpersonal Trust
Motivation for consuming alcohol at work				
To celebrate/bond with colleagues	-0.426	0.622*	0.554*	0.589*
To allow for a time out	0.257	0.263	0.42	0.183
To bring out the real character	0.548*	0.452	0.059	-0.832**
To break the ice	0.165	0.824**	0.254	0.343
For the taste	-0.296	0.296	0.692**	0.443
Because it is normal	0.045	0.304	0.499	0.29
Social response of employees that deem a colleague to be participating in inappropriate work-time drinking				
Confront/talk to him/her	-0.541*	0.433	-0.421	0.737**
Do nothing/ignore	0.126	0.396	-0.621*	0.722**
Join him/her	0.327	-0.284	-0.167	0.025
Inform superior	0.677*	-0.305	-0.742**	-0.621*
Opinion about work-related alcohol consumption				
A complete ban on work-related drinking would be good	-0.232	0.580*	-0.358	-0.609*
Refusing a drink from boss is viewed negatively	0.729**	0.423	-0.029	0.622*
Working from home increases work-related drinking	-0.198	0.308	-0.426	-0.261

NOTES $N = 14$. * $p < 0.05$, ** $p < 0.01$.

Several significant correlations emerged between our cultural dimensions and motivations for consuming alcohol at work and social responses of employees that judge a drinking occasion to be inappropriate as well as opinions related to the compatibility of alcohol in the work space.

Beginning with the motivations for consuming alcohol in the workplace, positive significant correlations were notable within three of the four analysed dimensions for wanting 'To celebrate/bond with colleagues'. Only 'Power distance' failed to achieve significance within this category and interestingly revealed a negative, albeit insignificant, correlation. The only significant negative correlation within the realm of motivations was linked to 'Interpersonal trust' levels with regards to wanting 'To bring out the real character' of the drinking counterpart.

The results pertaining to the social responses regarding inappropriate work-related alcohol consumption were more varied. 'Interpersonal trust' achieved three significant correlations; 'Informing a superior' achieved a significant negative correlation (-0.621) while 'confronting him/her' as well as 'ignoring it' both achieved significant positive correlations (0.737 and 0.722 , respectively). 'Indulgence' achieved only negative correlations, two of which were significant, and 'Individualism' achieved both positive and negative correlations, albeit all being insignificant. 'Power distance' achieved one significant positive correlation connected to 'Informing a superior' (0.677) and one significant negative correlation concerning direct confrontation (-0.541).

Finally, the results pertaining to opinions related to the compatibility of alcohol in the work space revealed many interesting thought-lines. Surprisingly, the notion 'A complete ban on work-related drinking would be good' scored significantly positive with 'Individualism' (0.580) while scoring significantly negative with 'Interpersonal trust' (-0.609). 'Refusing a drink from a superior is viewed negatively' achieved two significant positive correlations; the first with 'Power distance' (0.729) and the second with 'Interpersonal trust' (0.622). Lastly, although most correlations pointed in the negative directions, no significant correlations were found regarding 'Working from home increases work related drinking'. These results will be discussed in the following section.

Discussion

RESULTS PERTAINING TO POWER DISTANCE

Perhaps surprisingly, only one significant correlation emerged regarding extents of power distance and work drinking motivations. As power

distance levels increased so did the likelihood that the motivation for participating in a work-related drinking occasion pivoted around the desire to 'Bring out the real character' (0.548) of the opposing alcohol consuming person. It is theorized that high power distance employees may leave colleagues with uncertain and distant perceptions of each other. A common drink would be an opportunity for titles and status to be lessened in importance and provide more clarity and closeness in the bond that exists between co-workers, between and across ranks. As such, with small levels of intoxication, the high power distance employee is granted a candid view into a co-worker's otherwise closed off and formal behaviour.

In scenarios where a co-worker deems a fellow co-worker to be participating in inappropriate drinking behaviour at the workplace, power distance revealed several significant correlations. First, 'Informing a superior' was found to be significantly correlated with high power distance (0.677). These results comply with the high power distance notion to seek structural solutions to such a problem; to escalate the problem upwards to a higher entity that appropriately reprimands the employees and diffuses the situation. This behavioural tendency was not observed with low power distance employees that rather opted for direct confrontation and communicating with the individual, seeking a personalized, non-formal and non-structured solution, as is apparent from the significant negative correlation of -0.541 .

In accordance with our initial thought-line, the act of refusing a drink offered by a superior was indeed observed to be inappropriate for a high power distance individual compared to a low-power distance person (0.729). In the workplace, the yearning to respect authoritative lines and not disappoint or contradict a superior-ranked employee is a strong emotion for high power distance individuals (Gulev 2017). This sentiment was very robust judging by the strength of the positive correlation. For low power distance employees, the refusal of a drink offered was, not surprisingly, viewed as common, without cause for concern for either the superior or the subordinate.

RESULTS PERTAINING TO INDIVIDUALISM

Individualism and power distance are often observed to relate negatively to each other (Hofstede 2001; 1986), that is, individuals that rank high on power distance tend to rank low on individualism. It follows, that low power distance individuals tend to exhibit typical individualistic

behaviours. For this reason, it was expected that we achieve opposing correlations relating to alcohol consumption at work as with those observed with power distance. This was, however, by and large not the case and was most noticeable with the results pertaining to how negatively it is perceived to refuse a drink from a superior. According to our results, a slight positive, albeit failing to achieve significance, correlation (0.423) emerged suggesting that individualistic employees did, at least to some extent, care about how the social manager-employee bond may be affected by such a refusal. It is often presumed that highly individualistic-ranking people are comparably more resistant to societal prescriptions as they follow their own code of conduct (Gulev 2017; Oyserman and Lee 2008). With regards to refusing a drink at work, this lack of societal conformity was, however, not observed within our sample of highly individualistic respondents.

No significant correlations emerged regarding social actions that an individualistic person may take when deeming a colleague to be participating in inappropriate work-time drinking. Mild positive, albeit insignificant, correlations emerged pertaining to 'Confronting him/her' (0.433) and 'Do nothing/ignore' (0.396). We had theorized that both these societal responses would achieve significant positive correlations as the former confrontational response would not be atypical for individualistic behaviour while the latter is representative of separate and disconnected spheres of interest also typically associated with individualistic behaviour (Hofstede 2001). It is possible that individualistic behaviour, when it comes to alcohol at the workplace, is lessened and the pressure of societal norms regarding when it is appropriate to drink and not drink weighs heavy on both ends of the individualism-collectivism spectrum.

Two strong positive significant correlations emerged regarding motivations behind the act of participating in work-related drinking. Strongest and most surprising was the positive correlation of drinking at work in order to 'Break the ice' with co-workers (0.824). It was hypothesized that exactly this motivation would be weak, if not void, in individualistic people as the ease with which new relationships are formed tend to occur more easily as loose bonds are easily created and quickly lost (Gulev 2017; Hofstede 2001), which suggests the need to rely on an ice-breaking facilitator, such as alcohol, would be low for individualistic people. However, exactly this connection yielded the strongest correlation. It appears that when it comes to the somewhat taboo topic of alcohol-related work

interaction, individualistic people do not behave as free-willingly as their individualistic reputation may suggest.

Also surprising was the strong significant and positive correlation pertaining to the desire 'To celebrate/bond with colleagues' (0.622). Seeking occasions for bonding with colleagues was presumed to be a trait strongly represented within collectivistic work cultures attempting to increase a sense of community in contrast to individualistic work cultures that are characteristically underpinned by lone behavioural traits (Akuffo 2020). Yet, in relation to alcohol consumption at the workplace, our individualistic samples expressed this notion more vividly than their collectivistic opposites. When relating to alcohol consumption at work it appears that typical reclusive individualistic behaviour is quickly shelved for more communal bonding opportunities. It may be that the typical perception of the normality of drinking alcohol among different demographics influenced this result. According to a research branch within the World Health Organization, consuming alcohol regularly is more frequently observed on average in individualistic countries compared to averages found for collectivistic countries (World Health Statistics 2022). This may help partially explain why the respondents of our surveys that leaned towards individualism were quicker to agree with this motivation as it provides an opportunity to participate in an activity that is comparatively more commonplace for them.

RESULTS PERTAINING TO INDULGENCE

When viewing the results pertaining to the influence an indulgent predilection may have on mild work-related alcohol consumption, the clusters of positive and negative correlations quickly become apparent. All correlations related to the motivation for consuming alcohol at work yielded positive, albeit not all significant, results. Most strikingly, 'To celebrate/bond with colleagues' achieved a significant positive correlation with 'Indulgence' (0.554) and drinking 'For the taste' achieved a very strong positive correlation (0.692). Both of these positive correlations go in tune with the indulgent mindset opting for the pursuit of gratification and enjoyment (Palazzo 2019). Surprisingly, the motivation 'To allow for a time out' failed to achieve significance (0.420). Perhaps this is because the act of participating in a mild work-related drinking occasion is, from the viewpoint of a highly indulgent person, supposed to make the event more fun, but not provide a mental escape from it. As such, there appears to be a rational and intellectual disconnect between

the celebratory event and work obligations; they are perceived as two different occasions, albeit both being within the work domain.

Purely negative correlations were observed pertaining to the social responses to mild alcohol consumption deemed to be inappropriate that one can expect from highly indulgent individuals. These are best understood when viewing the results from the opposite end of the indulgence spectrum, namely, individuals that rank high on restraint. 'Informing a superior' revealed a strong and significant negative correlation (-0.742) with 'Indulgence'; when indulgence levels were low, or, put differently, restraint levels high, this response was popular. This result complies nicely with a tendency to suppress gratification and seek to regulate routines with strict social norms typical of restrained behaviour (Hofstede, Hofstede, and Minkov 2010). However, the significant negative correlation pertaining to the social response 'Do nothing/ignore' with 'Indulgence' (-0.621) seems to contradict this. Why are the same restrained individuals that have been argued to seek conformity through rules and regulations in the previous correlation now seeking a passive response to the same action? It is possible that when it comes to mild, perceived to be inappropriate, alcohol consumption at the workplace, the restrained person processes this by seeking a response of avoidance by ignoring it just as frequently as seeking an active response such as informing a superior.

RESULTS PERTAINING TO INTERPERSONAL TRUST

Finally, results pertaining to variances in 'Interpersonal trust' levels revealed some of the strongest and most telling correlations. Starting with exploring the motivations of consuming alcohol at work, we noticed a strong significant correlation with the desire 'To celebrate/bond with colleagues' (0.589). It is likely that a work-related drink can be viewed as a vehicle to facilitate trust building among colleagues and that high trust individuals successfully use that vehicle to further increase trust levels with their colleagues. While this is thought to be true, it is interesting to note that the motivation 'To bring out the real character' scored a very significant negative correlation (-0.832) with trust, which does seem to contradict the former correlation. In other words, would 'Celebrating/Bonding with colleagues' not also 'Bring out the real character' of the counterpart? Our results suggest that these two motivations indeed differ along two important chords.

First, we theorize that our respondents viewed the motivation 'To bond with colleagues' as a positive action that proactively boosts work

cohesiveness and enjoyment whereas the motivation 'To bring out the real character' has a negative stigma to it which would deteriorate current obtained trust levels. We believe that these positively and negatively charged undertones to each motivation led high trust individuals to agree with the notion of desirable bonding and reject the negatively charged motivation of wanting to decloak their counterpart and bring out their real character.

Second, high trust individuals are known for quickly extending trust to strangers, in contrast to low trust individuals that need a long time to build up trust (Gulev 2017; 2016; Gulev and Lierse 2012). This speedy trust-building inclination means that, although colleagues trust each other, they are aware that they may not know all about their counterpart and their multifaceted lives. They only know each other a short period of time in comparison to a low trust individual that has built up trust with a colleague over many years and consequently has more in-depth knowledge of their trusted counterpart. Accordingly, we believe it is likely that a high trust individual is happy to bond with the current version of the drinking counterpart without needing to delve deeper into other sides of the individual and the veiled 'real characters' that he or she may harbour below the surface.

Regarding the social responses to colleagues participating in perceived inappropriate work-related drinking behaviour, we notice two strong correlations that are noteworthy. The response 'To report the incident to a superior' scored significantly negative (-0.621) while the response 'To confront' and talk directly to the individual scored significantly positive (0.737). These correlations are in tune with the behaviour we would expect of a high-trust individual; escalating the issue outside the circle of trust is not wanted but a direct dialogue seeking quick internal resolution to the issue is wanted.

However, it is interesting to observe the significant positive correlation pertaining to the response 'Do nothing/ignore' with the perceived inappropriate work-related drinking behaviour (0.722). It appears ignoring the inappropriate behaviour seems just as fitting a response as directly confronting the individual. Although seemingly contradictory, both of these may simultaneously be typical responses of the high trust individual. Such an individual may choose to look away a few times if inappropriate drinking behaviour is observed; after all, trust is high and thus it is believed that the counterpart probably has it under control. Equally likely, the high trust individual may also eventually seek direct confron-

tation as an additional response. Accordingly, the two responses can be seen to complement each other when viewed in the entirety of several work-related drinking incidents.

The significant and negative correlation pertaining to 'A complete ban on work-related drinking would be good' (-0.609) matches the behavioural typecast of high trust individuals. Banning a work-related alcohol-laden event is viewed as too extremist when more personalized responses can remedy the situation in which counterparts can successfully address any potential negative repercussions of work-time drinking events.

However, the significant and positive correlation observed for 'Refusing a drink from a superior is viewed negatively' (0.622) is very surprising. Despite high trust levels, typically presumed to allow employees to express emotions freely (Gulev 2017), our respondents viewed the rejection of a drink offered from a superior as negative. We had theorized that high trust levels would trump any animosity or uncomfortableness that may arise as a result of such a refusal. The current results do not support this theory. It appears high trust individuals were very much exposed to feelings of negativity if they were to refuse an alcoholic beverage from a superior. Perhaps the high levels of assurance and confidence in colleagues typically expressed by the high trust individual do not transcend hierarchical borders so well. A superior making an invitation for a bonding moment over an alcoholic beverage is, it seems, a welcomed initiative from the perspective of the subordinate. We hypothesize that it may even foster increased trust levels across hierarchical levels, a connection that we had envisioned only for low trust individuals. High trust individuals seem to experience uncomfortableness with such a refusal similar to how low trust individuals would experience it.

Of the correlations that failed along all cultural dimensions, most interesting are the results pertaining to whether 'Working from home increases work-related alcohol consumption'. Although the results are insignificant at all levels, the fact that consistent insignificance was achieved is interesting. In the continuously evolving deliberations of the perils and promises of remote working and home office allowances, variances in work-related alcohol consumption and the occasions where they are warranted have to date not been explored. This study provides an initial cautious jab into this research terrain where much of the data was, by coincidence, collected during the height of the COVID-19 pandemic, a time of high global home office frequency. The emerging, insignificant, correlations suggest that working from home did not increase work-re-

lated alcohol consumption; in fact, the negative direction of most of the correlations suggest that a tendency towards less work-related alcohol consumption when working from home seems to have occurred in our sample group. Of course, this remains contentious as the correlations are insignificant and it is important to declare that this does not connect to overall changes in alcohol consumption patterns of people in general during the corona pandemic.

Conclusion

While the mostly negative-laden repercussions of alcohol consumption, and especially alcohol abuse, have been thoroughly researched and modelled in medical journals, global studies examining the impact of cultural variances on the acceptance of mild, work-related alcohol consumption are lacking. The current paper is among the first to examine the extent to which the specific cultural dimensions of 'Power distance', 'Individualism', 'Indulgence' and 'Interpersonal trust' impact the motivation, social responses and acceptance of mild, work-related alcohol consumption. The underlying aim of the paper is to enhance an understanding and contextualization of how these non-abusive drinking occasions are received differently by varying demographics.

Along this vein, the current research revealed many noteworthy findings that have value for anyone operating in a polycultural work environment that may desire some guidance with regards to behavioural norms concerning alcohol in the workplace. Equally, the current results contribute and have value for researchers that seek to continue research within this mostly unnavigated field and wish to gather some initial insights into how cultural variances may act as a tacit influence prompting certain implicit behaviours otherwise not easily deciphered in the workplace.

While none of the analysed cultural dimensions revealed unanimous indications of a particular predilection regarding mild, work-related alcohol consumption, it is interesting to note that the most common motivation for consuming alcohol at work, 'To celebrate with colleagues', achieved significance with all cultural dimensions except 'Power distance', which interestingly appears to be mildly negatively correlated with this motivation. Instead, 'Power distance' scored 'To bring out the real character' as the most significant motivator for participating in mild, work-related alcohol consumption, a trend not observed with the other cultural dimensions, and was directly opposite to the results pertaining to 'Interpersonal trust', which ranked this motivator as least influential.

Equally significant are the findings relating to the social responses of individuals deemed to be participating in inappropriate work-related drinking behaviour. In tune with our predictions, individuals high on 'Power distance' sought circumventive remedies, escalating the issue to a superior to deal with, rather than pursuing personalized confrontation through direct dialogue. This relationship was flipped with high 'Interpersonal trust', where direct confrontation was preferred to externalizing the issue to a superior.

Within the final category of analysis, exploring the acceptance of work-related alcohol consumption, it was highly interesting to see that no significant correlations were achieved along the view that remote working increased levels of alcohol consumption. This indicates a disconnect between the frequency of work-related alcohol consumption and on-site versus remote working; the frequency, among our sample groups, seemed to neither dramatically increase or decrease. A strong connection was, however, found for 'Refusing a drink from a superior' to be viewed negatively by both high 'Power distance' and, surprisingly, high 'Interpersonal trust' individuals. For the former, this was expected, but for the latter this negative interpretation of the refusal recontextualizes the open and free communication thought to be closely intertwined with high 'Interpersonal trust' levels.

Although these insights help individuals operating in a multicultural work environment better navigate the choppy waters of when one can say yes or no to participation in mild work-related drinking occasions, the results are limited along two important aspects. First, the connection between mild or non-abusive work-related alcohol consumption and the long-term drinking behaviour that may be facilitated as a result of work-related alcoholic engagements is not explored. As such, we are mindful of the claim that non-abusive work-related alcohol consumption may eventually lead to abusive behavioural patterns. Accordingly, the term 'non-abusive' can only be applied in the short term. Second, the studies included in this analysis probe opinions, not actions, regarding work-related alcohol consumption. The surveys triangulated questions to test for consistency in the responses which increased the buoyancy of the emerging results, yet it must be noted, especially with a sensitive topic such as alcohol consumption, that actions and opinions may be diverging. Consequently, the results of this study are not to be viewed as the absolute truth in all cases, but rather as indicative of behaviour that we can expect in some international settings.

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The Impact of Social Media on Business Performance of Women Entrepreneurs and their Empowerment: A Mixed Methods Study in the Context of Sri Lanka

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The impact of social media on business performance of women entrepreneurs and their empowerment is examined in this research. Focusing on Sri Lanka, two research questions are addressed: (1) How are social media platforms empowering women entrepreneurs in Sri Lanka today, and (2) How can the use of social media be improved to support women entrepreneurs in Sri Lanka? A mixed-methods approach was used, with a survey (157 responses) and an online focus group (5 respondents) discussion. The statistical findings showed that business performance of women entrepreneurs mediates the relationship between use of social media and women's empowerment. Qualitative analysis revealed that the use of social media transforms mindsets, facilitates knowledge sharing, provides motivation, supports business operations, promotes gender-neutral branding, and enables networking for women entrepreneurs in Sri Lanka to enhance the performance of their businesses, leading to empowerment. To enhance support, social media platforms should prioritize motivation, targeted networking, professional courses, and robust security measures.

Keywords: social media, women entrepreneurs, business performance, empowerment

JEL Classification: O3, M13

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Introduction

In developing countries, the growing numbers of women entrepreneurs has denoted a rise in women's empowerment socially and economically (Dewi 2020). The emergence of women entrepreneurs is influenced by various economic, social, religious, cultural, and psychological factors (Mishal, Iqbal, and Akhtar 2019). Economic necessity and increased access to education and digital opportunities have driven more women to seek formal employment and engage in business activities (Rusdianti, Purwantini, and Wahdi 2018). A digital infrastructure – the use of social media, encourages women to undertake an entrepreneurial experience and has made it possible to start a business with extremely low investments and operating costs (Smits and Mogos 2013). Social media has allowed women to maintain a network of social contacts, provided access to greater financial resources, and enabled them to redefine their role within the family (Cesaroni, Demartini, and Paoloni 2017). Further, the use of social media has offered women the opportunity to identify themselves and to redefine their role in society, while enhancing their family life, social life, professional life, and private life, leading to empowerment (Kaur and Kumar 2020).

Running a successful business has aided women globally to be liberated through financial independence and social media is a tool which can be used to overcome many obstacles women encounter when starting up and operating a business (Sengottaiyan, Duraisamy, and Rathinaswamy 2020). Kaur and Kumar (2020) claim that ICT and digital technologies are powerful tools for development, enabling the creation, sharing, and transfer of knowledge. As digital technologies continue to evolve, it is important for women entrepreneurs to embrace these opportunities and harness the power of social media for their business growth (De Silva et al. 2021). Social media apps are considered as new options for work and leisure that have altered the social dynamics of a flatter global world, changing both market reach and penetration options for small to large corporations (Gefen and Larsen 2017).

On the other hand, there is the ongoing discussion of how ICT tools such as social media are used for the empowerment of women. Empowerment is an improvement in a person's conditions from having less power to more power, providing the opportunity for social inclusion and the ability to make life choices (Malhotra, Schuler, and Boender 2002). Social media is considered as a platform or a tool which can be used to improve

the conditions (Mądra-Sawicka et al. 2020). Also, empowerment is not an end, it is the continuous improvement of one's conditions and a business is a mechanism which could support a woman in maintaining the conditions of empowerment (Olanrewaju et al. 2020). Though women entrepreneurs use social media as a tool to connect with friends and for marketing, they are less aware of how to use social media as a medium to develop their business, as a tool to acquire knowledge, and as a tool of empowerment (Kaur and Kumar 2020).

The purpose of this paper is to investigate how the phenomena such as use of social media, the performance of a business and women's empowerment relate and co-exist in bettering economic and social conditions for women entrepreneurs. There is less research conducted in the Sri Lankan and in the South Asian context on how social media could be used by women entrepreneurs to empower them (Ajjan et al. 2014). The financial independence a woman entrepreneur gains is emancipatory for women's empowerment and needs to be further investigated (Rindova, Barry, and Ketchen 2009). Little is known about the specific impact of use of social media on business performance despite its intensive use, which requires further investigation (Smits and Mogos 2013).

In previous studies, researchers have explored the challenges of women entrepreneurs and how they are empowered, referring to the beauty salon sector. Also how a social medium like Facebook is used in business was studied. Previous studies suggested that it is imperative to identify how social media use can support improving the performance of a business and lead to empowerment of women. The study is focused to answer two research questions, namely how is social media empowering women entrepreneurs in Sri Lanka today, and how can the use of social media be improved to support women entrepreneurs in Sri Lanka?

The next section presents the design of the conceptual framework and the establishment of the hypotheses of the study. This is followed by a detailed description of mixed methods approach deployed, quantitative and qualitative data analysis, discussion, and the conclusion thereof.

Theoretical Background

The theoretical framing of the current study is based on the resources and capabilities-based view of the business and empowerment theory. The resource-based view focuses on the firm's internal resources and capability to use them to better the firm's performance and enhance competitive advantage (Peteraf 1993). A firm may have resources such

as social media available and could be easily imitated by any other firm. But the capability developed in the firm to use it differently to any other firm could lead to a competitive advantage. The business performance of a business could be determined by the ability to transform its resources to capabilities (Paniagua and Sapena 2014). It is easy for any woman entrepreneur to obtain a resource like social media but what is difficult is to develop the capability to use it in a way that improves business performance.

On the other hand, empowerment theory focuses on the processes and factors that enable individuals to gain control over their lives and make informed choices (Perkins and Zimmerman 1995). Social media is a digital infrastructure which can act as a catalyst for women's empowerment by enhancing their access to information, education, and opportunities. It can also serve as a medium for self-expression, promoting self-esteem and self-efficacy among women (Ajjan et al. 2014). A performing business is considered as an emancipatory or empowering process which sets an individual or a group free from legal, social or political restrictions as an outcome (Rindova, Barry, and Ketchen 2009). Therefore, it is vital to understand the intricate connections between these elements to provide a comprehensive understanding of how social media platforms can impact the business performance of women entrepreneurs and ultimately contribute to their empowerment.

USE OF SOCIAL MEDIA AND BUSINESS PERFORMANCE OF WOMEN ENTREPRENEURS

Social media can be described as applications that allow the user to articulate an egocentric network, anchored by a profile (Mađra-Sawicka et al. 2020). Women entrepreneurs can benefit from using social media to share knowledge, market their businesses, and network online (Maier and Nair-Reichert 2007). Nevertheless, the widespread availability and ease of use of social media have led to its increased adoption by women entrepreneurs in both urban and rural settings, opening up new opportunities for development (Maier and Nair-Reichert 2007). The rise of social media has led to changes in how entrepreneurs carry out their day-to-day activities. Digital technologies have made it possible for technology use to no longer be the preserve of a few in terms of their accessibility, availability and use (Abubakar and Dasuki 2018).

Social media is not a mere mode of communication, but a tool which could be used to earn money, develop a business, and increase the per-

formance of a business (Paniagua and Sapena 2014). Social media can be used as an infrastructure to improve women entrepreneurs' knowledge and networking to support growing their businesses (Fletcher 2019). Social media offers unlimited and unconditional capacity to connect to customers, promotional methods, networking opportunities, and methods to improve revenue, leading to better business performance (Abubakar and Dasuki 2018). The digital technologies could deal with the uncertainties of women-owned businesses (Nambisan 2016). Use of social media is gender neutral and can support a woman or any minority person in starting a business and operating it with efficiency (Dewi 2020). The preceding discussion leads to the following hypothesis:

HYPOTHESIS 1A. Use of social media (SM) has a positive association with the business performance of women entrepreneurs (BPWE).

BUSINESS PERFORMANCE OF WOMEN ENTREPRENEURS AND WOMEN'S EMPOWERMENT

A performing business may not only create wealth but can also upgrade its economic, social, institutional, and cultural environments and set an individual free from any legal, social, and political constraints through financial independence, autonomy, and liberty (Rindova, Barry, and Ketchen 2009). A business may desire value maximization, creating expressions, new elements for the environment, empowerment, autonomy, and enhancement of life (Beninger et al. 2016).

Women's empowerment is a multi-dimensional concept defined as 'a process whereby women become able to organize themselves to increase their own self-reliance, to assert their independent right to make choices and to control resources which will assist in challenging and eliminating their own subordination' (Rowlands 1995). Empowerment is an ongoing process and women need to be continuously maintained in an empowered condition, and a performing business can be considered as a potential tool to achieve it (Melissa et al. 2015). A performing business leads to financial independence and capability for a woman. When financial independence is viewed as a process of emancipation it leads a woman to empowerment because the main objective of empowerment is to remove constraints on an individual.

Financial independence and capability serve as a catalyst for women's empowerment. The current study mainly defines empowerment as the economic empowerment gained by a performing business which leads to

overall empowerment of a woman. Running a business provides a woman with an income and autonomy in the family. A business can boost their self-esteem, self-confidence and make them less reliant on others for their own well-being (Kabeer 2001). Further, financial capability provides a woman with decision-making power in the family and society. The involvement of women in a business may develop important skills like leadership, time management, communication, teamwork, and balancing. Further, it could provide an opportunity to connect and network with a wider community, access to resources, advocacy and leadership opportunities in society, the ability to influence business eco systems, and could improve the qualities of resilience and problem-solving, providing the ability to impact a community and ultimately making the woman an empowered role model (Kabeer 2001). The preceding discussion leads to the following hypothesis:

HYPOTHESIS 1B. Business performance of women entrepreneurs (BPWE) has a positive association with women's empowerment (WEM).

USE OF SOCIAL MEDIA AND WOMEN'S EMPOWERMENT

Social media can play a significant role in empowering women across many domains, but the nature and extent of the empowerment could vary based on cultural context, socioeconomic status and digital literacy (Maier and Nair-Reichert 2007). The use of social media could empower women in different facets of life. It could be economic empowerment through using social media in business, through online business, access to markets or financial inclusion (Drolet 2011). The use of social media in business provides a woman entrepreneur success in the venture, which would lead to increased flexibility, financial freedom, increased confidence, independence and improved control over life which, in other terms, is the feeling of empowerment (Beninger et al. 2016).

Further, the use of social media can empower women through online activism, political participation and reducing the political gender gap for political empowerment (Abubakar and Dasuki 2018). The use of social media provides social support networks for women through online communities, mentorship, skills development programmes and through providing access to information and resources in the field in which they need to excel (Dewi 2020). According to Ajjan et al. (2014), social media should foster the control a woman has over her life and the choices she

makes. Yet cultural norms, opportunities for digital literacy, and privacy and safety issues in the cyber world could lead to variations of how a woman would empower herself using social media. Accordingly, use of social media, albeit with its own challenges, could lead to women's empowerment. The preceding discussion leads to the following hypothesis:

HYPOTHESIS 2. Use of social media (SM) has a positive association with women's empowerment (WEM).

MEDIATING ROLE OF BUSINESS PERFORMANCE OF WOMEN ENTREPRENEURS

A mediator is a conceptual variable which could account for differences in peoples' behaviours. It is an active organism that intervenes between a stimulus and a response, accounts for the relation between predictor and criterion and a variable which is a transformation process (Zhao, Lynch, and Chen 2010). Further, a successful mediator causes the dependent variable and is caused by the independent variable. A business is a generator of change. Business activities as emancipatory efforts are focused on changing individuals and teams, allowing pursuit of freedom and autonomy. A performing business may support to breaking the status quo and changing their position in society (Rindova, Barry, and Ketchen 2009). In this context, it is interesting to see how use of social media leads to business start-ups and supports their performance, leading to women's empowerment.

Digital technologies, including social media, have levelled the playing field and empowered women entrepreneurs to improve their lives (Beninger et al. 2016). Social media provides a platform for women entrepreneurs to engage, collaborate, interact with stakeholders, and create avenues for growth and progress (Dewi 2020). While social media has its benefits, research has highlighted potential challenges such as negative comments and the risk of burnout from constant use (Olsson and Bernhard 2021). However, social media has allowed women entrepreneurs from small-scale to large-scale enterprises to build their brand image and achieve business success (Olanrewaju et al. 2020).

Existing studies have highlighted that the use of social media is feasible in improving performance capabilities of businesses (Paniagua and Sapena 2014). Social media further empowers women entrepreneurs by not only offering valuable information but also by providing the education necessary for women to make informed decisions for their business activ-

ities (Buttner and Moore 1997). Use of social media has enabled women entrepreneurs to build on networks which have increased their competitiveness, ultimately empowering them to perform even better (Cesaroni, Demartini, and Paoloni 2017). The use of social media facilitates both well established and start up entrepreneurs to enhance relationships with stakeholders, and to reach a competitive advantage through easy use and cost effectiveness even at times of limited funds and lack of experience (Olsson and Bernhard 2021). Social media use has provided creative ways of interacting, participating, and communicating with different stakeholders in private life and business endeavours which may support women entrepreneurs who own small and medium businesses with limited resources and capabilities (Dewi 2020). The use of social media influences women entrepreneurs to use networking tools such as Facebook to allow balance between networking and family life (De Silva and Hansson 2022), to promote their businesses and conduct their business in social media apps and to use it as a cost effective and time-saving method (Kaur and Kumar 2020). Usage of social media platforms has shown the improvement of business performance of women entrepreneurs (Abubakar and Dasuki 2018). The establishment of hypothesis 1a assures how use of social media could be positively associated to business performance of women entrepreneurs and hypothesis 1b assures how business performance of women entrepreneurs could be positively associated to women's empowerment. Hence, business performance of women entrepreneurs qualifies to play the role of a mediator between the independent variable, use of social media and the dependent variable, women's empowerment. Based on the above discussion, the following hypothesis was proposed in this study:

HYPOTHESIS 3. Business performance of women entrepreneurs (BPWE) mediates the positive association between use of social media (SM) and women's empowerment (WEM).

In Figure 1, the conceptual framework represents the hypotheses relationship among variables to understand the key relationships of the use of social media, business performance of women entrepreneurs, and women's empowerment.

Methodology

The study aimed to explore the relationship between use of social media, women's empowerment, and business performance of women entrepreneurs in the Sri Lankan context. The author applied the mixed method

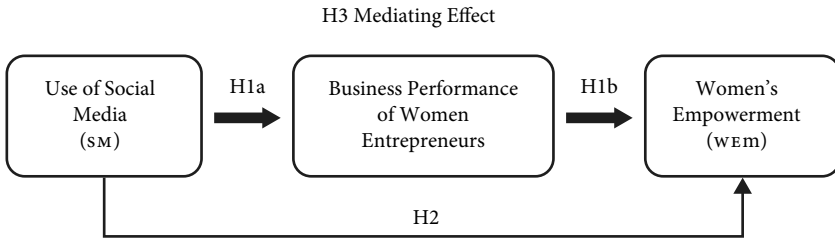


FIGURE 1 Conceptual Framework

using both quantitative and qualitative methods in data collection and analysis. The follow-up explanations model of explanatory design was used (Creswel et al. 2006). Firstly, the quantitative data (through an on-line survey) were collected, analysed and the results were derived. The results were then identified for a follow-up using a qualitative data collection method (focus group discussion) followed by data analysis and generation of results.

DATA COLLECTION

The research focused on women entrepreneurs who use social media in their businesses. The quantitative data were collected through a survey questionnaire from 200 women entrepreneurs (157 responses received) who use social media for their business. The convenience sampling technique was used. A list of contact details of women entrepreneurs who use social media for their business was obtained from the women's chamber of commerce of Sri Lanka, with the consent of the participants (these women entrepreneurs have provided their contact details with the consent to share it with external parties for marketing and research purposes). Qualitative data were gathered through a one-hour focus group discussion conducted via zoom with five women entrepreneurs in the Sinhala language. Two women entrepreneurs were known contacts and the other three were introduced by them using the snowballing technique.

MEASURES

A 5-point Likert scale was used throughout the questionnaire survey, 1 point being 'strongly disagree' and 5 points being 'strongly agree'. There were 9 items to measure the use of social media in women entrepreneurs' businesses (Ex: Social media is used to communicate and collaborate with customers and suppliers, Social media is used to learn from other business pages), 7 items to measure business performance of

women entrepreneurs in terms of how use of social media impacts the business (Ex: Use of social media has increased the overall sales of my business, The use of social media has improved the quality of services provided to customers, The overall satisfaction of customers about the business has improved), and 11 items to measure women's empowerment (I can choose to do whatever I wish in my life, I have an influence over the attitudes and opinions of my family members, I feel that I am capable of convincing others in society).

DATA ANALYSIS

Data were analysed using structural equation modelling (SEM), aiming to test the PLS-SEM path model and measure the mediating effects and complex relationships (Hair et al. 2014). SmartPLS 3.0 software was used in analysing the data. According to the descriptive statistics there were no missing values in this study. There were 7 outliers identified using box plot diagrams which were removed, and the remaining 150 responses were taken into the data analysis. 157 responses for the survey were given by women entrepreneurs who use social media in their businesses in various industries and fields.

The women entrepreneurs who were in the focus discussion will be named as A, B, C, D, and E in the qualitative data analysis.

RESPONDENTS' PROFILES IN THE QUANTITATIVE STUDY

Table 1 summarizes the key demographic and social media usage statistics of the 157 women entrepreneurs included in the analysis.

RESPONDENTS' PROFILES IN THE QUALITATIVE STUDY

Table 2 provides a snapshot of the backgrounds of each participant of the online focus group discussion.

Results

The results of both quantitative and qualitative analysis are presented, and the qualitative analysis was conducted to augment and build upon the results of the quantitative analysis.

STRUCTURAL EQUATION MODEL

Measurement Model

Based on the structural equation model there are three latent variables such as women's empowerment (WEM), business performance of wom-

TABLE 1 Respondents' Profiles in Quantitative Study

Category	Percentage	
Age	20–30 years	18%
	31–40 years	43%
	41–50 years	27%
	51 years and above	12%
Marital Status	Single	49%
	Married	42%
	Widowed	2%
	Separated	3%
	Divorced	4%
Education	Completed Advanced Level	36%
	Completed Ordinary Level	7%
	Diploma	25%
	Bachelor's Degree	21%
	Master's degree	10%
	PhD	1%
Business Duration	Less than 5 years	37%
	6–10 years	25%
	11–15 years	18%
	16–20 years	12%
	Over 21 years	8%
Business Sector	Fashion accessories	20%
	Beauty salons	26%
	Food and beverages	31%
	Leisure	11%
	Events and Decorations	5%
	Electronics	4%
	Other	3%
Social Media Platforms (the respondents had to select all platforms they use)	Facebook	73%
	WhatsApp	65%
	Instagram	57%
	TikTok	43%
	Viber	26%
	Twitter	15%
	Other platforms	None were mentioned
Social Media Experience	Less than 5 years	39%
	6–10 years	40%
	11–15 years	18%
	16–20 years	3%
Social Media Usage	Daily	73%
	Weekly	15%
	Monthly	9%
	Seasonally	3%

TABLE 2 Respondents' Profiles in Qualitative Study

Entrepreneur	Educational Background	Previous Occupation	Current Business Endeavour
A	BSc in IT	Senior Manager at ICTA (Information and Communication Technology Agency, Sri Lanka)	STEM and Entrepreneurship education provider
B	Architect	Architectural practice and lecturing	Architectural design practice and ongoing PhD studies
C	International Business Graduate	Internship at a multinational	Events management business
D	Veterinary studies (Dropout)	Worked in a us-based digital marketing company and acquired self-learned digital marketing skills	Cloud content marketing, content supplying, and network security services
E	Computer Science Graduate	Administrative officer at a leading university in Sri Lanka	Online clothing business (launched in 2021 during the covid outbreak)

en entrepreneurs (BPWE) and use of social media (SM). In accordance with PLS-SEM, the two-step process was applied as suggested by Hair et al. (2014), which is first to assess the measurement model and then the structural model. For the confirmatory factor analysis, the variables were allowed to co-relate with each other and according to the modification indices the factor loadings below 0.5 were removed. From the women's empowerment construct, WEM1, WEM7 and WEM8 were removed. When removing these, the items with the lowest factor loadings were removed first (Hair et al. 2014). In this refined model, all the factors were above 0.5 and were significant at the 0.05 level of significance.

The validity and the reliability of the measurement model was interpreted based on Cronbach's alpha average variance extracted (AVE) and composite reliability (CR).

As shown in Table 3, all the Cronbach's alpha values are more than 0.7, CR values are greater than 0.6 and AVE greater than or equal to 0.5.

According to Table 4, the discriminant validity matrix has a correlation comparison between latent constructs and the square root for AVE (Hair et al. 2014). The values depicted below represent the values greater than the corresponding off-diagonal elements for adequate discriminant validity.

TABLE 3 Indicator Loadings, Reliability, Internal Consistency Reliability and Convergent Validity

Item	Loadings	Cronbach's alpha	Composite Reliability (CR)	Average Variance Extracted (AVE)
Women's Empowerment (WEM)				
WEM2	0.789	0.831	0.839	0.502
WEM3	0.681			
WEM4	0.587			
WEM5	0.831			
WEM6	0.674			
WEM9	0.711			
WEM10	0.824			
Use of social media (SM)				
SM1	0.534	0.933	0.953	0.648
SM2	0.756			
SM3	0.812			
SM4	0.734			
SM5	0.566			
SM6	0.724			
SM7	0.665			
SM8	0.597			
SM9	0.759			
Business Performance of Women Entrepreneurs (BPWE)				
BPWE 1	0.779	0.833	0.901	0.590
BPWE 2	0.792			
BPWE 3	0.861			
BPWE 4	0.828			
BPWE 5	0.717			
BPWE 6	0.576			
BPWE 7	0.793			

Structural Model

The structural model was evaluated based on the hypothesized relationships among latent constructs. Figure 2 demonstrates the P value path related to the hypotheses.

The structural model demonstrated a good level of fit, where $CMIN/DF = 2.310$ (minimum discrepancy divided by its degrees of freedom), $GFI = 0.899$ (fit between the hypothesized model and the observed covariance matrix), $CFI = 0.934$ (comparative fit index) and $RMSEA = 0.081$ (root mean square error of approximation). Therefore, it can be established that the goodness of fit for the structural model is at an acceptable level.

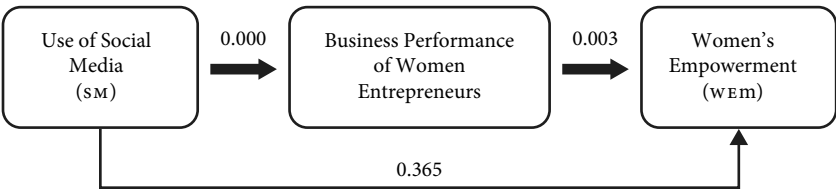


FIGURE 2 *P* value path related to the hypothesis testing.

NOTE $P < 0.011$.

TABLE 4 Discriminant Validity Matrix

	WEM	SM	BPWE
WEM	0.713		
SM	0.653	0.768	
BPWE	0.531	0.679	0.801

Structural model to determine the mediating effect

Based on the bootstrapping method with 5000 bootstrap samples generated at 95% confidence level, Table 6 represent the findings of the direct and indirect relationships and the mediating effect, whereas Figure 2 demonstrates the results including the mediating effect.

The study has revealed a full mediation between SM and WEM through BPWE, though the direct effect between SM and WEM is non-significant.

THEMATIC ANALYSIS

The nearly one-hour focus group discussion information was analysed using thematic analysis to develop the themes of how social media is empowering women entrepreneurs in Sri Lanka currently and to identify how social media can be improved to support women entrepreneurs in Sri Lanka.

According to the qualitative analysis, the use of social media is empowering contemporary women entrepreneurs in Sri Lanka in seven ways.

1. *As a platform which changes the mindset positively to become a businesswoman*

Entrepreneurship is a risky affair which can lead to both profits and losses and successes and shutdowns. Mostly, people are looking for stability and security in financial inflows of life and are reluctant to take on the risks of business. Specifically, society and families do

TABLE 5 Results of the Hypotheses Testing

Hypothesis	β	P	Result
H1a: SM \rightarrow BPWE	0.989	0.000	Accepted
H1b: BPWE \rightarrow WEM	0.419	0.003	Accepted
H2: SM \rightarrow WEM	0.352	0.365	Rejected

TABLE 6 Mediating Effect of Business Performance of Women Entrepreneurs, in the Relationship Between Use of Social Media and Women's Empowerment

Effect between variables	Direct Effect	Indirect Effect	Total Effect	Mediation Effect
H3: SM \rightarrow BPWE \rightarrow WEM	0.271 0.352	0.440 0.003 **	0.710	Full Mediation

not have a good image of someone leaving a professional and secure job to become a businessman/woman.

A: 'My parents didn't like me quitting my job as a hardcore developer and starting a business. They thought I am mad, and they believed businesswomen do not have a good image and it is not something stable to do.'

Today, many in our societies are part of various social media and the opinions, success stories and ideas they see in social media have changed their mindset about entrepreneurship.

2. *As a platform of motivation and inspiration*

There are many profiles and stories of successful entrepreneurs in social media. These stories can be very inspiring for many young women to think about their own lives, dreams, and focus.

D: 'When I dropped out from my university for a personal reason, I had no idea of what I should do next. I saw this profile of a renowned international celebrity who became very rich by having her own cosmetics label, and I thought, why not?'

Successful entrepreneurs provide many opportunities, tips, and strategies to follow in becoming a resilient entrepreneur and one can be really inspired even in difficult times not to give up in one's business.

3. *As a platform of knowledge creation and dissemination*

There are so many things that women entrepreneurs can learn in the social media platforms. There are so many pages and groups created for learning purposes. There are vloggers and pages that provide solutions to most of the problems a woman entrepreneur

might have through their videos and posts. Social media is used by women entrepreneurs to share what they learn, too, so that others can use their knowledge accordingly.

A: 'Many of us are using many types of social media for our businesses like Instagram, Facebook, LinkedIn, and WhatsApp at the same time. Different stakeholders are using different platforms to communicate with you, and it is really time consuming to look at all that separately. Then I learnt in a YouTube vlog that there is a platform called 'Omnichannel' where all your social media communications in various platforms can be integrated onto one platform. I used it and it is so effective. Then I did a small video about it and shared it in my social media for my followers to use it.'

4. *As a platform for business creation*

Nowadays there are many businesses which are started through social media platforms such as WhatsApp, Instagram, and Facebook. One can start an online business without requiring any space or with the least cost using social media.

E: 'During covid times, I became an online shopper. One day I was thinking, why can't I start my own online business, I always wanted to have my own clothing line. Without having anything in my hand, one night I created a business page in Instagram for my business. Then I got myself into contacting suppliers which I found through Facebook and started my work.'

5. *As a platform to operate a business*

Not only the online businesses, but the businesses which have physical stores now also have an online operating arm through social media. Many orders are taken through platforms such as WhatsApp, the marketing is done only via digital social media, the payments are done through online channels and almost all operations of a business can today be performed online via social media.

E: 'I have the t-shirts and other garments I sell in a room in my house. The ordering of customers, payments and the rest happens via WhatsApp and Instagram. Even the revenue lists are generated through the online cash payment system.'

6. *As a gender neutral and equal platform for personal, professional, and business branding*

Social media is a platform where any person, despite their gender, race, education level, country, etc., will have an equal and neutral opportunity for a person to present themselves, a business, an event, or any discipline. It provides a platform to brand yourself, promote yourself and come up with any opinion you want. The same goes for business organizations. Only self-motivation is required to use social media to brand yourself and promote your opinions. If used in the right way and in correct context, it is a very powerful tool.

C: 'When you establish yourself well using social media, there is no need for you to introduce yourself or business to anyone. I have established myself and my business well in social media like Instagram, Facebook and LinkedIn, no one requests my information because they know me well through these mediums.'

7. *As a platform to reach out to stakeholders and network*

Nowadays all types of businesses and individuals who are involved in work on different levels are part of some or all the types of social media. For many businesswomen, social media is a great platform to explore potential investors, employees, suppliers for the business materials they require, experts on the information they require, customers, etc., both locally and internationally. If not for social media, it would be a great deal of hard work for an entrepreneur to reach these various types of stakeholders.

A: 'Hatch and Accelerate Her are some funds providing agencies for women entrepreneurs, I got to know about them through Facebook pages. I was trying hard to expand my business internationally. I was trying India and Malaysia through the contacts I got from Facebook, and the Malaysian party I am working with are very positive. So, I will be reaching the Malaysian market in the next month with my STEM online platform.'

Social media is a platform to reach a wider society than you can physically develop interactions with. A business may connect to customers and can find employees, suppliers, and investors within local and international reach.

Further, the thematic data analysis was able to identify the below themes as to how social media can be improved to support women entrepreneurs in Sri Lanka.

1. *Start a social media movement to motivate and inspire women to become entrepreneurs*

There are so many myths and false judgements about entrepreneurship in general and women's entrepreneurship specifically. A movement of successful women entrepreneurs and their experiences can be developed through social media to reach out to wider society, targeting girls and women to motivate and inspire them in entrepreneurship, its benefits and how to use mediums like social media to start and develop a business easily. There are so many successful women entrepreneurs who are hidden, and such women can be given an opportunity through social media to speak of their journeys because social media is a very powerful and gender-neutral platform.

A: 'The female representation is a lot less in business, it is time that successful women entrepreneurs speak up about their stories using social media to inspire other women, especially young girls.'

More women role models can be promoted using social media to inspire women in general while celebrating the diversity of these women in terms of their age, sexual orientation, educational levels, geographical areas and the scale and type of their businesses.

2. *Create more networking, solutions, and opportunities through creating specific groups*

Social media can be used to develop pages on various aspects of a business, to develop business-related knowledge and to develop the necessary networking in similar groups. These groups can be used to sort out the issues of the business community in the same industries. There are so many policies developed by the government to support small and medium women's businesses and there are at times funds available but not communicated to the relevant parties. By creating specific social media pages this communication could be done in more effective ways.

B: 'We have made a group in Facebook for architects in Sri Lanka, most of the practicing architects are part of this group. So, whenever there are macro level or micro level issues relevant to our field, we discuss it in that group. Also, whenever an architect faces any technical difficulty and needs support or consultancy, we ask for help and opinions in the group and in no time, many respond with fantastic solutions.'

The global markets are changing every day and social media can be used to learn about these global trends as it disseminates lot of knowledge.

3. *Provide free professional courses on business-specific skills*

There are so many skills required to excel in business. Skills in management, marketing, handling finance, taxation, how to use technical tools for business, leadership, logistics handling, etc. Social media can be used as a platform to provide short courses, videos, sessions, and workshops to develop these skills of women entrepreneurs.

D: 'Social media is indeed a learning platform. In fact, one can start a business of providing short courses using this facility to educate women in entrepreneurship. You can learn through social media and even not necessary be physically in a place and at a much lower cost on your data.'

There are many tech tools like ChatGPT, Tom, Midjourney, etc. that women entrepreneurs can use in developing their businesses. But when compared to men, women tend to lag and are a little afraid to use these technologies. But social media can be a good learning platform for them to realize the importance of such technical tools.

4. *Provide more facilities for empowerment with privacy and security for women users*

Social media is indeed a platform which provides women with power to express themselves and their opinions. Also, in a very gender-neutral and equal way it provides the ability even to start and run their own business. These are platforms open to anyone and there can be very positive and constructive feedback on the work of women in terms of their personal and business profiles but at the same time negative, offensive, judgmental, and destructive comments. It is very difficult for most of the women to tolerate the negative and offensive comments because those can harm their self-pride, dignity, and confidence in front of an open crowd including known people and strangers using social media. Though social media is an empowering tool for women, it should be a platform which is safe and protects the privacy of women.

E: 'Once, I used my own photos promoting my t-shirt brand in Instagram. I was wearing a pair of shorts with the t-shirts; I got very

offensive comments about my legs, and I was body shamed and slut shamed. It was very embarrassing.’

Discussion

The quantitative analysis indicated that the impact of use of social media on the business performance of women entrepreneurs is positively correlated (0.989). Also, the impact of business performance of women entrepreneurs on women’s empowerment was positively correlated (0.419). Similarly, the relationship between the use of social media and women’s empowerment was positive (0.352), but not statistically significant. However, when examining the mediating role of women’s entrepreneurship, the relationship between use of social media and women’s empowerment was found to be both positive and significant. Further, the qualitative analysis identified that social media is empowering women entrepreneurs in Sri Lanka in various ways, namely, as a platform which changes their mindset, as a platform of knowledge creation and dissemination, as a platform of motivation and inspiration, as a platform of business creation, as a platform of operating a business, as a gender neutral platform for personal, professional and business branding and as a platform to reach out to stakeholders and for networking. The study revealed that the use of social media has great potential to empower women when used in the business context and social media can be further improved to support women entrepreneurs in Sri Lanka through using it as a movement to motivate women entrepreneurs, through creating more networking, solutions and opportunities through specific groups, to provide professional courses to develop business skills and through providing more facilities for empowerment with security and privacy.

According to the study findings of Cesaroni, Demartini, and Paoloni (2017), at an individual level, women are using social media to chat with friends and relatives to maintain social contacts and improve the work-life balance, and at an organizational level (for their business). The impact of use of social media could impact the performance of a business positively regarding management, governance, knowledge management and strategic competitiveness (Smits and Mogos 2013), which reinforces the current study finding that the use of social media impacts women’s empowerment through the mediation of business performance of women entrepreneurs. Social media networks provide the immediate facility of connecting to new markets, suppliers and customers and has overwhelmingly changed the way that business transactions are taking

place, providing unprecedented opportunities for entrepreneurs (Ramadani et al. 2013). Social media can promote a company, product, or a brand, build external communities of followers, build brand loyalty, build internal communities of followers, educate customers on specific topics or technologies, and promote a social cause. Further, social media could support product improvement or product development and has the ability to defend the company against attacks, supporting improvement in performance of a business (Global Entrepreneurship Monitor 2022). Research has found that businesses that use social media outperform those which do not use social media, as use of social media could lower the costs and improve the efficiency of business firms (Smits and Mogos 2013).

When women entrepreneurs use social media in their businesses, it has an overall positive impact on their lives personally and jobwise (Beninger et al. 2016). The ability of social media to find new ways of networking and doing business through innovative concepts such as sharing, collaboration and co-creation has supported women entrepreneurs tremendously in overcoming their challenges in their businesses such as women's subordination, marginalization and lack of inclusion (Cesaroni, Demartini, and Paoloni 2017). Women often face unequal treatment in accessing resources and gaining ICT knowledge, limiting their ability to fully leverage social media platforms (Abubakar and Dasuki 2018). Also, despite the availability of social media technologies, many women entrepreneurs are unsure of how to use these platforms to enhance their businesses (Lacho and Marinello 2010). Use of social media enables economic growth and wealth creation and increases productivity worldwide, having a special impact in emerging economies and for women specifically (Mądra-Sawicka et al. 2020) and creates value, drives business innovation, improves business performance and enhances the entrepreneurial business processes generally for any business (Olanrewaju et al. 2020). From an individual perspective, use of social media by women entrepreneurs has inspired many others to join the platforms and created a certain trend to build financial success through it (Ukpere, Slabbert, and Ukpere 2014). Individuals are also able to increase their exposure in various areas and build both professional and personal relationships using social media platforms (Beninger et al. 2016).

Supporting the findings of the current study, Ajjan et al. (2014) revealed that social media use by women entrepreneurs in emerging economies increases the women's value in financial and non-financial positions, felt

as entrepreneurial success via the feelings of empowerment. The use of social media by women entrepreneurs is vastly improving the performance of their businesses and innovation through business networking, information search and methods like crowdfunding (Olanrewaju et al. 2020). Financial independence is a key contributor to empower a woman and entrepreneurship facilitates financial independence of a woman and the well-being of a family (Kabeer 2001).

The relationship between the use of social media and women's empowerment is positive but not significant. But the relationship of social media and women's empowerment mediated through the business performance of women entrepreneurs is a positive significant relationship. Social media is considered as a way for women to become empowered, as it can provide access to resources and opportunities through its networking capabilities (Dewi 2020). Yet, it is required to be used in a right context like a business venture to achieve positive outcomes. Research in the use of social media clearly reveals that social media could be used for communication and self-expression, civic participation, social change, women's rights and economic empowerment (Mourtada and Salem 2011). Previously, social media was merely used to find friends, connect and for entertainment but lately it is being put to good use to promote a social cause, promote political manifestoes, raise voices and for empowering women, being a gender neutral platform (Melissa et al. 2015).

Conclusion

In an era where access to and use of social media tools is growing exponentially, it is very important to understand how such tools can be used for economic propulsion and overall social wellbeing. Though the popularity of the social media has improved in emerging economies such as Sri Lanka, the role that social media has regarding women entrepreneurs and on their empowerment was not clear. The results of the current study suggest that use of social media does empower women, if it is used in a productive activity like a business. It could result in greater economic and social benefits and emancipation. When social media is used in business, not only do the women entrepreneurs become financially independent; in a more sustainable way they are encouraged to be more self-actualized, which will increase their self-esteem, self-confidence and overall well-being. All these surely lead to women having a strong position in their families and society, thus being conducive to their empowerment. Social media offers women liberty, freedom, em-

powerment, independence, and control more than ever before because it facilitates an online platform which is gender neutral for them to do things on their own which were impossible to do in a real or a physical context.

Social media platforms are empowering women entrepreneurs in Sri Lanka by providing a level playing field to showcase their products/services, reach a wider audience, and establish their personal and business brands, while also fostering networking, collaboration, and knowledge-sharing opportunities for growth and success. The use of social media can be enhanced to support women entrepreneurs in Sri Lanka by creating targeted networking groups and communities that cater specifically to their needs, providing professional courses and resources to develop their business skills, and ensuring improved security and privacy measures to foster a safe and empowering online environment for women entrepreneurs to thrive.

While the research has the limitations of being limited to one country and a relatively small sample, the findings reveal the power of social media in the subsets of women entrepreneurs in empowering them. The use of social media in relation to business performance and empowerment are mainly conducted for emerging economies like Kenya, Indonesia, Nigeria, Egypt and South Africa and it is time to conduct more research in the same areas for the countries in South Asia. As the discussions and research on use of social media, business performance of women entrepreneurs and women's empowerment in Sri Lankan society are still evolving, this study will be contributing to the ongoing conversation. The study reveals that the use of social media leads to better business performance, facilitating economic empowerment for women entrepreneurs. The findings of the current research will largely facilitate the researchers' next project on developing an app supporting women's empowerment through support for business development and motivation. The researchers' intention is to use the proposed app as a resource and support women entrepreneurs to use it as a means of improving capability and to empower them.

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Zgodovina državnosti in zgodnja kmetijska tranzicija kot globoki korenini gospodarskega razvoja v Afriki

Sisipho Fani in Andrew Phiri

Raziskava želi zagotoviti vpogled v globlje vzroke za razlike v ravneh dohodka med afriškimi državami z ugotavljanjem, ali lahko zgodovina državnosti in kmetijska tranzicija, kot domnevni globoki korenini gospodarskega razvoja, pojasnita sedanje ravni dohodka v Afriki. Ocenjujemo presečne regresije rasti med sedanjimi ravnmi BDP na prebivalca, dejavniki globokih korenin in drugimi kontrolnimi spremenljivkami za vzorec 49 držav. Nadalje ocenjujemo dvostopenjsko regresijo najmanjših kvadratov (2SLS), da bi preučili, ali zgodnja tehnologija služi kot možen prenosni kanal od zgodnjih držav in zgodovine kmetijstva do sodobne rasti. Naši rezultati kažejo razmerje v obliki črke U med zgodovino kmetijstva in ravno dohodka, pri čemer so države, ki so opravile tranzicijo pred več kot 4.000 leti, lahko izkoristile zgodnjo tehnologijo, s čimer so pridobile začetno razvojno prednost. Države, ki so tranzicijo opravile pozneje, zgodnje tehnologije niso mogle izkoristiti in so doživele učinek »obrata sreče«.

Ključne besede: zgodovina državnosti, kmetijska tranzicija, zgodnja tehnologija, BDP na prebivalca, Afrika

Klasifikacija JEL: C22, C32, O43

Managing Global Transitions 22 (2): 103–119

Proučevanje determinant porabe obnovljivih virov v južnoafriškem energetskega združenju

Lesley Aidoo

V članku so proučeni glavni dejavniki, ki vplivajo na uporabo obnovljivih virov energije v južnoafriškem energetskega združenju (Southern African Power Pool – SAPP). Vir podatkov za obdobje med letoma 1988 in 2018 je 12 držav, ki sestavljajo SAPP. Učinek BDP, bruto investicij v osnovna sredstva, dela, trgovine in neobnovljive energije na obnovljivo energijo v SAPP je ocenjen s panelno metodo ARDL. Empirične ugotovitve kažejo, da imajo dolgoročno vsi koeficienti pojasnjevalnih spremenljivk pozitivne predznake, razen bruto investicij v osnovna sredstva in neobnovljive energije, ki imajo negativne predznake. Poleg tega so bili vsi rezultati statistično značilni od enega do petih odstotkov. To nakazuje, da je redukcija obnovljive energije v SAPP dolgoročno povzro-

čena z neobnovljivimi viri energije in bruto investicijami v osnovna sredstva, ne pa tudi s katero koli drugo pojasnjevalno spremenljivko. Rezultati so pokazali tudi, da je bil vpliv vsake države članice SAPP na obnovljivo energijo spremenljiv. SAPP bi torej lahko sprejetje obnovljivih virov energije spodbujal s pomočjo rezultatov, predstavljenih v tem poročilu. Na podlagi ugotovitev naša raziskava kaže, da bodo gospodarske politike, ki pospešujejo gospodarski razvoj in rast, povečale porabo obnovljive energije.

Ključne besede: energija, elektrika, trajnostnost, obnovljiva energija, SADC, SAPP, dohodek

Klasifikacija JEL: C23, O11

Managing Global Transitions 22 (2): 121–142

Z delom povezana poraba alkohola: analiza motivatorjev in odzivov v različnih kulturah

Rune Ellemose Gulev in Gabriel Dukaric

Medtem ko je raziskav o zlorabi alkohola veliko, je znanstveno preučevanje tega, kako različne kulture gledajo in se odzivajo na zmerno z delom povezano uživanje alkohola, znatno zapostavljeno. Pričujoči članek prikazuje rezultate anket, izpeljanih v sedemletnem obdobju, in se osredotoča na kulturne razsežnosti »odmik moči«, »individualizem«, »prepuščanje užitku« in »medosebno zaupanje«, ki se povezujejo z motivatorji, odzivi in s stopnjami sprejemanja zmernega z delom povezanega uživanja alkohola. Najmočnejši motivator za zmerno pitje alkohola v službi je bil »praznovanje s kolegi«, kar je po pomenu doseglo vse kulturne razsežnosti razen odmika moči, ki je, nasprotno, dosegel enak pomen kot motivator »izkaz resničnega značaja« nasprotnika. Tudi odmik moči je bil močno povezan z negativnimi čustvi ob zavrnitvi pijače, kadar jo ponudijo starejši. Skupaj je bilo izvedenih 52 korelacijskih testov, od katerih jih je pomembnost doseglo 18. Verjamemo, da bo boljše razumevanje te tematike povečalo verjetnost vzpostavitve harmoničnega delovnega mesta, ki zmanjšuje nesporazume in konflikte med zaposlenimi.

Ključne besede: kultura, alkohol, delovno mesto, odmik moči, individualizem, zaupanje, prepuščanje užitku

Klasifikacija JEL: F23, I31, J81, M14, M84, Z10

Managing Global Transitions 22 (2): 143–166

Vpliv družbenih medijev na poslovno uspešnost podjetnic in njihovo opolnomočenje: raziskava z mešanimi metodami v kontekstu Šrilanke

Thilini De Silva in Henrik Hansson

Pričujoča raziskava proučuje vpliv družbenih medijev na poslovno uspešnost podjetnic in njihovo opolnomočenje. Ob osredotočenju na Šrilanko si zastavljamo raziskovalni vprašanje: (1) Kako platforme družbenih medijev danes krepijo vlogo podjetnic na Šrilanki in (2) Kako je mogoče izboljšati uporabo družbenih medijev z namenom podpore podjetnicam na Šrilanki? Uporabljen je bil pristop mešanih metod, z anketo (157 odzivov) in razpravo v spletni fokusni skupini (5 anketirancev). Statistične ugotovitve so pokazale, da poslovna uspešnost podjetnic posreduje v razmerju med uporabo družbenih medijev in opolnomočenjem žensk. Kvalitativna analiza je razkrila, da uporaba družbenih medijev spreminja miselnost, omogoča izmenjavo znanja, zagotavlja motivacijo, podpira poslovne operacije, spodbuja spolno nevtravno znamčenje in omogoča mreženje podjetnic na Šrilanki z namenom izboljšanja uspešnosti njihovih podjetij, kar vodi do opolnomočenja. Za izboljšanje podpore bi morale platforme družbenih medijev dati prednost motiviranju, ciljno usmerjenemu mreženju, strokovnim tečajem in robustnim varnostnim ukrepom.

Ključne besede: družbeni mediji, podjetnice, poslovna uspešnost, opolnomočenje

Klasifikacija JEL: O3, M13

Managing Global Transitions 22 (1): 167–192