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Editorial Note

The May 2024 issue of the *Journal of International Business Disciplines (JIBD)* has been the result of a rigorous process of blind reviews, and in the end, the reviewers recommended four articles for publication in this issue of *JIBD*.

JIBD is committed to maintaining high standard of quality in all of its publications.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

IMPACT OF EXPORTING AND IMPORTING ON SOCIAL-ECONOMIC DEVELOPMENT: A CROSS-COUNTRY STUDY OF SOUTH AFRICA AND BRAZIL

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ABSTRACT

This paper tests the predictions of various conflicting theories on international trade and development by examining the impact of exporting and importing on economic level and basic needs in two developing countries of two different developing regions of the world; one in Latin America & Caribbean, and one in Sub-Saharan Africa. The two countries are Brazil and South Africa, respectively. Using fifteen-year lagged data that spanned 1984-2019, the paper finds that exporting tends to have negative and significant impact on both economic level and social basic needs in these two countries. Importing, on the other hand, was found to have positive and significant impact on economic level, and social basic needs in both countries. Implications of these findings for public policy and international trade theory development are discussed, and directions for future research are given.

INTRODUCTION

Two of the most important environmental forces that an international marketer must contend with in foreign markets are political and legal forces. Even if all other factors look favorable, but the government has hostile trade policies, an international marketer might consider the political risk too high to enter the foreign market. Although international firms can and do lobby governments to ensure favorable trade legislations, such efforts can be counterproductive, costly, and or time consuming, and often favor just a few firms or industry groups (Manuel & Shooshtari, 2021). A better scenario is when the government, on its own accord, adopts policies that are favorable to international trade, because it is convinced of its long-term benefits (Srivastava et al., 2022). Whereas the international marketer is more interested in the monetary or financial performance of international trade activities, the government, or policy maker is more concerned about their effects on the wider national welfare. He would more readily adopt policies that are favorable to exports and imports if convinced of their positive effects on the economic and social development of the country. Hence the need to study, not just the monetary or financial aspects of exports and imports, but also their socio-economic dimension. This latter area has received relatively little attention in the literature compared with the former.

As rightly noted by Oyewole (1997), the less developed countries, like the ones studied in this paper, will be particularly more concerned about the socio-economic dimension of exports and imports. In their quest for national development, they often seek aid and advice from the developed countries and international organizations like the IMF and the World Bank. Some of the policy

recommendations that are offered them are however looked at with skepticism. They are viewed as being particularly meant for the developed economies. Open trade policy recommendation in particular has not been enthusiastically received by many developing countries. For example, as noted by Foroutan (1993) and Nash (1993), although African governments have attempted various development policies and structural adjustments including trade reforms, these are often carried out with characteristic inconsistency. This betrays a lack of assurance of the positive impacts of these reforms on national development. An empirical evaluation of the socio-economic dimension of exports and imports in two developing countries, and belonging to two different regions of the world, as conducted in this paper, should therefore prove enlightening to policy makers in developing countries. Such study should also be of great interest to multinational corporations seeking to enter foreign developing countries, as well as domestic firms in those developing countries wanting to reach out to the international market. It is vital to find answers to such questions as: To what extent should these developing countries participate in the international market? What are the effects of exporting and importing on their national development? Which dimension of their development is being served, and which is being disserved by exporting on one hand, and by importing on the other? Answers to these questions will be of great interest to public policy makers, macromarketers, international business managers, and national interest groups alike. As succinctly stated by Gatfield and Rugimbana (2007), the State and Federal Governments around the world are becoming proactive in assisting their industries in their export endeavors. Shin and Kim (2010) for example, discussed how different government subsidies can affect quality of products meant for export. In all this venture, public policy makers need to be convinced of the positive impact of exporting and importing on their national development before entering into either bilateral or multilateral agreements and/or relaxing any policies on economic protectionism. As pointed out by Kishor (2004), businesses themselves also play significant roles in the export performance of most countries of the world. They sometimes take proactive actions lobbying governments to secure better trade conditions. These international marketers could lobby governments for more favorable trade policies only if armed with hard data showing the positive impacts of their marketing activities on national development (Manuel & Shooshtari, 2019; Shooshtari & Reece, 2017). Thus, studies of the type conducted in this paper are essential to effective policy and practice of international marketing in developing countries as they search for the best path to growth in this 21st century.

The important role that active participation in export and import can play in the development of the third world countries has long been emphasized in the literature (World Bank, 1995). Theoretically, export expands the market and can lead to benefits of specialization and economies of scale. It increases capacity to pay for the imports needed for development. It stimulates investment, learning and entrepreneurship. Import exposes a country to international competition, new products, technology, and ideas, with the positive effect of improving domestic efficiency. It increases consumer product choice with possible improvement in living standard. Especially for developing countries, importation of certain products is essential to their socio-economic development. For example, importation of books and other school materials enhances educational development, which in turn enhances the skill of the labor force. Likewise, importation of drugs and other medical supplies promotes better health which in turn promotes labor force efficiency and productivity. Interestingly, better health and wealth have been found to be positively related (Pritchett & Summers, 1993).The Development Committee of the IMF has thus encouraged giving increased attention to the role of international trade in national development as a vehicle to

stimulate sustained development of the less developed countries (IMF, 1985). It was pointed out that in the 19th century, exports of primary products were an important source of growth for many developing countries, and that in the last two decades or so, labor-intensive manufacturing have served the same function for the newly industrializing countries that have followed export-oriented policies. The committee therefore submitted that the developing countries' best hope for realizing their economic and social objectives lies in fuller integration into the international economy. Expanding world trade is said to be essential for resolving their financial problems, restoring economic growth, and effectively tackling such vital issues as employment and equity. In view of the forgoing discussion, this paper presents empirical evidence, from two developing countries in two different regions of the world for comparisons. They are South Africa in Sub-Saharan Africa, and Brazil in the region of Latin America & Caribbean. These two countries are among the relatively more advanced economies in their respective regions. Hence, it would be highly informative to explore how exporting and importing have, or have not, contributed to their socio-economic development.

LITERATURE

Several authors have written on the topic of national development with differing viewpoints. Earlier writers have equated national development with economic growth measured by such variables as GNP or GNP per capita (Bennett & Green, 1972; Green & Cunningham, 1975). However, macromarketers have increasingly become more concerned about actual benefits to the society by any purported development, such as decrease in poverty rate and unequal distribution of income (Dholakia & Dholakia, 1984; Todaro, 1989). Thus, consensus among macromarketers has swayed towards development being viewed as multi-dimensional rather than uni-dimensional focusing only on economic growth (Kinsey, 1982; Lazer, 1987; Sherry, 1989). It is now widely held among macromarketers that national development has at least two dimensions, namely: (i) economic growth, and (ii) basic needs (Duhaime et al., 1985; Mullen, 1993; Mullen et al., 1996). In connection with international trade, basic needs in the society have been measured by such variables as safe water, medical care, shelter, educational opportunities, life expectancy, birth weight of babies, level of pollution, and protein consumption among others (Karim, 2023; Pierce & Schott, 2020; Bombardini & Li, 2020; Dix-Carneiro et al., 2018; Olper et al., 2018).

Based on this two-dimensional paradigm of development, Mullen (1993) conducted a global study of the effects of exporting and importing on both economic growth and basic needs in the countries of the world. His study found that exports have a direct positive effect on economic dimension of development but a direct negative effect on basic needs. Contrariwise however, imports were found to have a direct negative effect on economic dimension and a direct positive effect on basic needs. Interestingly though, the study reported that total effect of exports on basic needs was positive and statistically significant while total effect of imports on basic needs was negative though not statistically significant. The situation was the same for total effect on economic dimension. It was positive and significant for exports while negative and significant for imports.

In another study on the effect of exporting and importing on development, Mullen et al. (1996) replicated and refined Mullen (1993). A major refinement was the use of lagged data, whereby

effects of 1975 exports and imports were assessed on 1980 economic level and basic needs. This was done to address the prior study's limitation of using cross-sectional data to study a longitudinal phenomenon. Findings of the two studies were however very similar. As in the prior study, Mullen et al. (1996) found that exports have a positive direct effect on economic level but a negative direct effect on basic needs. The reverse was the case though with imports. They have negative direct effect on economic level and a positive direct effect on basic needs. The authors however reported a positive direct effect of economic level on basic needs suggesting a trickle-down effect. Consequently, the authors found that the total effects of exporting on basic needs and economic level were both positive and statistically significant. On the other hand, total effect of importing on economic level was negative and significant. Total effect of importing on basic needs was also negative though not statistically significant – hence held to be negligible.

Using 1975 and 1980 lagged data for several countries of the world in another study, Mullen et al. (2001) examined separately the effects of exports and imports of raw materials, agricultural products, and manufactured goods on national development. They found that while exports of manufactured goods and raw materials tend to have positive effects on economic growth and basic needs, exports of agricultural products have the opposite negative effects. While this finding is of interest, the countries studied are a mixture of developed and developing countries of the world, not specifically developing countries as is done in the present paper.

In yet another study involving some 104 countries of the world, Mullen et al. (2009) also examined the effects of international trade on quality of life. They reported that while international trade enhances the well-being of the people through economic growth, this comes with negative impacts on global warming through increased emission of carbon dioxide into the environment. Of course, this finding does not relate specifically to developing countries as the countries studied are all-inclusive of both developed and developing countries.

While useful information was gained from Mullen (1993), Mullen et al. (1996), Mullen et al. (2001), and Mullen et al. (2009) the studies were general in nature, encompassing all countries of the world. They were not particularly focused on developing countries although these are known to exhibit different traits and problems from the developed world. A few authors have focused on developing countries in their study of impact of exporting and importing on national development. Oyewole and Okoro (2010) for example, studied sub-Saharan Africa as a group and reported that exporting tends to have positive and significant impact on both economic level and basic needs in Africa. Importing was found to have negative and significant impact on economic level while having negative but not significant impact on basic needs. Hojjat (1994) found that export was a major contributor to socio-economic development of Argentina and Brazil. Similarly, Yu et al. (1995) found a positive relationship between international trade and socio-economic development of India. In their own study on Nigeria and Kenya, Oyewole and Choudhury (1996) reported a positive relationship between level of exports and imports on key economic, educational, industrial, and health indicators. Similar result was found in a later study on Malawi and Cameroon by Oyewole (1997). More recently, Murakami and Hernández (2018) studied the direct impacts of bilateral exports to China on economic growth of three developing South American countries of Brazil, Chile, and Peru, during the commodity boom between 2001 and 2008. They reported that the magnitude of China's impact was less than 1 percent! The authors attributed this to the continued increasing trends of income elasticity of demand for imports in those countries, and the

growth rates of the export volumes were not sufficient to counteract this trend. In their own study of bilateral trade, between developing countries of India and four Latin American and Caribbean countries of Brazil, Colombia, Mexico, and Trinidad and Tobago, Srivastava et al. (2022) examined what factors contribute to increase in imports, exports, and total trade, as dependent variables, rather than what impacts these variables have on economic growth – in opposition to the aim of the present paper. They reported that GDP, GNP, per capita GDP, and per capital GNP, as well as openness of the economy, as independent variables, have positive and significant impacts on volume of trading activities between India and its four Latin American and Caribbean bilateral partners. Another study more related to the goal of the present paper is that of Santos-Paulino (2017). Using panel data spanning 1980-2014, the author studied the impact of trade specialization and trade policy on poverty in developing countries. The conclusion was that the amount of reduction on poverty varied by type of exports by those countries. Manufacturing exports contribute to poverty reduction more so than commodity exports, but agricultural exports have a more significant effect on poverty in low-income countries amongst these developing countries, the study reported.

Although these foregoing studies focused on developing countries, most of them did not separate analysis of exports from that of imports as did Srivastava et al. (2022). Either they analyzed only one of them (say export) or lumped the two together as one variable termed international trade. Consequently, it was difficult to extract the effects of exporting from those of importing as was done in Mullen (1993) and Mullen et al. (1996). Most of them also failed to lag the data used for their analyses. The present paper combines the best of both worlds. It (i) focuses on developing countries, (ii) separates exports from imports in its analysis, (iii) examines the effects of these on both economic level and basic needs dimensions of national development, and (iv) uses lagged data for its analysis to avoid the limitations of using cross-sectional data to study a longitudinal phenomenon.

THEORETICAL FOUNDATION

Debates on participation of developing countries in the international market have often wrapped around the dependency theory and its closely related world systems theory. Both theories predict that international trade is detrimental to the economic growth of developing countries! Dependency theory had its root in Lenin's (1917) thoughts on imperialism and Ricardo's (1817) tenet of comparative advantage of nations. The theory holds that international trade cannot favor developing countries because, being mainly primary producers, they export raw materials and import manufactured goods in accordance with Smith's (1776/1963) principle of absolute advantage of nations. It is held that the latter (manufactured goods) always commands higher prices in the world market than the former (raw materials) resulting in net loss to developing countries hurting their economic growth. Contemporary dependency theory submits that even if trade leads to economic growth, it will not lead to enhancement of basic needs. It is held that the structural framework of trade in developing countries is such that resources are concentrated in the hands of multinational corporations and the elite groups (Gultung, 1971). Hence, any economic growth from trade will only widen the gap between the rich and the poor (Evans, 1979; Chirot & Hall, 1982).

Closely related to dependency theory is the world systems theory (Wallerstein, 1974, 1979, 1980). Rooted in macrosociology and Karl Marx's thought on class distinctions in society, world systems theory holds that the world is made up of three classes of countries namely: the core, the semi-periphery, and the periphery. The core consists of the developed countries of the West, while the periphery consists of developing countries. The theory holds that using their superior political and military power, the core always gets favorable terms of trade from the periphery. Thus, international trade is said to benefit only the core while it leads to further underdevelopment of the periphery.

Neoclassical economic trade theory however sees things differently. In opposition to dependency theory and world systems theory, neoclassical economic trade theory (Ohlin, 1933; Heckscher, 1949) holds that mutual benefits accrue to trading nations. It is held that a nation's comparative advantage in the international market depends mainly on its relative possession of such factors of production as land, labor, and capital more so than political or military power! Hence, developing countries, such as the countries of Sub-Saharan Africa, and Latin America & Caribbean region, could also benefit from international trade. Could they indeed? What would the data say? A country was selected from each of these developing regions of the world to test the theories. Brazil was selected from Latin America & Caribbean region, and South Africa from Sub-Saharan Africa. These two countries are among the relatively more advanced economies in their respective regions.

To use these two countries to test the foregoing theories, the following eight hypotheses are stipulated and tested, namely:

H1: Imports have a positive effect on economic level in Brazil.
H2: Exports have a positive effect on economic level in Brazil.
H3: Imports have a positive effect on economic level in South Africa.
H4: Exports have a positive effect on economic level in South Africa.
H5: Imports have a positive effect on basic needs in Brazil.
H6: Exports have a positive effect on basic needs in Brazil.
H7: Imports have a positive effect on basic needs in South Africa.
H8: Exports have a positive effect on basic needs in South Africa.

METHODOLOGY

Data for this study was obtained from The World Bank's "World Development Indicators" (World Bank, 2022a); "Education Statistics-All Indicators" (World Bank, 2022b); and "Health, Nutrition, and Population Statistics" (World Bank, 2022c). From these sources, data on imports and exports were collected for a period of 35 years covering 1984 to 2019, and data were also collected on a number of selected 16 socio-economic variables that are often used in the literature as indicators of socio-economic development (World Bank, 1995; Oyewole & Okoro, 2010). Eight variables were selected as indicators of economic growth and eight for social basic needs development. For economic growth, the following variables were retained: (i) the GDP (constant 2015 US$), (ii) GNI (constant 2015 US$), (iii) GNI per capita (constant 2015 US$), (iv) value added in industry (% of GDP), (v) value added in industry (constant 2015 US$), (vi) value added in manufacturing

(% of GDP), (vii) value added in manufacturing (constant 2015 US$), and (viii) urbanization (% of population living in urban areas). As for indicators of social basic needs, the following variables were retained: (i) life expectancy at birth, (ii) crude death rate (per 1,000 people) (iii) infant mortality rate (per 1,000 live births), (iv) female % of total labor force, (v) number of people who are undernourished, (vi) percentage of population using at least basic sanitation services, (vii) percentage of total labor force with basic education, and (viii) percentage of female labor force with basic education.

A multiple regression econometric model was fitted to the data taking the form:

$$Y_i = \beta_i + \beta_1 X_{1i} + \beta_2 X_{2i} + \varepsilon_i$$

Where:
Y_i = dependent variable
X_{1i} = independent variable 1
X_{2i} = independent variable 2

β_1 = *coefficient of independent* var*iable* 1

β_2 = *coefficient of independent* var*iable* 2

β_i = *cons* tan *t*

ε_i = *error term*

The independent variables were exports as percentage of GDP and imports as percentage of GDP. Dependent variables were indicators of the two dimensions of development: on one hand economic growth and on the other, social basic needs, as specified above. In fitting the multiple regression model, natural logs of the dependent and independent variables were used to reduce the levels of skewness and kurtosis. Also, to overcome the problems associated with studying longitudinal phenomenon by cross-sectional data, lagged data of the dependent variables were used. Various lagged periods were attempted including 1-year, 5-year, 10-year, and 15-year. The 15-year period was found to be the most adequate based on the amount of explained variance as indicated by the computed R^2s. Thus, for example, 1999 data of the dependent variables was fitted with the 1984 imports and exports data in the final multiple regression model.

RESULTS

Trends of Exports and Imports in Brazil and South Africa, 1999-2019

Charts 1 and 2 show the trends of international trade in Brazil and South Africa respectively during the twenty-year period of 1999-2019. Generally, imports and exports in the two countries have followed a relatively upward trend during the period. In 1999, Brazil imported $107.38 billion, and exported $99.25 billion worth of goods and services. By 2019, the corresponding figures were $264.03 billion for imports, and $249.88 billion for exports! As for South Africa, in 1999, it

imported $42.71 billion, and exported $63.24 billion worth of goods and services. By 2019, the corresponding figures were $101.57 billion for imports, and $95.54 billion for exports!

In Brazil, imports and exports grew at average annual rates of 4.26%, and 4.92% respectively over the period 1999-2019. The corresponding figures for South Africa were 4.09% and 2.20%.

CHART 1. BRAZIL: TRENDS OF IMPORTS AND EXPORTS, 1999-2019 (IN CONSTANT 2015 US$)

CHART 2. SOUTH AFRICA: TRENDS OF IMPORTS AND EXPORTS, 1999-2019 (IN CONSTANT 2015US$)

CHART 3. BRAZIL: ANNUAL % GROWTH RATES OF IMPORTS AND EXPORTS, 1999-2019

**CHART 4. SOUTH AFRICA: ANNUAL % GROWTH RATES
OF IMPORTS AND EXPORTS, 1999-2019**
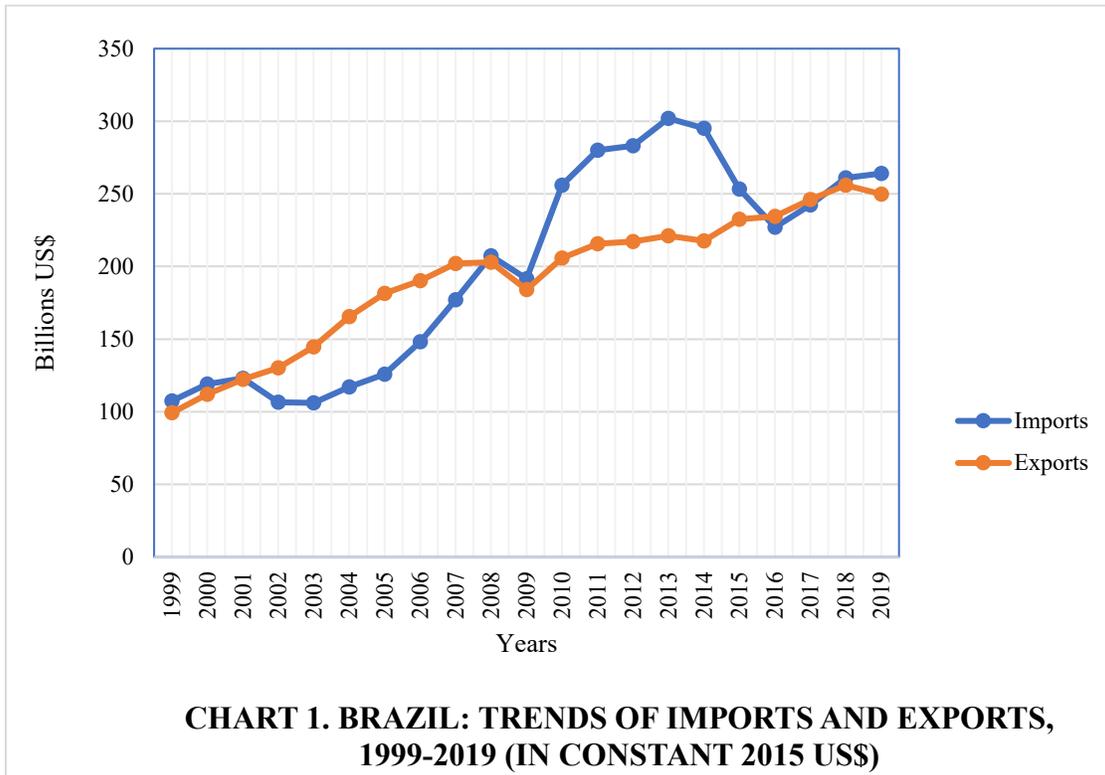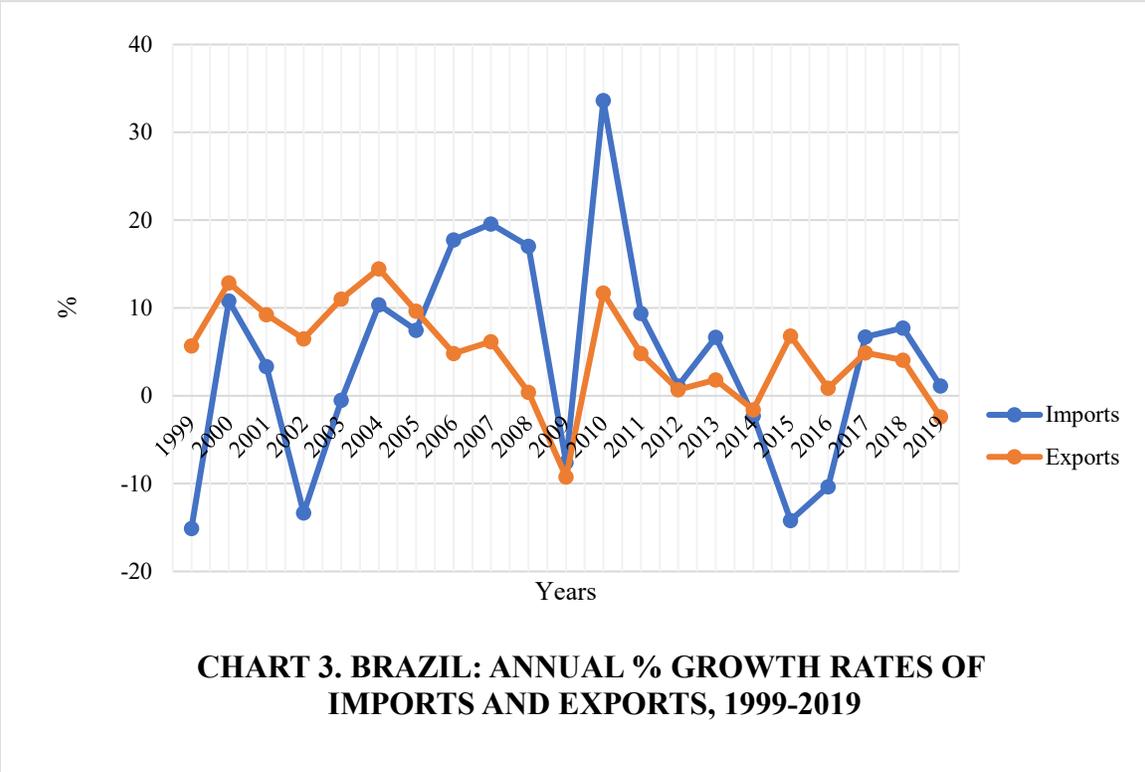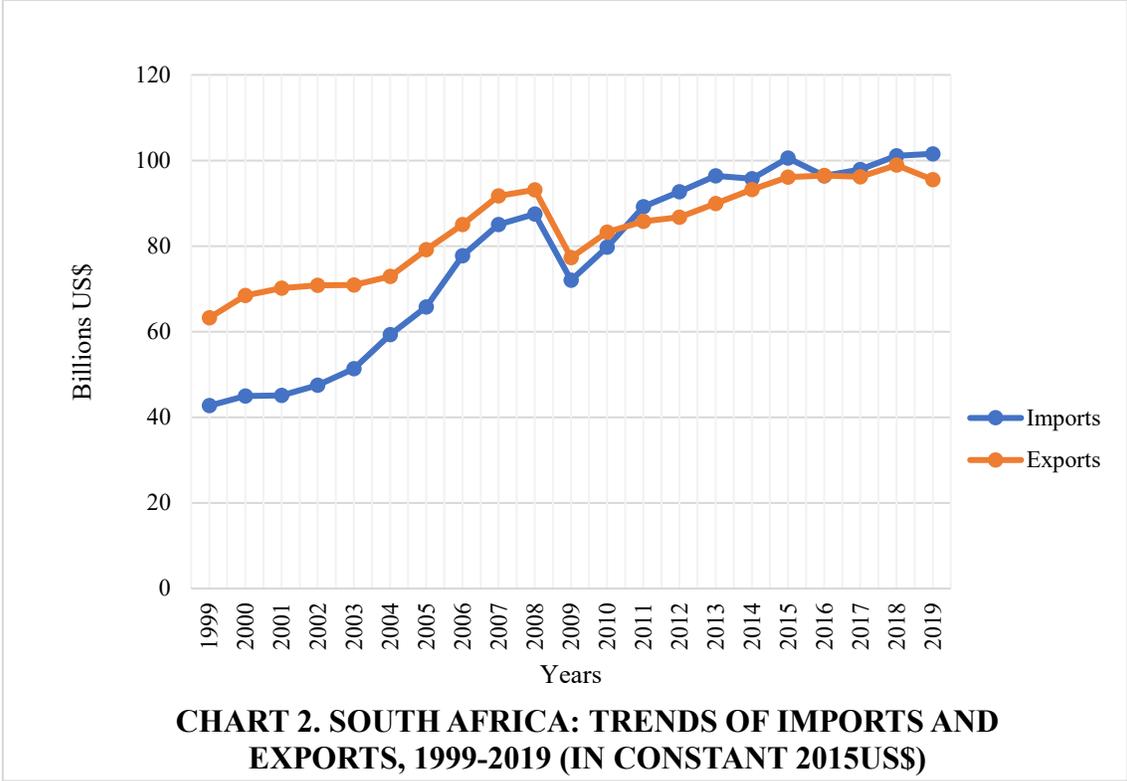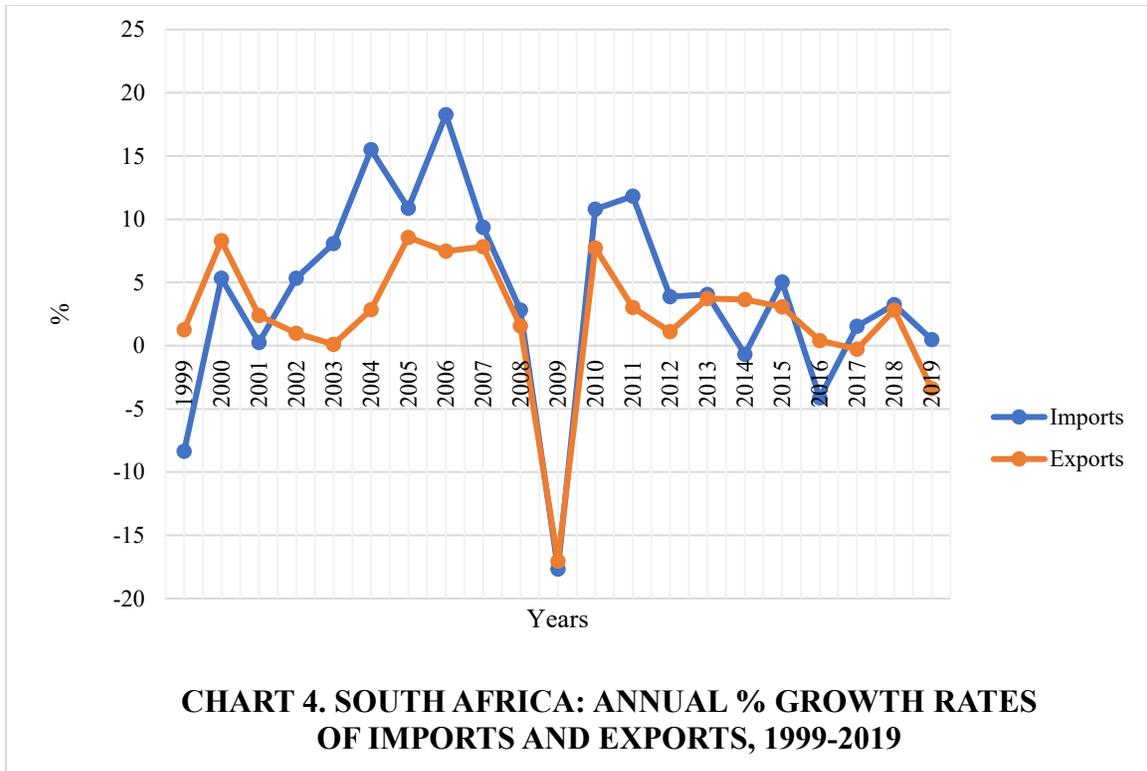
Thus, on average, exports have grown at a greater rate than imports in Brazil, while imports have grown at a greater rate than exports in South Africa. However, we noticed wide fluctuations from year to year in these growth rates as shown in Charts 3 and 4. For example, negative growth rates were recorded for several of the years in both countries. In Brazil, out of the 20 years examined, 7, and 3 negative growth years were recorded for imports and exports, respectively. Corresponding figures for South Africa were 4 and 3.

As shown in Charts 5 and 6, imports and exports as percentage of GDP followed slightly different trends in the two countries. In Brazil, the trend of imports as percentage of GDP was slightly upward, while that of exports was rather flat, despite the bump recorded in 2004. In the case of South Africa, both imports and exports as percentage of GDP tended to have an upward trend from 1999 to 2019, albeit minimal.
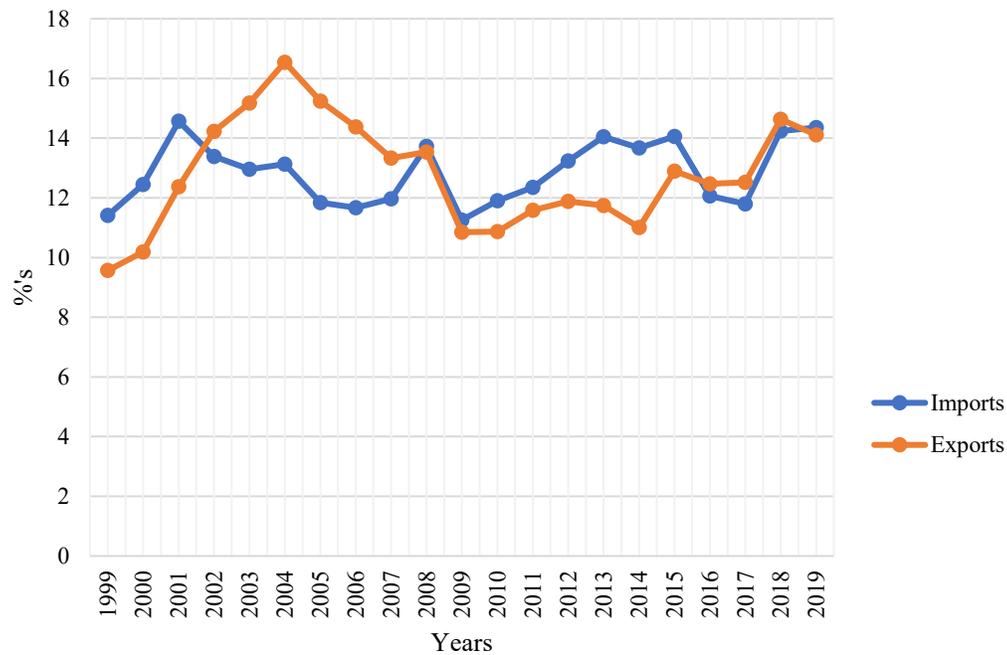
CHART 5. BRAZIL: IMPORTS AND EXPORTS AS % OF GDP, 1999-2019
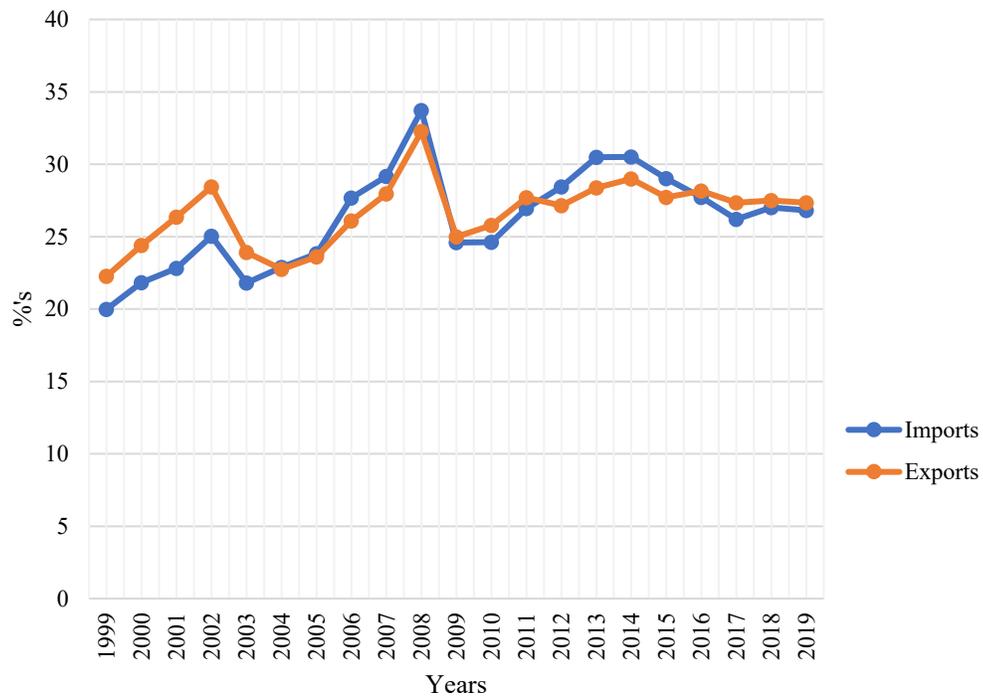
CHART 6. SOUTH AFRICA IMPORTS AND EXPORTS AS % OF GDP, 1999-2019

Given this background, the relationship between the level of imports and exports on socio-economic performance of both countries is empirically examined in the sections that follow.

Multiple Regression Analysis Results

The result of multiple regression analysis of imports and exports on economic level indicators for Brazil is shown in Table 1a. As could be seen in the Table, all the F ratios are significant at 0.05 level (as indicated in parentheses), thus indicating a good fit of the model to the data set. Likewise, all the t's of the coefficients, except one, are significant at 0.05 level as indicated by their p-values. This indicates that the impact of the independent variables on the dependent variables is significant. However, there is a striking difference between the impact of imports on economic growth, and that of exports. Looking at the coefficients, all of imports' coefficients, except two, are positive. Hence, the hypothesis H1, that says, "Imports have a positive effect on economic level in Brazil," could not be rejected by the data of this study. On the other hand, the coefficients of exports are negative across all economic level indicators except one. From this result, the hypothesis H2, that says, "Exports have a positive effect on economic level in Brazil," could not be accepted based on the data of this study. It appears that they tend to have negative effects.

TABLE 1A. ECONOMIC LEVEL INDICATORS IN BRAZIL: RESULTS OF MULTIPLE REGRESSION ANALYSIS.

| Dependent Variables	F (Sig)	Independent Variables	Coefficients	t	p-value
GDP (constant 2015 US$)	47.327 (.000)	Imports (% of GDP)	.976	9.600	.000
		Exports (% of GDP)	-.516	-5.077	.000
GNI (constant 2015 US$)	45.342 (.000)	Imports (% of GDP)	.971	9.383	.000
		Exports (% of GDP)	-.522	-5.040	.000
GNI per capita (constant 2015 US$)	49.461 (.000)	Imports (% of GDP)	.951	9.522	.000
		Exports (% of GDP)	-.623	-6.245	.000
Value Added in Industry (% of GDP)	52.999 (.000)	Imports (% of GDP)	-.771	-7.950	.000
		Exports (% of GDP)	-.297	-3.068	.007
Value Added in Industry (constant US$)	39.565 (.000)	Imports (% of GDP)	.882	8.053	.000
		Exports (% of GDP)	-.715	-6.532	.000
Value Added in Manufacturing (% of GDP)	19.882 (.000)	Imports (% of GDP)	-.870	-6.124	.000
		Exports (% of GDP)	.129	.910	.375
Value Added in Manufacturing (constant US$)	15.506 (.000)	Imports (% of GDP)	.580	3.761	.001
		Exports (% of GDP)	-.805	-5.220	.000
Urbanization	31.055 (.000)	Imports (% of GDP)	.946	7.848	.000
		Exports (% of GDP)	-.276	-2.289	.034

The result for South Africa, of multiple regression analysis of imports and exports on economic level indicators, is presented in Table 1b. Again, all the F ratios are significant at 0.05 level (as shown in parentheses), thus indicating a good fit of the model to the data set. Likewise, all the t's of the coefficients, except two, are significant at 0.05 level as indicated by their p-values. This indicates that the impact of the independent variables on the dependent variables is significant. Again, however, there is a noted difference between the impact of imports on economic growth and that of exports. Looking at the coefficients, all of imports' coefficients, except two, are positive. Hence, the hypothesis H3, that says, "Imports have a positive effect on economic level in

South Africa," could not be rejected by the data of this study. As for Brazil, the coefficients of exports are negative across all economic level indicators except two. From this result, the hypothesis H4, that says, "Exports have a positive effect on economic level in South Africa," could not be accepted based on the data of this study. They tend to have negative effects.

TABLE 1B. ECONOMIC LEVEL INDICATORS IN SOUTH AFRICA: RESULTS OF MULTIPLE REGRESSION ANALYSIS.

Dependent Variables	F (Sig)	Independent Variables	Coefficients	t	p-value
GDP (constant 2015 US$)	8.702 (.002)	Imports (% of GDP)	.655	3.004	.008
		Exports (% of GDP)	-.903	-4.145	.001
GNI (constant 2015 US$)	8.901 (.002)	Imports (% of GDP)	.656	3.027	.007
		Exports (% of GDP)	-.909	-4.194	.001
GNI per capita (constant 2015 US$)	10.538 (.001)	Imports (% of GDP)	.445	2.146	.046
		Exports (% of GDP)	-.932	-4.496	.000
Value Added in Industry (% of GDP)	10.870 (.001)	Imports (% of GDP)	-.806	-3.922	.001
		Exports (% of GDP)	.913	4.441	.000
Value Added in Industry (constant US$)	8.129 (.003)	Imports (% of GDP)	.442	1.996	.061
		Exports (% of GDP)	-.880	-3.973	.001
Value Added in Manufacturing (% of GDP)	15.672 (.000)	Imports (% of GDP)	-.843	-4.567	.000
		Exports (% of GDP)	.997	5.404	.000
Value Added in Manufacturing (constant US$)	6.257 (.009)	Imports (% of GDP)	.400	1.703	.106
		Exports (% of GDP)	-.816	-3.476	.003
Urbanization	8.877 (.002)	Imports (% of GDP)	.795	3.665	.002
		Exports (% of GDP)	-.853	-3.936	.001

A second series of multiple regression analysis was conducted for basic social needs in the two countries of Brazil and South Africa. The result for Brazil is shown in Table 2a. All the F ratios are significant at 0.05 level (as indicated in parentheses), thus indicating a good fit of the model to the data set. Likewise, all the t's of the coefficients, except one, are significant at 0.05 level as indicated by their p-values, thus indicating that the impact of the independent variables on the dependent variables is significant. Note that, to be structurally favorable to basic human needs, the signs of the coefficients of crude death rate, infant mortality rate, and number of people who are undernourished should be negative. This is because the positive, or desirable thing is to reduce the figures of such indicators as much as possible. Thus, coefficients with a positive sign on those indicators should be interpreted as structurally negative. Given this understanding, Table 2a shows that 5 of imports' coefficients are positive, and 3 are negative. This is less than 75% in either direction as a rule of thumb. In view of this, the hypothesis H5 that says: "Imports have a positive effect on basic needs in Brazil," could not be conclusively rejected nor accepted by the data of this study. The tendency would be to accept this hypothesis. However, more study would be needed before any affirmation could be made from a statistical standpoint. On the hand, all the 8 coefficients of exports are negative. Given this result, the hypothesis H6 that says: "Exports have a positive effect on basic needs in Brazil," could not be accepted by the data of this study. Rather, they tend to have negative effects.

TABLE 2A. BASIC NEEDS INDICATORS IN BRAZIL: RESULTS OF MULTIPLE REGRESSION ANALYSIS.

Dependent Variables	F (Sig)	Independent Variables	Coefficients	t	p-value
Life expectancy at birth, total (years)	36.938 (.000)	Imports (% of GDP)	.966	8.578	.000
		Exports (% of GDP)	-.308	-2.733	.014
Crude death rate (per 1,000 people)	25.216 (.000)	Imports (% of GDP)	.497	3.810	.001
		Exports (% of GDP)	.537	4.118	.001
Infant mortality rate (per 1,000 live births)	33.075 (.000)	Imports (% of GDP)	-.956	-8.121	.000
		Exports (% of GDP)	.408	3.468	.003
Female % of total labor force	4.579 (.025)	Imports (% of GDP)	.627	3.026	.007
		Exports (% of GDP)	-.236	-1.139	.270
Number of people who are undernourished	36.342 (.000)	Imports (% of GDP)	-.964	-8.505	.000
		Exports (% of GDP)	.425	3.751	.001
% of Population using at least basic sanitation services	45.944 (.000)	Imports (% of GDP)	.975	9.464	.000
		Exports (% of GDP)	-.222	-2.153	.045
% of Total labor force with basic education	18.137 (.000)	Imports (% of GDP)	-.510	-3.478	.003
		Exports (% of GDP)	-.476	-3.246	.004
% of Female labor force with basic education	20.375 (.000)	Imports (% of GDP)	-.506	-3.593	.002
		Exports (% of GDP)	-.498	-3.535	.002

The result of multiple regression analysis of the impact of imports and exports on basic social needs in South Africa is presented Table 2b. Again, all the F ratios are significant at 0.05 level (as indicated in parentheses), thus indicating a good fit of the model to the data set. Likewise, all the t's of the coefficients are significant at 0.05 level as indicated by their p-values, thus indicating that the impact of the independent variables on the dependent variables is statistically significant. Table 2b shows that all of imports' coefficients, except one, are structurally positive. In view of this, the hypothesis H7 that says: "Imports have a positive effect on basic needs in South Africa," could not be rejected by the data of this study. Contrariwise, however, all the coefficients of exports, except one, are structurally negative. Given this result, the hypothesis H8 that says: "Exports have a positive effect on basic needs in South Africa," could not be accepted by the data of this study. They tend to have negative effects.

TABLE 2B. BASIC NEEDS INDICATORS IN SOUTH AFRICA: RESULTS OF MULTIPLE REGRESSION ANALYSIS.

Dependent Variables	F (Sig)	Independent Variables	Coefficients	t	p-value
Life expectancy at birth, total (years)	17.941 (.000)	Imports (% of GDP)	1.056	5.979	.000
		Exports (% of GDP)	-.721	-4.083	.001
Crude death rate (per 1,000 people)	19.535 (.000)	Imports (% of GDP)	-1.070	-6.235	.000
		Exports (% of GDP)	.623	3.632	.002
Infant mortality rate (per 1,000 live births)	15.778 (.000)	Imports (% of GDP)	-1.000	-5.433	.000
		Exports (% of GDP)	.840	4.559	.000
Female % of total labor force	5.530 (.013)	Imports (% of GDP)	.557	2.318	.032
		Exports (% of GDP)	-.797	-3.315	.004
Number of people who are undernourished	10.302 (.001)	Imports (% of GDP)	.943	4.520	.000
		Exports (% of GDP)	-.533	-2.557	.020
% of Population using at least basic sanitation services	11.957 (.000)	Imports (% of GDP)	.849	4.242	.000
		Exports (% of GDP)	-.916	-4.576	.000
% of Total labor force with basic education	3.877 (.040)	Imports (% of GDP)	.682	2.672	.016
		Exports (% of GDP)	-.589	-2.305	.033
% of Female labor force with basic education	5.020 (.019)	Imports (% of GDP)	.725	2.963	.008
		Exports (% of GDP)	-.674	-2.752	.013

In summary, the results of the tests of the hypotheses are as follows:

H1: Imports have a positive effect on economic level in Brazil – Not rejected.
H2: Exports have a positive effect on economic level in Brazil – Not accepted.
H3: Imports have a positive effect on economic level in South Africa – Not rejected.
H4: Exports have a positive effect on economic level in South Africa – Not accepted.
H5: Imports have a positive effect on basic needs in Brazil – Not conclusive.
H6: Exports have a positive effect on basic needs in Brazil – Not accepted.
H7: Imports have a positive effect on basic needs in South Africa – Not rejected.
H8: Exports have a positive effect on basic needs in South Africa – Not accepted.

DISCUSSION AND IMPLICATIONS

The findings of this study tend to conflict with those reported in Mullen (1993), Mullen et al. (1996), as well as in Oyewole and Okoro (2010). Those studies reported that the total effect of exporting on economic level and basic needs was both positive and statistically significant. However, the reverse was the case in this paper with the non-acceptance of hypotheses H2, H4, H6, and H8. Findings in this paper actually showed significant and negative impact of exports on economic level and basic needs in the two countries studied. On the other hand, Mullen (1993), Mullen et al. (1996), as well as Oyewole and Okoro (2010) reported that the total effect of importing was negative and statistically significant for economic level but negative and non-significant for basic needs. Again, the findings of the present paper conflict with this report. This is shown by the non-rejection of hypotheses H1, H3, and H7 of the present study, and its inconclusive acceptance or rejection of hypothesis H5 that nonetheless had a positive sign. Overall, exports tend to have a negative effect on the two dimensions of development in Brazil and South

Africa while imports tend to have positive impact. These findings have some implications for theory and public policy development as discussed below.

Although dependency theory and world systems theory posit that international trade is detrimental to developing countries, the findings of this study challenge this prediction for the two developing countries studied. From the findings of this study, while exporting tends to have negative impact on development, importing is shown to have positive impact. In the same vein, while neo-classical economic theory holds that international trade has mutual benefits for participating partners, the findings of this study tend to show that while developing countries benefit from importing, their development does not significantly benefit from exporting. One implication of all these conflicting findings is that, rather than having one single body of theories solely for international trade, researchers should develop separate theories for (i) importing, and for (ii) exporting instead of lumping the two together. This will give better direction to the study of impacts of exporting and importing on national development.

The results of the analyses in this paper have shown that there is a statistically significant relationship between imports and exports and socio-economic development in the two countries studied. Policy implications of the findings of this study are many. In the first place, they show that developing countries would benefit themselves socially and economically if they adopted favorable trade policies. The fact that 15-year lagged data was found to be the most adequate based on the amount of explained variance as indicated by the computed R^2s implies that the impact of imports and exports was slow to be noted on socio-economic development of the countries studied. Thus, international trade policies should be taken as a long-term project by the government not just a quick fix to systemic problems of the country. Even then, governments should find ways for a quicker even development for the positive impacts of these trade policies to be spread across the country, as is usually the case in developed countries. The practice of concentrating development only in certain parts of the country, such as the capital cities, and urban centers, should be reexamined. When favorable trade policies are in place, both the country and the international marketers will benefit. There will be a reduction of perceived, or actual political risk, encouraging imports and inward flow of foreign investment. It also encourages domestic firms to reach out to the international market thus enlarging their customer base. There will be less need for international marketers to lobby government with all its attending expenses of time and money. The government will promulgate favorable trade policies for its own sake because these contribute to long term national socio-economic development.

The usual practice of many governments in developing countries, to restrict imports at the first sign of negative balance of payment, as noted by Foroutan (1993), and Swamy (1994), should be discontinued. Likewise, the policy of import substitution, rather than outward orientation leading to export expansion, should be re-examined. What the findings in this paper show is that imports have significant and positive impacts on socio-economic development in the two countries studied. Hence, the main issue should not be whether imports will lead to negative balance of payment, but whether the right goods and services are imported to promote economic growth and higher standard of living for the populace.

The negative impact of exports, on both economic and social developments, found in this study was rather unexpected! Two policy implications of this finding present themselves. One is that the

countries studied should reexamine *the structure* of their exports and shift to exporting products that have high growth demand in this 21st century global market. As Santos-Paulino (2011) found in a cross-country study, it is not the volume of exports that is important but also the type of specialization patterns, or structure of the exports of a country. Business as usual may not be the best policy as the world changes. For example, as pointed out by Hassan and Nassar (2018), increased service components of manufacturing have given a boost to international trade in services in recent years. Hence, shifting to such services that accompany manufactured goods would enhance the export structures of the countries studied. Even if this means giving automatic controlling power to foreign investors to boost influx of FDI's into the country in this sector of services, it will still be worthwhile (Hassan & Nassar, 2017; Nwachukwu, 2011). The second implication is that perhaps the right products are being exported but the resulting revenues are not well utilized by the government to support necessary areas of social and economic developments in the country. Just like a household (or a person) may spend its money on non-essentials and be left wanting for necessities, a nation can likewise spend its revenues on non-essentials – that do not meet the most important basic needs of the populace. In other words, how the money is spent may require greater fiscal planning, discipline, and accountability.

As a direction for future research, although the findings of this study point to positive relationship between imports and socio-economic development, but negative relationship for exports, they are not conclusive for all developing countries, not even for all of Sub-Saharan Africa, or Latin America & Caribbean region to which the two countries studied here belong. It is thus recommended that similar studies be conducted for several other developing countries. Results of such studies could then be pooled to give a fuller picture of the impact of increasing level of exports and imports on socio-economic development in the less developed world. Should conflicting results be found for various countries, the intervening variables that determine positive versus negative relationship between socio-economic development and level of exports and imports could then be isolated for further study and recommendation.

In future studies, it might be good to use actual quantity or volume, rather than monetary value of exports and imports in the analysis to reduce the effect of different price levels for the same products across countries. The data available for this study did not permit a thorough examination of this area at the present time.

The analysis done in this paper was at aggregate nation-wide level only. Due to uneven development, some parts of the countries studied may have better or worse figures than the reported here. For example, urban centers may differ from rural areas by a wide margin. This divergence was not studied in the present paper due to limitation of data availability. Hence, future studies could examine this phenomenon with availability of necessary data for such more in-depth analysis.

CONCLUSION

Using lagged data, this paper has examined the impact of importing and exporting on economic level and basic needs in two developing countries of Brazil and South Africa. The paper tested the

predictions of three conflicting international trade theories namely: the dependency theory, the world systems theory, and the neo-classical economic trade theory. Based on the findings of the present study, none of these theories could be discarded as untruth nor upheld as the whole truth! In harmony with the tenets of the dependency theory and the world system theory, exporting was found to have negative effects on economic level and basic needs in the two countries studied. This, however, is contrary to the tenet of the neo-classical economic trade theory.

On the other hand, in harmony with the tenet of the neo-classical economic trade theory, importing was found to have positive effects on economic level and basic needs in the two countries studied. This, however, is contrary to the predictions of the dependency theory and the world systems theory. In view of these conflicting verdicts, the paper agrees with the suggestion of Oyewole and Okoro (2010) that separate development theories are needed for exporting on one hand, and for importing on the other instead of lumping both together (as is currently the practice) under one single body of theories termed trade, or international trade theories. For example, the work of Yu (2010) tends to suggest that democracy as a form of government affects exporting differently than it does importing. This would support different development theories for the two. It goes without saying though, that developing such separate sets of theories will require extensive additional studies analyzing data from several other developing countries and experimenting with an array of different lagged periods than what was done in this paper.

In the meantime, the findings of this paper suggested some policy directions for the governments in developing countries. They should refrain from restricting imports as a quick fix to negative balance of payment problems. Likewise, the policy of import substitution by these countries should be reexamined. Greater fiscal planning, discipline, and accountability is also called for in the way that the government spends the revenues from exporting to ensure even development in the country and satisfaction of the most important basic needs of the populace. By doing this, the negative effects of exporting on economic level and basic needs will be minimized, while the positive effects of importing on those two dimensions of development will be maximized.

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IMPORTANCE OF PERSONAL AND PROFESSIONAL TRAITS IN THE EVALUATION OF PROSPECTIVE JOB APPLICANTS

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ABSTRACT

This study focuses on the issue of names with diverse flavors and whether having these diverse names can affect an applicant being hired for managerial or non-managerial positions. The specific names utilized in this study are Caucasian versus African-American names. The respective names were put on copies of résumés and evaluated by post-secondary students who aspire to someday become hiring managers. One of the unexpected results from the study was that participants were more likely to hire applicants with African-American names for managerial positions and applicants with Caucasian names were deemed a better fit for non-managerial positions.

INTRODUCTION

"Human resource management is a distinctive approach to employment management which seeks to achieve competitive advantage through the strategic deployment of a highly committed and capable workforce using an array of cultural, structural and personnel techniques" (Storey, 2007, p. 7). In other words, human resource management is focused on how an organization can maximize employee performance through focusing on how employees are managed and the development and implementation of effective and efficient policies and procedures.

Human resource management has been shown to be critical in numerous industries including health care (Kabene et al., 2006), non-government organizations (NGOs), volunteer organizations, and not-for-profit organizations (Bartram et al., 2017), sports (Weerakoon, 2016), and manufacturing (Hecklau et al., 2016). Human resource management helps organizations with promoting innovation in organizations (Arvantis et al., 2016), improving strategic sustainability initiatives within organizations (Schroeder, 2012), and managing a growing international population of employees (Dowling, 2004; Schuler & Jackson, 2005).

Human resource management consists of many crucial dimensions including staffing, newcomer orientation, training and development, compensation, benefits, morale and motivation, mental health, performance appraisal, career progression, and retention. The focus of the current work is on staffing, especially as it relates to recruitment and selection of prospective job applicants. Specifically, this work focuses on how peoples' perceptions of names can impact the evaluation of prospective job applicants.

The clichés concerning names are plentiful: "What's in a name? That name rings a bell. He doesn't want to name names. You name it! Make a name for yourself. Say my name." The list is seemingly endless. Indeed, names are an important part of an individual's identity. Names provide handles by which an individual can be hailed, alphabetized, categorized, or labeled. Additionally, however, names can reveal characteristics such as race gender, or ethnicity, which can be used as considerations in hiring decisions; thus the name an individual has can assume an entirely different degree of importance in one's career path.

While numerous studies have been conducted on hiring professionals' views or perceptions on the impact of names on hiring decisions, studies that analyze post-secondary students' perceptions of names are scarcer. There are two central rationalizations for the use of the current sample in this research. First, the fact that today's students will be tomorrow's young business professionals lends credence to the importance of studying what perceptions these future business professionals have of individuals' names and whether these perceptions will bias their decision in their upcoming roles as job interviewers. Second, we know far less about the perceptions of the younger generations than we do about older generations. This makes it important to better understand potential generational gaps as it relates to the evaluation of prospective job applicants based on their name.

LITERATURE REVIEW

A 2008 study conducted by Cotton et al. revealed that common names, which were not particularly unique but were well liked, represented individuals who were the most likely to be hired. Subsequently, individuals who had unique, uncommon names were the least likely to be hired. "The name an individual carries has a significant impact on how he or she is viewed, and conceivably, whether or not the individual is hired for a job" (p. 18). Despite laws that were legislated to prevent discrimination in hiring, research suggests that discrimination, whether direct or indirect, still exists. A job seeker's name alone can indicate race or gender to an interviewer, e.g., names such as Tenisha and Darnell normally refer to female and male African Americans, while names such as Emma and Cody are traditionally female and male Caucasian names. Therefore, an interviewer simply reading the name on a résumé may have a preconceived notion about an applicant's employability within an organization. Additional research found that ethnically identifiable names could affect the pre-employment process as well as salary expectations (Bart et al., 1997).

A 1997 study (Bart et al.) utilized a sample of college undergraduates as study participants to review a résumé with an African-American-sounding name and a résumé with a Caucasian-sounding name to determine which of the candidates the students would hire. The researchers determined that female study participants evaluated the female candidate more favorably than the male participants did, and the African-American study participants evaluated the African-American candidates more favorably than the Caucasian participants did.

Research indicates that when interviewers see résumés with names that may indicate race, the potential employers react negatively toward those names (see Bursell, 2007; Carlsson & Rooth,

2008; Derous & Ryan, 2012; Shore et al., 2021 for discussion). In other studies (Bertrand & Mullainathan, 2004) researchers sent résumés in response to help-wanted advertisements in Chicago and Boston. The résumés were titled with either "white-sounding" [sic] or "African-American-sounding" names on them. Research revealed that approximately 50% more of the white-sounding names received calls for interviews than did the résumés with African-American-sounding names. This finding is consistent with other research that notes that ethnic-sounding names may be a direct antecedent of employment discrimination (e.g., King et al., 2006). Researchers also note that these significant differences transcend the hiring process and impact career earning potential across the different ethnicities (Pincus, 2003). Additionally, according to a study conducted by the National Bureau of Economic Research (Bertrand & Mullainathan, 2004), résumés with white-sounding names received an average of 50% more callbacks than résumés with black-sounding names. This fact is consistent with research (e.g., Tieleman, 2016) in Europe that found that applicants did not receive an invitation for an interview when using their names (i.e., Arab sounding in this case) but did receive an invitation when they changed their names to their Flemish names (i.e., a more *white* sounding name). This statement is supported by other research in Europe that found that ethnic-sounding names had a direct impact on employment discrimination (e.g., Carlsson & Rooth, 2008; Zegers de Bejil, 2000). Interestingly, a 2016 study entailed researchers submitting résumés and biographical information for jobs and housing application in the Czech Republic and Germany. Researchers found that individuals who have majority names (as opposed to minority names) were viewed more favorably in both the employment field and the housing market (Bartos et al., 2016).

To combat diversity challenges in the hiring process, some organizations have undertaken blind hiring. Job applicants are instructed not to include their names, addresses, college names, or graduation dates on résumés they submit for jobs. While the practice of blind hiring cannot guarantee that hiring discrimination is not taking place, it can improve the job applicants' experience with the job-search process by having organizations evaluate relevant qualifications as opposed to focusing on one's ethnic-sounding name (Meena, 2016). However, since not all companies subscribe to or utilize blind hiring, current post-secondary students may require some classroom guidance performing professional, unbiased searches for candidates to fill jobs. The current study will demonstrate if name bias needs to be addressed in today's educational arena.

Research Question 1: How does one's demographics (e.g., sex and race) influence hiring decisions?

Purpose of Study: Study 1

The purpose of this study is to determine if job applicants' names bias job interviewers in the hiring process. More specifically, we are assessing a newer generation of prospective hiring professionals (the younger half of Gen Z). The respondents who participated in this project are post-secondary business students enrolled in various business classes, who may potentially be job interviewers at some point in their careers. Since some of these students are working toward becoming hiring professionals, the perceptions they have regarding applicants' names are noteworthy. If clear biases are evident in this study, then some re-education or re-direction of students' learning may

be warranted in higher education classrooms. Furthermore, this will allow the current work to compare results of a younger generation (i.e., Gen Z) of decision makers with those of older generations (e.g., Baby Boomers).

STUDY 1

Methodology

The following sections of the article will describe the study participants, materials, and procedure used in this project. Additional materials are provided in the appendices.

Participants. Upper-level undergraduate business students (N=67) participated in the study in exchange for extra credit. Six participants were excluded for providing incomplete information on the dependent measures. This extrication resulted in a final sample size of 61 (38 men and 23 women with a mean age of 21.44 years); 40 participants (66.1%) were currently employed, and 15 (24.6%) had previous managerial experience.

Materials. The researchers created résumés with 4 conditions designed around a 2 (applicant ethnicity: African American or Caucasian) x 2 (applicant sex: male or female) analysis. The text, body, and style of each résumé were exactly the same. The sole manipulation on the documents was the first name of the job applicants based on the previously described conditions (see Appendix A for a sample résumé). The first names used on the résumés were Michael, Michelle, Deion, and Beyoncé. The choice of names for the two African-American applicants was chosen randomly, via number generator in Excel, from a list of the top 25 African-American *sounding names*.

Scales. The dependent measures in this study were two survey instruments that focused on assessing respondents' perceptions of the appropriateness of prospective job applicants (i.e., Job Applicant Scale; see Appendix B) and the desirability of specific traits of job applicants in general (i.e., Desired Traits, see Appendix C). Each survey instrument and the corresponding questions were created for the current research and were measured on a 5-point Likert Scale. Each respondent evaluated two job applicants and no respondent evaluated the same two conditions (i.e., no one assessed a male, African American for both evaluations).

Reliability. The Cronbach's alpha for the Job Applicant survey instrument was .694 and the Desired Traits survey instrument had a Cronbach's alpha of .965 (specifically, the 4 items measuring perceptions of ethnicity and sex, questions 5 – 8).

Procedure. The lead author went to several classes to ask for participation in an extra credit survey. The lead researcher explained each of the forms, what would be expected from the respondents, and answered any questions the respondents had. Respondents were then informed that the survey required them to evaluate job applicants based on information provided in the

résumés included in the survey packet. Once the survey materials were completed, the students returned the materials to the lead author.

Coding. The lead author removed any identifiable marks (i.e., respondents' names on the cover page used for extra credit) from each of the surveys received and assigned a number for identification to each survey packet received for data entry purposes.

RESULTS

The researchers initially analyzed the data using a 2 (applicant ethnicity) x 2 (applicant sex) analysis of variance (ANOVA) but found no significant influence of applicants' sex, so this variable was removed from the analysis. Furthermore, the respondents age, gender, and race were included as covariates. These results yielded no significant findings and therefore are not reported here. The data was then analyzed using a univariate analysis of variance with applicant ethnicity (African-American or Caucasian) for each of the scales. A significant main effect occurred for applicant ethnicity, $F(1,120) = 6.86$, $p < .01$, $\acute{\eta}^2 = .06$. Respondents were more willing to hire African-American applicants ($M = 3.65$) than Caucasian applicants ($M = 3.25$). A moderately significant main effect resulted for applicant ethnicity, $F(1,120) = 3.74$, $p < .10$, $\acute{\eta}^2 = .03$. Respondents were more willing to hire Caucasian applicants ($M = 4.08$) for a non-management position than African-American applicants ($M = 3.82$). A significant main effect for applicant ethnicity also occurred, $F(1,120) = 14.59$, $p < .001$, $\acute{\eta}^2 = .11$. Respondents were more willing to hire African-American applicants ($M = 3.35$) for a management position than Caucasian applicants ($M = 2.76$). A significant main effect resulted for applicant ethnicity, $F(1,120) = 13.56$, $p < .001$, $\acute{\eta}^2 = .10$. Respondents reported that Caucasian applicants ($M = 3.95$) had a higher degree of fit with a non-management position than African-American applicants ($M = 3.26$). No significant main effect for applicant ethnicity in regard to respondents' perceptions of applicant ethnicity and degree of fit occurred in a managerial position.

Additional Results

A secondary focus of the current research was to ascertain the importance of particular traits that respondents had for job applicants. Specifically, which traits, when detached from a candidate (i.e., ethnicity or sex) are more important than others. Researchers initially analyzed the data using a 2 (applicant ethnicity) x 2 (applicant sex) analysis of variance (ANOVA) but found no significant influence of applicants' sex, so this variable was removed from the analysis. The data was then analyzed using a univariate analysis of variance with applicant ethnicity (African American or Caucasian) for each of the scales. Results yielded a significant main effect for applicant ethnicity, $F(1,120) = 6.93$, $p < .01$, $\acute{\eta}^2 = .05$. When evaluating a Caucasian job applicant, respondents felt stronger that the manager should be Caucasian ($M = 3.32$) than when respondents were evaluating an African-American job applicant ($M = 2.92$). A significant main effect for applicant ethnicity resulted, $F(1,120) = 8.86$, $p < .01$, $\acute{\eta}^2 = .06$. When evaluating an African-American job applicant, respondents felt that the manager should be African American ($M = 3.50$) than when the

respondents were evaluating a Caucasian job applicant ($M = 2.97$). A significant main effect for applicant ethnicity was yielded by the research, $F(1,120) = 4.86$, $p < .05$, $\acute{\eta}^2 = .03$. When evaluating a Caucasian job applicant, respondents felt that the manager should be male ($M = 4.05$) than when the respondents were evaluating an African-American job applicant ($M = 3.69$). A significant main effect was shown for applicant ethnicity, $F(1,120) = 13.56$, $p < .001$, $\acute{\eta}^2 = .10$. When evaluating a Caucasian job applicant, respondents felt the manager should be female ($M = 3.95$) than when the respondents were evaluating an African- American job applicant ($M = 3.26$).

DISCUSSION

The current research provided some interesting results. Respondents reported being more willing to hire African-American job applicants and to hire African-American job applicants for managerial positions as opposed to their Caucasian counterpart. Additionally, respondents reported that they felt that a Caucasian job applicant had a better fit with non-managerial positions.

Secondary analysis found that respondents' feelings of who were the better job applicants to hire may have been based on who they were evaluating. When evaluating an African- American job applicant, respondents reported a stronger belief that the manager should be African American as opposed to Caucasian. Similarly, when evaluating a Caucasian job applicant, respondents reported a stronger belief that the manager should be Caucasian as opposed to African American. Additionally, study researchers found that respondents evaluating a Caucasian job applicant felt the manager should be male (more so than female) and that respondents felt a female should be the manager more when evaluating Caucasian job applicants as opposed to African-American job applicants.

These results could be a reflection of generational differences from previous research or the study researchers may have been priming respondents. Respondents with a minority applicant (based on ethnicity) possibly would be primed to see less fit for the person as a manager based on the lack of fit people perceive between minorities and leadership roles. This assertion would support research that shows a disparity among different races/ethnicities and supervisory positions (e.g., Flores & Combs, 2013). The counterintuitive results in this study may have been derived from the feeling of justice or progressive beliefs being primed or evoked. Specifically, many within the younger generations are more cognizant of the history of minority applicants (in comparison to older generations) and these feelings may have been activated.

Research Question 2: How does one's qualifications bias hiring decisions?

Purpose of Study: Study 2

The purpose of this study is to determine if job applicants' qualifications bias job interviewers in the hiring process. As with Study 1, the respondents who participated in this project are post-secondary business students enrolled in various business classes, who may potentially be job

interviewers at some point in their careers. This study is important as it will provide insight as to how biases influence perceptions of a prospective job applicants' potential value as a future employee. If apparent biases are found in this study, then future research will need to see which biases are more prevalent in hiring decisions (i.e., Study 1, demographics or Study 2, qualifications).

STUDY 2

Methodology

Participants. Upper-level undergraduate business students (N=75) participated in the study in exchange for extra credit. Five participants were excluded for providing incomplete information on the dependent measures. This extrication resulted in a final sample size of 70 (36 men and 34 women with a mean age of 20.79 years); 38 participants (54.29%) were currently employed, and 17 (24.29%) had previous managerial experience.

Materials. The researchers created résumés with 8 conditions designed around a 2 (School type: State versus Ivy league) x 2 (GPA: 3.00 or 4.00) x 2 (Participation in Internship: Yes or No) analysis. The text, body, and style of each résumé were exactly the same. The résumés were amended so that respondents received a résumé consisting of 2 of the previously described conditions (see Appendix D for a sample résumé). The first names used on the résumés were Michael, Michelle, Deion, and Beyoncé.

Scales. The Job Applicant Scale and Desired Trait Scale from Study 1 were used for Study 2.

Reliability. Cronbach's alpha for the Job Applicant survey instrument was .733. Reliability for the Desired Traits survey is not available because each metric was measured by 2 items and 3 are needed to generate a Cronbach's Alpha.

Procedure. The procedure for Study 2 was the same as that for Study 1.

Coding. The lead author removed any identifiable marks each of the surveys received and assigned a number for identification to each survey packet completed for data entry purposes.

RESULTS

The researchers initially analyzed the data using a 2 (3.00 GPA vs. 4.00 GPA) x 2 (Internship vs. No Internship) x 2 (State School vs. Private Ivy League School) analysis of variance (ANOVA) but found no significant influence of applicants' sex, so this variable was removed from the analysis. As in study 1, respondents age, gender, and race were included as covariates but were found not to be significant. A significant main effect occurred for applicant GPA, $F(1,134) =$

12.42, $p < .001$, $\acute{\eta}^2 = .085$. Respondents were more willing to hire applicants with a 4.00 GPA ($M = 3.97$) than applicants with a 3.00 GPA ($M = 3.36$). A moderately significant main effect occurred for applicant GPA, $F(1,137) = 3.50$, $p < .07$, $\acute{\eta}^2 = .025$. Respondents were more willing to hire applicants for non-management positions who had a 4.00 GPA ($M = 3.35$) than applicants with a 3.00 GPA ($M = 3.11$). Finally, a significant interaction effect occurred for applicant GPA and Participation in an Internship, $F(1,45) = 4.87$, $p < .05$, $\acute{\eta}^2 = .098$. Respondents were more willing to hire applicants with a 4.00 GPA and No Internship ($M = 3.88$) than applicants with a 3.00 GPA and Participation in an Internship ($M = 3.22$).

Additional Results

As with Study 1, a secondary focus of the current research was to ascertain the importance of particular traits that respondents had for job applicants. Results yielded a significant main effect for applicant GPA, $F(1,67) = 6.28$, $p < .02$, $\acute{\eta}^2 = .086$. When evaluating an applicant's GPA, respondents felt that Previous Management Experience was more important for applicants with a 3.00 GPA ($M = 4.45$) than applicants with a 4.00 GPA ($M = 3.69$). A moderately significant main effect occurred for Participation in an Internship by an applicant, $F(1,67) = 3.27$, $p < .08$, $\acute{\eta}^2 = .047$. When evaluating an applicant's Participation in an Internship, respondents felt that Previous Management Experience was more important for applicants with no internship experience ($M = 4.06$) than applicants with internship experience ($M = 3.65$).

The current study also found a moderately significant difference for State vs. Ivy League Schools when evaluating African-American job applicants, $F(1,67) = 3.30$, $p < .08$, $\acute{\eta}^2 = .047$. Respondents noted that desirability for an African-American job applicant was higher when evaluating an Ivy League job applicant ($M = 1.38$) than an African-American job applicant from a state school.

Finally, the current study found a significant difference for State vs. Ivy League School when evaluating High GPA Desirability, $F(1,42) = 4.09$, $p < .05$, $\acute{\eta}^2 = .089$. Respondents noted that desirability for a High GPA was higher for applicants from an Ivy League School ($M = 3.07$) than for applicants from a State School ($M = 2.40$).

DISCUSSION

The results of this study present, perhaps, an interesting lens on how employment (and the viability of job applicants) may be perceived by younger generations. Respondents reported valuing higher GPAs more than lower GPAs both in general and for non-managerial positions. Respondents also reported desiring a higher GPA with no internship experience compared to a lower GPA with internship experience. Additional analyses provided some insight on these results. Respondents reported that prior managerial experience was more important for a prospective job applicant who had a lower GPA. Furthermore, internship experience was more important for those without prior managerial experience.

The prestige of the school attended (State vs. Ivy League) was found to be statistically significant for ethnic minorities but not their Caucasian counterparts. Additionally, and quite perplexingly, respondents noted a desire for a higher GPA from prospective applicants who attended an Ivy League compared to a State school.

While not the focus of the current study, additional (potentially psychological) factors seemed to have influenced the results.

General Discussion

The current studies provided some confirmation of previous theory about a high-quality prospective job applicant but also provided some potential changes as well. Many of the predicted results were in the opposite direction and may suggest that how job interviewers view prospective job applicants may be changing with younger generations. Specifically, ethnic minorities were often favored over their Caucasian counterparts. This trend was especially prevalent when respondents were evaluating minority applicants. This result suggests that opinions about prospective job applicants may be able to be primed, i.e., unconsciously influenced, either positively or negatively. While the purpose of the current work was not to assess this fact, deeper examination is merited.

Also warranted in this discussion are some potential limitations of the current work. The current results could reflect a change in generational viewpoints of what a high-quality job applicant is. The results of the study could reflect the use of college students who do not have significant experience in making such HR decisions. This lack of experience was mitigated, to some extent, by using upper-division business students who will be pursuing careers that will require them to make such hiring decisions and often do make *hiring* decisions in current employment, extracurriculars, etc. Regardless, it is suggested that the study be replicated with employees that make hiring decisions and analyze any differences in results. Another weakness of the current work is that emotion and the impact of emotionally charged names was not assessed. It is possible that some of the findings are skewed by emotionally charged reactions that respondents had with the names and therefore should be controlled in subsequent research. Lastly, the respondents could have provided researchers with the answers the respondents thought were wanted.

Despite the limitations, several fruitful avenues exist for using the current results. For theory, deeper analysis and understanding of the results need to be assessed. Future research can focus on assessing if some of the counterintuitive results were a byproduct of different generational views or a potential priming effect. The former suggests perceptions on HR theory may be changing and needs further analysis of the extent of such a change. The latter suggests that evaluations of individuals may be susceptible to priming and thus could help minimize (or exacerbate) unfair evaluations.

For practice, the current study suggests data as minimal as a name can influence evaluations. This information suggests the need for organizations to use blinded-review processes that only reveal necessary knowledge, skills, and abilities of prospective job applicants. Similarly, organizations

should think about the impact of certain qualifications and how they might bias evaluations. For example, why is attending an Ivy League school, compared to a State school, significantly important for ethnic minorities but not their Caucasian counterparts? Future research should also assess the impact of time constraints and salience of a name on hiring decisions. Specifically, are findings strengthened the more limited time for review is due to less ability of the brain to conduct conscious thought?

For future research, an interesting analysis might be the interaction effects of demographics (e.g., Study 1) and qualifications (e.g., Study 2) of prospective job applicants. At what point do the qualifications outweigh perceptions of different demographics?

CONCLUSION

The current work supports some prior research but also suggests some potential changes in how prospective job applicants are viewed. While the *why* was not answered by the current work, the current results encourage the need for a deeper examination of how the mechanisms of *how* and *why* individuals are evaluated within the workplace context may be changing. The article researchers hope this work will encourage continued research endeavors by scholars, promote thoughtful questions by practitioners about best practices and how current practices are contributing to *skewed* evaluations of prospective job applicants, and encourage all to continuously update and revise their ways of thinking as it relates to hiring practices. Human resource management is a fluid concept in that it requires managers to stay up to date on the federal- and state-level legislative changes, policy changes within industry, cultural and environmental changes, interpretation changes of current statutes. As the study results show, one cannot continue to assume findings from previous generations will continue to hold true with each subsequent generation. People change, perceptions change, and human resource management and staffing continue to evolve with the changes.

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APPENDIX A

Beyonce Smith

Permanent Address:
123 Parkway Drive
Martin, TN 38237
555.555.5555
Skyhawk1@utm.edu

OBJECTIVE   To obtain an entry-level management position in an industry leading organization that will utilize education and experience to foster growth for the organization

EDUCATION

The University of Tennessee at Martin; Martin, TN
Bachelor's of Science Degree in Business Administration
☐   Concentration in ***Management***
☐   Graduation: **May 2019**

EXPERIENCE

The University of Tennessee at Martin Grant Accounting Office
                                                                                        Martin, TN
Work Study   August 2016 – May 2019
☐   Scan records and documents
☐   Answer phone calls
☐   Take messages
☐   Provide service to walk-ins

SCHOLARSHIPS AND AWARDS

☐ Outstanding Undergraduate Management Student
☐ Local High School Annual Scholarship
☐ Tennessee Lottery Scholarship

SKILLS

☐ Effective oral communication
☐ Clear and concise written communication
☐ Proficient at Microsoft Office
☐ Time management

REFERENCES

Available upon Request

APPENDIX B

Questions for evaluating Job applicants

Instructions: All questions, unless otherwise noted, are measured on the following 5 point, Likert-type scale.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

Please indicate to what extent you agree with the following statements:

1. I would hire this candidate_____.
2. I would not hire this candidate_____.
3. This candidate is qualified for a position in management_____.
4. This candidate is not qualified for a position in management_____.
5. This candidate possesses the skills required for a position in management_____.
6. This candidate does not possess the skills needed for a position in management_____.
7. I would hire this candidate for a non-management position_____.
8. Based on this candidate's skillset, I feel a non-management position (as opposed to a management position) would be a better fit_____.
9. I would not hire this candidate for a non-management position_____.
10. Based on this candidate's skillset, I feel a management position (as opposed to a non-management position) would be a better fit_____.

APPENDIX C

Questions assessing importance of traits
Instructions: All questions, unless otherwise noted, are measured on the following 5 point, Likert-type scale.

1	2	3	4	5
Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree

Please indicate to what extent you agree with the following statements:

1. I feel it is important for a manager to have internship experience_____.
2. I do not feel it is important for a manager to have prior internship experience_____.
3. I feel it is important for a manager to have prior management experience_____.
4. I do not feel it is important for a manager to have prior management experience_____.
5. I feel it is important for a manager to be Caucasian_____.
6. I feel it is important for a manager to be African American_____.
7. I feel it is important for a manager to be male_____.
8. I feel it is important for a manager to be female_____.
9. I feel it is important for a manager to have a high GPA in College_____.
10. I feel it is important for a manager to come from a university with a high level of prestige (e.g. an Ivy League School like Harvard) _____.
11. I do not feel it is important for a manager to come from a university with a high level of prestige (e.g. small state school like UTM) _____.

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EDUCATION

The University of Tennessee at Martin; Martin, TN
Bachelor's of Science Degree in Business Administration
☐   Concentration in ***Management***
☐   Graduation: **May 2019**
☐   GPA: **4.00**

EXPERIENCE

Internship   Martin, TN
                                                        Summer 2019

The University of Tennessee at Martin Grant Accounting Office
                                                        Martin, TN
Work Study   August 2016 – May 2019
☐   Scan records and documents
☐   Answer phone calls
☐   Take messages
☐   Provide service to walk-ins

SCHOLARSHIPS AND AWARDS

☐ Outstanding Undergraduate Management Student
☐ Local High School Annual Scholarship
☐ Tennessee Lottery Scholarship

SKILLS

☐ Effective oral communication
☐ Clear and concise written communication
☐ Proficient at Microsoft Office
☐ Time management

REFERENCES

Available upon Request

TEACHING THE FUNDAMENTALS OF LEADERSHIP: THE IMPORTANCE OF EMPHASIZING SKILL DEVELOPMENT

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ABSTRACT

This article explores the implications of focusing on leadership education as a process of developing fundamental skills, like the way fundamental skills are developed in sports. Effective leaders need to develop high levels of proficiency in relation to increasing awareness, making decisions, managing attention, building relationships, and communicating. Like the fundamental skills associated with sports, these skills require sustained and intentional practice over time. This demands educational processes that place greater emphasis on affective and behavioral outcomes with an emphasis on deeper learning. Consequently, learners need to move through levels of proficiency from acquisition to compilation to automaticity. To support such progress, educators need to place more emphasis on teaching processes, providing more opportunities for scaffolded practice, and encouraging and supporting greater application beyond the classroom. This necessitates greater collaborative efforts in program design across the curriculum and with cocurricular partners that challenges the current emphasis on academic freedom.

INTRODUCTION

Leadership is a complex skill, an art and a science (De Pree, 1987). Like many sports, it requires that an individual develop the capacity to read a situation and intuit a response based on knowledge, experience, and competencies built over time. Great leaders, like great athletes have developed habits of greatness (Covey, 1989, 2004). These habits of greatness are rooted in the practice of fundamental responses and behaviors that represent the foundation of individual greatness (Duhigg, 2014). They do the most basic things extremely well. Then, they develop the capacity to apply these basic skills in different situations through the application of processes that become habitual responses (Kraiger et al., 1993). At the same time, they develop the wisdom and insight to recognize when the context is changing enough to require adaptive responses and intuitively and creatively make these adjustments. How do athletes do this? What are the implications for leaders? How does this impact the way we teach others to practice leadership? This article identifies the fundamental skills of leadership and explores how education and development processes might need to be adapted to better promote fundamental leadership skill development. Implications and challenges associated with making these adjustments are also examined.

FUNDAMENTAL SKILLS

Fundamentals are the basic skills that represent a foundation for greatness in any sport. They are the habitual patterns of behavior that individuals develop through sustained practice of repetitive behaviors. Individuals who master them are easily distinguished from those who do not and will achieve higher levels of success in their athletic arena. But how do we know what is fundamental to a specific field of endeavor?

What is most fundamental is often most frequent. If one breaks the play of a sport down into its individual moments, the fundamentals will be those things that are performed most frequently and repetitively across these moments. Consider the example of basketball. If one asks the question, what is the most fundamental skill of basketball, what does one do most frequently in every moment, the answer is not what many people may think. When people think of basketball, they often think of scoring: shooting, layups, slam dunks. However, while the process of squaring up to the basket and taking a jump shot does represent a fundamental skill in basketball, it is not something that happens that often. Most players spend little of their time on the court shooting and most take very few shots, if any, in an actual game. What is most fundamental then are those things that most players do most frequently in most moments throughout a game. These include running, sliding, dribbling, passing, jumping, and, to a lesser extent, jump shots, free throws, and layups. These behaviors are foundational to most moments and great coaches make sure players are skilled in these and make them habitual. This occurs when players intuitively operate based on these fundamentals. For example, when the offensive player moves towards the defensive player, the former drops into a stance that protects the ball while the latter naturally moves into a wide defensive stance and slides to stay in front of the offensive player. The question of course, in any field of practice is "what are the fundamentals?" and "how do we recognize and develop them?" In sports, these are identified by looking at what happens in each moment and identifying the behaviors that allow one to make the most of each moment. The same is true of leadership.

LEADERSHIP AS A MOMENTARY PHENOMENON

The scholarly world of leadership has been undergoing a paradigm shift. Traditionally, leadership has been viewed through the lens of the great man theory of leadership (Carlyle, 1973; Spector, 2016). The essence of this theory is that great men drive history. Their ability to lead others and achieve success determines the course of human events. This basic assumption represents the foundation of much of the early study and practice of leadership. It led and still leads researchers to study traits, behaviors, skills, styles, and approaches of effective leaders to replicate these to achieve success (Northouse, 2019). And, to some extent, it has been successful. Scholars and practitioners know more now about leadership effectiveness than at any other time in history. However, its success has not contributed to the creation of a society that is dominated or even characterized by widespread evidence of effective leadership (Burns, 1995). In fact, Kellerman (2004, 2016) argued that the leadership industry has failed to deliver on its promises and that to better understand leadership, it is essential to shift the focus away from the leader to the leadership system. The essence of this argument is that leadership is an activity that emerges through the

interaction that takes place in any given moment between the leader, the follower, and the context (McClellan, 2021b; Rost, 1993; Tourish, 2014; Uhl-Bien, 2006; Uhl-Bien & Marion, 2009).

As leaders and followers mutually influence each other in complex interactions within contexts that contribute to and shape these interactions, processes of influence are shaped and formed. From this perspective, leadership becomes an emergent, momentary phenomenon. Consider the following example provided by McClellan (2021a), "A leader is asked to meet with an employee to address his or her decline in performance and to influence him or her to improve" (p. 613). In this example, a leader enters a moment of interaction with a goal to influence the behavior of a follower within a specific context via a process of influence based on a relationship, as these are perceived by the leader. Likewise, the follower brings to the moment his or her own goals, influence processes, perceptions of the relationship and context, etc.

If one looks at leadership from this paradigmatic perspective, as an emergent momentary reality, then one can examine these moments to identify what they have in common and, consequently, identify what fundamental skills are foundational to success. While this, of necessity refocuses attention on what the leader is doing, it does so with an awareness that this refocusing is part of a negotiated creative interaction as opposed to a simplistic emphasis on just the actions of the leader. There is value in learning from what an effective leader does, even if one recognizes that the leader's behavior is only part of the leadership process. Thus, one can focus on what the leader brings to the leadership moment and learn from this. This is what McClellan (2021a) did to develop the cognitive process model of leadership. Consider how he describes these fundamental skills in relation to the leader's cognitive processes in the previous example:

The leader's neuro-network actively approaches the moment by collecting information via the senses and reviewing and bringing to awareness the relevant information regarding the moment that is about to occur. Information regarding the person, their performance, the leader's feelings and preferences for leading and the context are all reviewed consciously and subconsciously to determine how best to approach the situation. As this occurs, this information is vetted by neural processes based on its relative importance to the situation and attention is directed toward the most salient information. This information is then used to make decisions about what to do and how to do it. At this point, in time, the leader then captures the attention of the follower and engages in a process of directing and managing his or her attention through the process of communication to influence his or her actions. As the leader does so and based on how he or she does so, the leader builds, maintains or harms the relationship that exists between the leader and the follower. The result is the enactment of an influence process that is unique to that moment. (pp. 613-4)

This description of what happens in this moment, provides insight into six fundamental practices of leaders that apply to all leadership moments: increasing awareness, making decisions, capturing, directing, and maintaining attention, relationship building, communication, and action. Furthermore, because these are rooted in basic cognitive processes, they are consistently important across cultural contexts, even if the relevant practices associated with them vary from culture to culture (McClellan, 2021a).

COMPETENCIES FOR EVERY MOMENT

Associated with each of these momentary practices are competencies that leaders can be trained to develop and practice. The first practice, awareness, suggests that leaders need to enter each leadership moment with an awareness of themselves, others, and the context in which they find themselves (McClellan, 2022). Critical competencies that allow a leader to do this include listening, environmental scanning (informed by systems thinking and cultural intelligence), and mindfulness. Decision making involves developing and practicing skills in critical thinking and problem solving based on an understanding of intuitive and rational decision-making models. Managing attention, capturing, directing, and maintaining it, involves the ability to engage in effective perception management, create a shared vision, and engage in strategic planning and leadership. Relationship building requires competencies in trust formation and interpersonal skills. Effective communication requires that a leader develop the capacity to encode, convey, and decode messages to facilitate understanding. Action involves the ability to engage in active learning: developing knowledge, planning action, acting intentionally, reflecting on outcomes and repeating to deepen learning. See Table 1.

TABLE 1. THE FUNDAMENTAL SKILLS OF LEADERSHIP

Fundamental Practices	Fundamental Skills
Awareness	Listening Environmental Scanning Mindfulness
Decision-Making	Application of Intuitive and Rational Decision-Making Models
Attention: Capture, Direct, Maintain	Perception Management Vision Creation Strategic Planning and Leadership
Relationship Building	Interpersonal Skills: Bidding & Responding (Gottman, 2011; Gottman & DeClaire, 2001) Trust Building
Communication	Encoding, Conveying & Decoding Messages
Action	Active Learning Process

These competencies represent the fundamental skills of leadership and are applicable in virtually all leadership moments. Consider the example of decision making. Decision making skills lie at the heart of leadership coaching, meeting facilitation, strategy formulation and most other leadership practices. The ability to make decisions or at least facilitate the decision-making process is foundational to the act of leadership. Listening is another example. Leaders can only gain information about themselves, others, and the world around them through the act of listening. Thus, they must listen in every leadership moment if they wish to use any of the other foundational skills effectively, as listening and receiving influence contribute to improved decision-making, better relationships, improved communication, and even the ability to manage the attention of others (Flynn et al., 2008; Lehrer, 2009; McMillam & Chavis, 1986). The same is true of each of the other fundamental skills. They are, like running in any sport, essential skills for practicing leadership from moment to moment.

TEACHING FUNDAMENTAL SKILLS

Having identified these fundamental skills, it is essential to examine how such skills can be developed or trained, this is especially important since the goal is not mere repetition but rather creative expression in the interactive relationship between leader and follower. In their research on effective training, Kirkpatrick and Kirkpatrick (2016) identified four levels of training effectiveness: reaction, which means how people feel about the quality of the training experience; learning, the extent to which people develop new knowledge as a result of training; changes in behavior, changes that people make in terms of their actions as a result of training; and impact on results, the extent to which behavior change leads to measurably improved outcomes. Traditionally, higher education has focused on the first two levels, with most faculty evaluations and assessment methods focused on how people feel about the training or what knowledge they have acquired (Stolovitch & Keeps, 2002). In his study of leadership educators instructional practices, Jenkins (2020) found that the most commonly used methods (class discussions, interactive lectures, small group discussions, etc.) were very much within the realm of the traditional knowledge focused practices and that faculty actually tended to avoid "the highly experiential instructional strategies role-play, simulation, and games" (p. 52). Assessment processes focused on traditional approaches such as presentations and paper, with less emphasis on tests.

These traditional lectures, discussion, test, and paper writing approaches of higher education are very much consistent with a focus on the first two levels. Interestingly, many active learning strategies that are focused on just helping students learn, process, and memorize information are likewise focused on these areas. A traditional focus on teaching leadership theories and models is consistent with this cognitive outcome approach. However, if one wishes to develop fundamental skills, educators must move past this emphasis on reaction and knowledge acquisition and focus more on the behavioral and affective outcomes of the educational processes that result in actual changes in behavior and results. They must "create conditions in which leadership can be practiced" and skill developed (Ganz & Lin, 2012, p. 355). To do so requires an understanding of learning outcomes and how they are achieved.

One of the common approaches to developing learning outcomes is to develop them based on whether they are focused on knowledge acquisition, skill development, or shifts in attitudes and motivations (Kraiger et al., 1993). As mentioned, traditional pedagogical approaches in higher education tend to focus on knowledge acquisition, which is important. The acquisition of knowledge is a foundational purpose for seeking an education. Nonetheless, just possessing a knowledge of leadership is like just possessing a knowledge of a sport, it provides understanding to enjoy, but not skill to play the sport. This is because leadership, like any sport, is a complex field of practice. So, while "procedural knowledge acquisition" does enable "the reproduction of trained behaviors" (Kraiger et al., 1993, p. 316), it is insufficient to develop proficiency. Leadership education must, therefore, go beyond knowledge-oriented learning to provide for true fundamental skill development. As with any sport, the focus must be on helping would be practitioners develop the complex fundamental skills they need to apply in their arena of practice.

Complex skill development naturally occurs in three different stages: acquisition, compilation, and automaticity (Kraiger et al., 1993). Acquisition refers to the development of and initial attempts to apply procedural knowledge, and is dependent upon critical awareness of "facts, information, terms, and models," actionable knowledge, and guided practice (Yip & Wilson, 2010, p. 83). In basketball, this could involve teaching someone the basic steps to making a layup. With this procedural knowledge, the individual talks themselves through the steps as they attempt to complete the task. Regarding the fundamental skills of leadership, it might involve knowing the steps involved in effective problem solving or relationship development and initially practicing these in a structured learning environment. The key here is that faculty who wish to teach fundamental skills of leadership would need to ensure that these are converted first into procedural knowledge and that these can then be practiced in a "challenged and supported environment, with immediate coaching and feedback on performance effectiveness" (Yip & Wilson, 2010, p. 83).

Compilation occurs when individuals practice a behavior overtime and begin to develop basic skills beyond initial success. According to Kraiger et al. (1993), "performance at this stage is characterized by faster, less error-prone performance and by the integration of discrete steps into a single act" (p. 316). Actors cease to depend on the recitation of steps and begin to practice steps without having to mentally contemplate each step individually. Performance becomes more effective and fluid. In a sport, this occurs as the participant begins to act without having to think about what they are doing in the moment. In leadership, it might mean that they are able to engage in active listening without thinking about what active listening entails or move more fluidly through the process of developing a vision or the steps in an action plan without thinking about each stage of the process. To help students achieve this level, faculty needs to insure that sustained supervised practice occurs over time. Recent research conducted by Koedinger et al. (2023) examined how rates of skill oriented learning varied among students with differing level of prior knowledge. There results found very little differentiation in learning rate with typical students requiring 7 to 8 opportunities for practice to achieve 80% mastery. If this level of mastery can be assumed to correspond with the compilation stage, then the implication for leadership educators is that at least this many opportunities for practice would need to be provided at this stage. This is often problematic in leadership courses as content requirements push faculty to cover new content that is often not additive or even related closely to previous content.

Furthermore, skill development at this stage must be focused and intentional. When a player is working on the footwork for a new move or maneuver, practice is focused and intentional on that specific move until proficiency is established in this compilation stage. Only once this occurs, can the individual be expected to put the maneuver into practice in a game. Likewise, in leadership learning, simple skill development and application should come before more complex experiential application. However, it may be that many of the experiential activities that leadership educators use to apply leadership knowledge and skills bypass this simple skill development phase of compilation. This could account for why many such educators experience "challenges" with "highly experiential learning activities . . . with respect to student readiness" (Jenkins, 2020, p. 51). Students are not ready for the stage of complex application when they have not yet consolidated basic skill development at this level. Thus, this level and the next, automaticity, may be hard to attain in the format of traditional leadership courses, even though they are necessary if one is to develop fundamental skills because of the challenges of extensive content and limited

opportunities or compilation level practice before engaging in more complex experiential application.

Automaticity is a stage of proficiency characterized by high levels of skill, low error rates, and speed (Anderson, 1992). Generally, at this stage, skilled performance emerges as behaviors require less conscious effort and one can engage in parallel processing (Kraiger et al., 1993; Yip & Wilson, 2010). It is likely that this the level of proficiency is foundational to developing the capacity for creative, focused performance and versatility (Yip & Wilson, 2010), which is consistent with the experience of the flow state (Bergamin, 2017). Consider a basketball player who can focus on running a play while dribbling the ball as opposed to having to focus attention on just dribbling the ball. Such a player no longer needs to look at or think about the ball, as it has become automatic.

In addition, at this stage, one becomes more able to act intuitively in the application of skill and in adapting the skill to the context (Kraiger et al., 1993). For example, a skilled basketball player intuitively shifts the open approach of dribbling the ball in the open court to a more guarded approach when more closely defended. Furthermore, at this stage of skill development, creativity becomes possible as the interplay between the offensive and defensive player can result in new creative expressions of behavior. Thus, when something unexpected occurs the player may maneuver with the ball in an entirely novel way while still maintaining control, such as some players have done when falling down suddenly during play. In leadership fundamental terms, this might mean intuitively using different approaches to capture the attention of followers and build relationships or creatively developing new approaches based on the interplay between leader and follower. This level of skill is even harder to develop in a classroom setting as it requires more "real world" situation-based application and practice under varying circumstances over time. In summary, in terms of skill development, leadership educators could help students by, in relation to each of the fundamental skills: identifying and teaching the processes that should be enacted, providing opportunities for scaffolded practice that support basic skill development, and encouraging and supporting broader and intentional application in various settings to promote automaticity (Ganz & Lin, 2012; Kraiger et al., 1993). Consider the example in Table 2.

TABLE 2. FUNDAMENTAL SKILL DEVELOPMENT ROLE OF LEADERSHIP EDUCATOR

Fundamental Skill	Acquisition	Compilation	Automaticity
Interpersonal skills: Bidding and responding (Gottman, 2011; Gottman & DeClaire, 2001)	Teach processes of social interaction: bidding and responding	Provide structured practice in the classroom or applied setting for relationship building through bidding and responding. Provide feedback and repeated practice.	Encourage students to engage in the practices of bidding and responding in a variety of settings beyond the classroom. Encourage creative expression, feedback seeking and reflection on results.

In addition to focusing on fundamental skill development, leadership education also needs to facilitate the development of effective leadership attitudes or the leaders "way of being." Luthans and Avolio (2003) suggested that instead of focusing on just teaching leaders to use whatever

technique or skills are necessary to achieve one's desired results, leadership development programs must focus on fostering integrity by "creating a seamless link between [a leader's] espoused values, actions, and behaviors" (Luthans & Avolio, 2003, p. 242). Such alignment is essential because, "Personal character is the core of all leadership effectiveness. . . . ethical standards, integrity, and authenticity are extremely important" (Zenger & Folkman, 2002, p. 13). These elements represent the attitude or "way of being" that a leader carries with them into each leadership moment.

Research suggests that a leader's way of being is foundational to the success of the leader (Quinn & Spreitzer, 2006; Quinn, 2004). This is because people do not just respond to how leaders are behaving towards them, but also to how the leader "is regarding [them] when doing those things" (Arbinger Institute, 2000, p. 27). With regards to the kind of "way of being" that is essential to effective leadership, Quinn (2004) found that leaders needed to be purpose centered, focused on the meaningful reason for which they are leading and the related goals they wish to achieve as opposed to being comfort centered; other focused, mindful of and responsive to the needs of others as opposed to focused on their own wants and needs; internally directed, guided by core values and principles and opposed to being driven by concern for what others think of them; and externally open, open as opposed to feedback from others regarding their leadership. The importance of these kinds of attitudes is widely supported in the literature on leadership effectiveness and resilience (Arbinger Institute, 2019; Maddi & Khoshaba, 2005; McClellan, 2020; McClellan, 2021c; Stein & Bartone, 2020).

For leadership education to contribute effectively to development in the affective domain, participants must be assisted in first, identifying, clarifying, and reinforcing their sense of purpose and values. According to Zenger and Folkman (2002), a leader's sweet spot or sense of purpose is found at the point where their interests, skills, and their ability to respond to the needs of others converge. This corresponds to the "purpose for" approach suggested by Haidt (2006) which involves leaders identifying the unique ways in which they are "designed" or "called" to contribute to the lives of others. However, Haidt also advocated for a "purpose within" approach which is less focused on identifying one's overarching calling and more focused on answering the question, "what ought I to do to have a good, happy, fulfilling, and meaningful life" (p. 294). This approach is more open to an evolutionary and changing sense of purpose from moment to moment and across different life stages as what one finds engaging and interesting, one's skills, and one's opportunities to respond to others evolve over time. Regardless of the approach taken, leadership educators can nurture purpose by encouraging would be leaders to reflect on their sense of meaning as it relates to their interests, skills, and their potential for responding to the needs of others. This can be achieved through completing assessments and questionnaires, active experimentation and reflection, and journaling regarding experiences that provide a strong sense of meaning.

It is worth noting that given the emphasis on responding to the needs of others as an essential part of purpose development, the importance of being other focused is clear. To the extent that one is able to see others as fellow human beings, recognize the innate connectedness they share with them, demonstrate a concern for other's challenges, needs, and desires, and make an effort to respond to these needs, they are better able to maintain a state of being that is more deeply engaged and influential with others (Arbinger Institute, 2006, 2019). Doing so requires an effort to be mindful of how one is regarding others when leading them. Leadership educators can support this mindset by modeling it themselves, encouraging it in those they teach, and inviting them to develop

a mindful awareness of the way they are regarding others. Developing this kind of mindset management requires sustained mindfulness practices consistent with the skills-based processes outlined above (Boyatzis & McKee, 2005; Siegel, 2014).

Similar approaches can be taken to identifying values. One common approach is to identify and rank values from a list of values (Brown, 2018; Senge, 1994). Values clarifying activities, in which dialogue around specific issues or challenges results in the surfacing and discussion of values, can also be used (Fritz & Guthrie, 2017). However, values can also be identified by examining how people spend their time, money, and effort (Covey, 1989) and, even, by examining what inspires and upset them (Kegan & Lahey, 2001), as values represent a hierarchy of emotional responses (Goleman, 1995). Once values and purpose are identified. The next step is to reinforce these values. This is often done through story telling. Just as the strength of an organizational culture relies on the quality of the stories that are told within the culture to reinforce its values (Bolman & Deal, 2017; Schein, 1992; Zepeda, 2014). So, too are values reinforced in the individual. By reflecting on the stories and connecting with stories that reinforce and strengthen values, would-be leaders can increase their commitment to their own personal values. Having increased one's commitment, it is then important to explore how one is manifesting one's values in one's life and to look at ways to increase this alignment. As Brown (2018) explained, we must first become "clear about what we believe and hold important," then, with this clarity, we must make the effort to insure that "our intentions, words, thoughts, and behaviors align with those beliefs" (p. 186). Leadership educators can do this by inviting participants to explore the gaps in their own behavior and encouraging them to reflect on ways they can better create this alignment. However, this is not a one-time thing. Values must be constantly revisited, reaffirmed, reinforced, and realigned. Furthermore, values are not enough to assure success. Bad values will lead to bad behavior. Thus leaders must insure that their values are aligned with principles that lead to success (Covey, 2015).

While clarifying and repeatedly aligning one's behavior with one's purpose and values allows one to become more purpose centered and values oriented, and monitoring one's mindset to ensure a focus on others contributes to being other focused, being externally open is critical to maintaining one's state of being. Openness inspires trust and creates a context for feedback to be provided and received, without defensiveness, in a way that produces greater personal alignment and growth (Bradford & Robin, 2021; Gottman & DeClaire, 2001; Willemyns et al., 2003). Leadership educators can promote greater alignment by teaching students how to give and receive effective feedback, as part of the skill development associated with communication, and providing them with the practice they need to be able to do this well. Once again, development of this skill occurs consistent with the skill development processes outlined above. Consequently, the same approach of teaching processes, providing scaffolded practice, an encouraging broader application and reflection are essential.

IMPLICATIONS AND CHALLENGES

While the approach to educating leaders outlined here is consistent with many efforts to promote engaged or experiential learning, which is a commonly espoused and advocated for approach to education today (Chapman et al., 1992; Downing, 2020b; Hutchings & Wutzdorff, 1988), the

emphasis on specific skills as fundamental to leadership practice and, therefore, essential to leader development, in the same way fundamental skills are to any sport, requires a significant rethinking of the way leadership is taught. Together, this calls for a greater emphasis on integration of curricular and cocurricular experiences (Downing, 2020a). Doing so means altering paradigms about the importance of these different activities and creating alignment regarding approaches to educating across these different realms. Boundaries between the classroom and its processes and those of clubs, organizations, jobs, and other leadership experiences need to be blurred and integrated even more than they are now. It is not possible, within the structure of a typical course, for a student to gain all the practice and experience necessary to move from novice to expert in relation to any of these skills. Students need both scaffolded and less structured opportunities to practice. For this to occur, increased alignment between the content and structure of these disparate learning environments would need to occur. Faculty and staff would need to align around the curriculum of both realms and increase communication to support student learning and development.

In addition to this curricular and co-curricular alignment, there would need to be a greater emphasis on learning outcomes and aligned instructional practices across program level curriculum as opposed to just within individual course curriculum. As individual courses would have to become more focused, with less emphasis on theory and more on practice, in course curricular foci will naturally narrow. Courses would have to be designed to build upon each other by reinforcing previously developed skills while also expanding the breadth of skills learned. Doing so would require greater collaboration within departments and programs and universities to support student development.

To achieve greater collaboration, more alignment would be needed around a commitment to educational practices that emphasize applied learning. These would run counter to the traditional emphasis in higher education that is placed on educating for reaction and learning as opposed to emphasizing training and development that leads to changes in behavior and results. Such educational practices would place more intentional focus on altering academic content to facilitate teaching of processes, providing scaffolded practice, and encouraging broad and frequent application amidst reflection.

All of these aligning efforts present threats to the deeply engrained values of individual academic freedom of faculty, as collaborative processes and structures would need to replace independent and individual faculty-controlled processes and structures that are the foundation of the current approach taken to curricular design and implementation. These structures and processes that have been implemented over the years to protect individualism within the halls of higher education represent significant barriers to change that might result in educating up-and-coming leaders in the fundamental skills of leadership.

An even greater challenge comes from the question as to whether this is what higher education should be about. Defining the purpose of higher education amidst the competing interests of students, faculty, staff, employers etc. is an ongoing challenge (Chan, 2016). Many in the academy bemoan the increasing emphasis on career preparation over the traditional emphasis on a broad liberal arts education for its own sake. For many this kind of skill focus is just the kind of thing that would appear to cater to this career orientation. And, truthfully, it does. Indeed, the kinds of

competencies outlined here are similar to those hiring managers and the career world seem to be looking for and requesting from higher education programs (Burning Glass Technologies, 2015; Tynjala et al., 2008; Association of American Colleges & Universities, 2018; Workforce Solutions Group, 2019). However, leader development has a much broader focus than the narrower career-oriented emphasis and is not mutually exclusive to liberal education. Indeed, the preparation of citizens to serve as leaders has always been a priority in American higher education (Durden, 2007; Lucas, 1994). However, there is a great need for more effective and skilled leaders and it has been argued by some that higher education and the leadership development industry are not succeeding in this effort (Burns, 1995; Kellerman, 2016; Owen, 2013; Rowland, 2016). Consequently, there is a need for more of an intentional and focused effort on developing fundamental leadership skills. This approach merits consideration and intentional efforts as it possesses the potential to contribute to the intentional development of leaders in new ways.

CONCLUSION

Just as with any sport, effective leadership is based on the development and acquisition of fundamental skills. To be effective, leaders need to develop high levels of proficiency in relation to their ability to increase awareness, make decisions, manage attention, build relationships, and communicate. These skills are part of what leaders do in every leadership moment. Making the most of these moments depends upon a leader's ability to cocreate effective leadership with followers based on mastery of these basic competencies. Like the fundamental skills associated with any sport, these skills are developed through sustained and intentional practice over time. This requires educational processes on the part of faculty that place greater emphasis on the affective and behavioral outcomes of the educational process with an emphasis on deeper learning at the levels of behavior change and outcomes. Consequently, learners need to move through levels of proficiency from acquisition to compilation to automaticity. To support such progress, educators would need to place more emphasis on teaching processes, providing more opportunities for scaffolded practice, and encouraging and supporting greater application beyond the classroom. This focus will require greater collaborative efforts in terms of program design across the curriculum and with cocurricular partners that will challenge the individualist emphasis on academic freedom.

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IMPACT OF FINANCIAL AND ECONOMIC VARIABLES ON A FIRM'S GROWTH

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ABSTRACT

This study examined the relationship between a firm's revenue as a measure of growth and the firm's financial ratios and macroeconomic variables. Fifty firms from the New York Stock Exchange were chosen at random for the period from 2009 to 2022. The variables included in the study were: Earnings per share (EPS), free cash flow (FCF), debt-to-equity ratio (DER), return on assets (ROA), current ratio (CR), inflation (CPI), GDP, federal fund rate (FFR), and unemployment rate (Unempl).

The results showed that each variable was significantly related to revenue for some firms. Across firms, the percentage of relationships for each variable was low (56% or less). In particular, the percentages over firms were as follows: EPS (56%), FCF (40%), CPI (30%), GDP (30%), DER (24%), FFR (24%), Unempl (20%), ROA (20%), and CR (22%). Financial ratios showed positive effects, as well as negative relationships with growth. These findings indicated that financial ratios are not good growth indicators.

INTRODUCTION

Growth is crucial to the long-term survival of a business. It helps to acquire assets, attract new talent, and fund investments. It also drives business performance and profit. Studies in the literature have examined factors related to firm growth, measured by growth in employment, earnings growth, or sales growth. In terms of firm characteristics, the factors analyzed were firm size, innovation, dividend payout, age, liquidity ratio, bank financing, current ratio, debt ratio, and return on assets. However, most studies were in emerging markets, and none considered the effect of financial ratios and macroeconomic variables on firm growth.

Studies in the literature have predominantly used regression analysis on time series data pooled over firms and time without considering serial correlations and non-stationarity, which could affect the accuracy of the results (Granger & Newbold, 1974; Nason, 2006; Wei, 2006). Besides, the effect of an independent variable in regression, as measured by its regression coefficient, is over all the firms and time and does not give information on an individual firm's dynamic behavior.

One must conduct a time series analysis on individual firms to gain information on the dynamics of individual firms. Results on individual firms are helpful for the investor. They will ascertain the importance of a given variable to a given firm and across firms in the sample.

This study uses a time series analysis of individual firms in a random sample of fifty New York Stock Exchange firms. We examine the impact of financial ratios and macroeconomic variables on a firm's growth as measured by the firm's revenue. This study is a significant addition to the literature, which lacks studies regarding the impact of financial ratios and macroeconomic variables on the growth of individual firms in a highly developed economy. Also, the study uses the proper time series analysis, which corrects for serial correlation and non-stationarity in the time series data.

REVIEW OF LITERATURE

Avdullahi & Ademi (2020) showed that firm size (measured as the number of employees) was positively related to growth in terms of sales for small and medium enterprises. The study used regression analysis and a sample size of 600 SMEs in Kosovo.

Dalgıç & Fazlıoğlu (2021) showed that innovation of Turkish SMEs had a positive impact on firm growth in terms of sales and number of employees. Product/service innovation had the most significant effect on growth, followed by process innovation and R&D efforts. Firms at the higher end of the growth distribution benefited more from innovation than firms at the lower end.

Kildaire et al. (2022) investigated the effects of real GDP and dividend payout ratio as independent variables on the earnings growth of firms listed on the Johannesburg Stock Exchange (JSE). Contrary to previous studies, results showed no relationship between the independent variables and earnings growth.

Megaravalli and Sampagnarob (2018) studied the impact of firm age and liquidity ratio on firm growth for manufacturing firms in India. Results indicated that the liquidity ratio had a positive effect on growth. Firm age, however, had a negative impact on firm growth. Younger firms grow faster than older or established firms.

Nuševa et al. (2021) reported on the effects of export, size, capital turnover, revenue cycle, current ratio (liquidity ratio), debt ratio, and return on assets on growth (changes in sales) of coffee processing companies in Serbia. Results of panel data analysis for 2015 – 2018 showed that size, revenue cycle, and current ratio were negatively related to growth. On the other hand, return on assets was positively related to growth.

In a recent study in Croatia, Srhoj (2022) reported on predicting high growth firms (HGF) (measured as employment or sales) from the firm's financial ratios. It was found that the firm's effectiveness in using assets to generate profits, EBITDA margin, debt ratio, equity-to-debt ratio, and return on assets was associated with a high-growth firm status. However, the prediction was modest, and the conclusion was that financial ratios did not provide a good prediction of HGF

status. It was suggested that better predictions could be obtained by incorporating nonfinancial variables.

Braunerhjelm and Thulin (2023) examined the relationship between explorative or exploitative innovation and firm employment growth. Explorative innovation was a dummy variable: "equal one if a firm applies for a patent in year t within a patent class where it has not applied for a patent for the last five years, zero otherwise." Exploitative innovation was a dummy variable: "equal one if a firm applies for a patent in year t in a patent class where it has already applied for a patent for the last five years, zero otherwise." Patent data were obtained from the Swedish register from 1997 to 2012. Regression analysis showed that both innovations had a positive relationship with employment growth. However, explorative innovation had a more pronounced effect on employment growth.

Khan et al. (2021) investigated the impact of the stock market and bank development on the growth of firms listed on the Pakistan Stock Exchange for the 2014-2019 period. Firm growth was measured by the natural log of total assets. Stock market development was measured by capitalization to GDP ratio and banks' development by credit to the private sector to GDP. Multiple linear regression was used for the analysis, with the firm's profitability, interest, and inflation as control variables. The analysis showed a positive relationship between stock market development and firm growth. However, a negative relationship existed between bank development and firm growth. The control variables were negatively associated with firm growth.

Ullah and Wei (2017) examined the relation between firm growth (sales growth and employment growth) and bank financing in the transition economies of thirty East European and Central Asian countries. The study period was from 2002 to 2014. Results of regression analysis showed that firms using formal bank finance grew faster than firms financed by informal sources. These results held when controlling for GDP, inflation, and firm characteristics such as age, size, and industry type (manufacturing, service).

In a similar study (in the period 2009-2011) of firms in Eastern European and Central Asian countries with transition economies, Brzozowski (2019) reported that bank credit or loan from a financial institution had a positive effect on the firm's sales growth and a negative impact on its employment growth.

In a study on factors affecting firm sales growth, Hermelo and Vassolo (2007) showed, using regression analysis, that investing in new technology, diversifying from local towards national and international markets, and sales return had a positive impact on the growth of small and medium-sized firms in Tucumán, Argentina.

Peljko et al. (2017) examined how constructs representing an entrepreneur's creative abilities impact firm growth in sales and number of employees. A structural model was used for the analysis. Data were from Serbia, the USA, and Slovenia combined. Results of the analysis showed that the entrepreneur's creative abilities, in the case of the USA and Slovenia, were positively related to firm growth. There was no relationship between an entrepreneur's creative skills and firm growth in the case of Serbia.

Zhu et al. (2021) studied the impact of R&D on firm sales growth in China's manufacturing industry from 2012-2017. Results of panel quantile regression showed that R&D positively affected firm growth. The impact was greater for private firms than for state-owned firms across all quantiles. In addition, the R&D impact was greater for non-SME firms than for SMEs. Also, R&D had a more significant effect on High-tech firms.

Using cross-sectional data, Kiani et al. (2012) examined the effect of financial factors on firm sales growth in Taiwan for the years 1997 and 2003. Principle component analysis was used on 18 financial variables, grouped into five extracted principal components or factors: short-term liquidity, return on investment, long-term liquidity, firm size, and capital turnover. Sales growth (dependent variable) was regressed on the five factors. Results of the regression analysis for the year 1997 showed that return on investment was positively related to firm growth, while long-term solvency was negatively associated with firm growth. Also, smaller firms tended to grow faster than larger firms. However, results for the year 2023 showed that larger firms grew faster than smaller firms, and sales growth was positively related to short-term liquidity. It was suggested by the authors that "firms that finance internally or do not rely too heavily on indebtedness may end up growing slower during boom periods, but they are the ones that survive and outperform after the bust."

Wang et al. (2022) examined the effect of financial constraints on firm growth. Growth was measured by the average sales growth rate over the past three years. Financial constraint was a dummy variable that equaled one if the firm was a rejected borrower or discouraged borrower and zero otherwise. The data came from the World Bank World Business Environment Survey (WEBS) dataset. Multiple linear regression analysis was used to control for firm size, age, past sales, exporter, foreign and government ownership, and manufacturing and region dummies. Results showed that financial constraints had a negative impact on firm growth. The impact was more substantial in the case of small firms. In addition, there was no difference in the impact of financial constraints between state-owned and non-state-owned firms.

Lee (2023) examined the effects of firm characteristics on firm sales growth in the Czech Republic, Hungary, and Poland. Data were obtained from the World Bank's Enterprise Surveys. Regression analysis was performed where the dependent variable was growth, and the independent variables were firm age, size, foreign-owned and government-owned firms, and the firm's financial condition, measured by the number of loans it has obtained from financial institutions and the share of external funds. Results differed over the three countries. Firm age and size, in the case of Poland, had significant negative relationships with growth. However, there was no significant relationship in the case of the Czech Republic and Hungary. In addition, a firm's excess to external financing had a negative impact on growth.

Elston and Weidinger (2023) examined the relationship between firm size and firm growth in the Middle East and North African (MENA) region. Regression results showed that, in agreement with previous studies on firms in the West, smaller firms grew faster than larger firms. However, this was not the case for firms in the energy, telecommunication, and manufacturing sectors, where firm size and growth were unrelated.

Rabinovich (2023) examined the effects of advertising, R&D, and capital expenditure on sales growth of US nonfinancial firms for the period 1979-2018. Using quantile regression and controlling for the age and size of the firm, it was found that R&D had a positive effect on growth in sales in the case of high-growth firms and a negative impact on the rest of the firms. Advertising had a positive effect on growth in sales for all firms except the top decile. Capital expenditure had a positive impact on the growth of sales in all firms.

Joensuu-Salo and Matalamäki (2023) investigated the effect of the digital capability of a firm and firm size on firm growth and performance in Finnish SMEs. Using structural equation modeling, results showed that digital capability had a positive relationship with firm growth and firm performance. Also, firm size had a positive relationship with firm performance but did not affect firm growth.

METHOD

Data

Quarterly data (using Macrotrends) of free cash flow (FCF), debt-to-equity ratio (DER), current ratio (CR), earnings per share (EPS), return on assets (ROA), and total revenue (REV) (defined as the amount of money, in millions of US dollars, a company receives from its customers in exchange for the sales of goods or services) were obtained for each of fifty firms chosen at random from all firms listed on the New York Stock Exchange for the period 2009 to 2022. In addition, quarterly data on inflation (CPI), unemployment rate (Unempl), GDP in Millions, and federal fund rate (FFR) were obtained using the Saint Louis Federal Reserve economic database.

Time series analysis

In this study, we use the transfer function approach in time series to relate a stationary input time series to a stationary output time series. In general, the model relating a stationary output series y_t to a stationary input series x_i is expressed as

$y_t = v(B) x_t + a(t),$ (1)
where $a(t)$ is the residual and
$v(B) = w(B)B^c/d(B)$.
Here, $w(B) = w_0 - w_1 B - \ldots - w_s B^s$
$d(B) = 1 - d_1 B - \ldots - d_r B^r$.
B is the backshift operator,
and c represents the time delay (or lag) until the input variable x_t produces an effect on the output variable y_t.

We assume the input series follows an ARMA process, $\frac{\varphi(B)}{\theta(B)} x_t$. The function v(B) with its lags is determined from the cross-correlations between the white noise input series $\frac{\varphi(B)}{\theta(B)} x_t$ and the filtered output series $\frac{\varphi(B)}{\theta(B)} y_t$ (Wei, 2006).

Once v(B) is identified, one can express a_t in Eq. (1) as

$$a(t) = y_t - v(B) x_t \tag{2}$$

and identify the appropriate time series model for Eq. (2). With a_t known, one can determine the final model in Eq. (1).

For this analysis, the independent variables (FCF, DER, CR, EPS, ROA, Unempl, GDP, CPI, and FFR) and the dependent variable (revenue) were tested for stationarity using the Phillips-Perron test and the augmented Dickey-Fuller test. Where a variable was not stationary, we used its first difference, which was stationary. Thus, all variables that entered the model were stationary. The backward elimination variable selection technique (Montgomery et al., 2001) was used so that the final model included only the independent variables significantly related to the dependent variable.

RESULTS AND DISCUSSION

Table 1 presents the time series models for each of the 50 firms. Each model is from equation (1) of the time series analysis. Table 2 summarizes the results of the analysis presented in Table 1. The results in Table 2 show that EPS was related to revenue in 28 firms or 56%. The relationship was positive in 23 firms (46%). The next variable to show a relationship with revenue was the GDP. Fifteen firms, or 30%, showed a positive relationship with the firm's revenue, as expected. FCF had a significant relationship with revenue in 20 (40%) firms. Eighteen percent of the firms had a positive relationship, and 22% had a negative relationship. Fifteen firms (30%) showed a significant relationship between CPI and revenue. The relationship was positive in 9 (18%) firms and negative in 6 (12%) firms. DER was significantly related to revenue in 12 (24%) firms. Six firms had a positive relationship, and six firms had a negative relationship. Twenty-two percent of the firms showed a significant relationship between CR and revenue. The relationship was positive in 8% of the firms and negative in 14%. There was a significant relationship between FFR and revenue in twenty-four percent of the firms. This relationship was positive in 10% of the firms and negative in 14%. Twenty percent of the firms showed a significant relationship between unemployment and revenue. The relationship was negative in 16% of the firms and positive in only 4%. Return on assets was significantly related to revenue in 20% of the firms. The relationship was positive in 8 (16%) of the firms and negative in 2 (4%).

The above results indicate that all the financial ratios and the macroeconomic variables had a significant relationship with revenue for some of the firms. No variable had a predominant relationship with revenue over the firms. Earnings per share were the most dominant among the variables and had a relationship in only 56% of the firms. The relationship was mostly positive. The relationship between a variable and revenue across the firms was as follows: EPS (56%), FCF (40%), CPI (30%), GDP (30%), DER (24%), FFR (24%), Unemployment (20%), ROA (20%), and CR (22%). Relationships were positive for GDP, primarily positive for EPS, and mostly negative for unemployment. For all other variables, the impact on growth was positive or negative.

From the investor's perspective, these results are not encouraging because no financial variable was a strong indicator of the firm's revenue or growth across the firms. This is in agreement with the study by Srhoj (2022) in a developing economy in which the conclusion was that financial ratios did not provide a good prediction of growth.

Earnings per share was positive in 44% of the firms. This is expected because EPS indicates how much money a company makes, and a higher EPS can suggest growth.

In 30% of the firms, GDP was positively related to growth. This implies that economic growth, as measured by the GDP, enhances growth in some firms, but the majority are not affected.

The effect of inflation on growth can be positive or negative. This can be explained by the realization that, at times, consumer spending remains on the increase in the face of inflation, which can lead to a positive relationship between growth and inflation. On the other hand, if consumer spending declines with inflation, this could lead to a negative relationship between inflation and growth. The current ratio (CR = current assets/current liabilities) can impact growth positively or negatively. Liabilities can help finance the company, which can help the company grow. This can lead to a negative relationship between growth and CR since an increase in liability would decrease CR while increasing growth. Also, increased assets would increase CR and revenue, leading to a positive relationship between CR and Growth. The debt-to-equity ratio can be positively or negatively related to growth. Too high a debt can be a signal of poor business prospects and growth. However, debt can enable the firm to grow by securing finance such as loans for investment. Lowering FFR rates makes borrowing money cheaper. This encourages consumer and business spending and investment and can lead to growth, translating into a negative relationship between FFR and growth. Increasing rates can, on the other hand, benefit bond buyers, lenders, and savers. This can contribute to growth for some firms. Hence, FFR and growth can also have a positive relationship. Unemployment is, as expected, negatively related to growth. When businesses are down, firms lay off workers, and unemployment increases. Return on asset is expected to have a positive relationship with growth, but the relationship can be negative depending on the change in net income relative to assets. Free cash flow can be positively related to growth. However, a company can have earned revenue and low to negative cash flow since an increase in revenue does not mean that the company has received cash immediately.

From the above discussion, financial ratios can have a positive or negative effect on growth, which agrees with the results. Also, in most firms, financial ratios did not affect growth. As such, they are not good indicators of growth.

CONCLUSION

In this study, we used time series analysis to investigate the impact of financial ratios and macroeconomic variables on the growth of business firms, as measured by their revenue. The independent variables considered in the study included Earnings per share (EPS), free cash flow (FCF), debt-to-equity ratio (DER), return on assets (ROA), current ratio (CR), inflation (CPI), GDP, federal fund rate (FFR), and unemployment rate (Unempl). The findings of the investigation

revealed that the relationship between any given variable and growth was 56% or less across firms. The percentages across firms were EPS (56%), FCF (40%), CPI (30%), GDP (30%), DER (24%), FFR (24%), Unempl (20%), ROA (20%), and CR (22%). The sign of the relationship between a variable and growth was predominantly positive for EPS, positive for GDP, and mostly negative for unemployment. The impact of other variables turned out to be inconclusive. These results indicate that, in general, financial ratios are not good indicators of firm growth.

TABLE 1. EQUATIONS RELATING THE DEPENDENT VARIABLE (REVENUE) TO THE INDEPENDENT VARIABLE(S) FOR DIFFERENT COMPANIES

Company Code	Dependent Variable	Independent Variable(s)	$a_t = f(e_t)$
AEO	$Revenue(1)_t$	Mean EPS_t FCF_t CR_t DER_t CPI_t 17.62 144.38 -0.209 -105.24 -116.74 -33.13	$a_t = e_t/(1 - ø_4 B^4)$ $ø_4 = 0.974$
AES	$Revenue(1)_t$	Mean FCF_t $CPI(1)_t$ -109.72 0.191 130.66	$a_t = e_t/(1 - ø_1 B^1$ $- ø_2 B^2 - ø_3 B^3)$ $ø_1 = -0.849$ $ø_2 = -0.746$ $ø_3 = -0.717$
AIV	$Revenue_t$ 167.32	Mean EPS_t $DER(1)_t$ ROA_t 98.17 72.04 -8.07	$a_t = e_t/(1 - ø_1 B^1$ $- ø_4 B^4)$ $ø_1 = 0.433$ $ø_4 = 0.508$
AT&T	$Revenue(1)_t$	Mean $CPI(1)_t$ $GDP(1)_t$ CR_t EPS_t -8819.0 -3617.0 0.013 6104.5 -2236.1 FCF ROA 0.461 456.54	$a_t = e_t/(1 - ø_1 B^1)$ $ø_1 = -0.0086$
AVD	$Revenue(1)_t$	Mean FFR_t $DER(1)_t$ EPS_t -0.188 -3.462 38.98 30.76	$a_t = e_t/(1 - ø_4 B^4)$ $ø_4 = 0.758$
ALV	$Revenue_t$	Mean FCF_t EPS_t 1610.3 5.01 280.84	$a_t = e_t/(1 - ø_1 B^1)$ $ø_1 = 0.02879$
BLX	$Revenue_t$	Mean EPS_t EPS_{t-1} 34.51 13.23 30.18	$a_t = e_t/(1 - ø_1 B^1)$ $ø_1 = 0.635$
BNS	$Revenue(1)_t$	Mean FFR_t CR_t EPS_t EPS_{t-1} 2154.2 236.39 -2934.2 1443.3 - 777.84	$a_t = e_t/(1 - ø_1 B^1)$ $ø_1 = -0.222$
BXP	$Revenue(1)_t$	Mean $Unempl(1)_t$ $Unempl(1)_{t-1}$ $CR(1)_t$ $CR(1)_{t-1}$ 5.69 -8.41 8.61 -5.66 - 4.47	$a_t = e_t/(1 - ø_1 B^1)$ $ø_1 = -0.469$
KO	$Revenue(1)_t$	Mean $CPI(1)_{t-1}$ $CPI(1)_{t-2}$ $GDP(1)_{t-1}$ $DER(1)_{t-1}$ 105.23 334.55 - 340.87 0.00208 -823.57 $ROA(1)_t$ 107.73	$a_t = e_t/(1 - ø_4 B^4)$ $ø_4 = 0.862$

CACI	Revenue(1)$_t$	Mean CPI(1)$_t$ Unempl(1)$_t$ DER$_t$ DER$_{t-2}$ 67.61 15.63 6.29 56.84 - 108.85	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.693$
CDE	Revenue$_t$	Mean Unempl(1)$_{t-1}$ EPS$_{t-4}$ 180.93 -5.23405 8.09	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.585$
DEI	Revenue(1)$_t$	Mean Unemp(1)$_{t-1}$ FFR(1)$_t$ FFR(1)$_{t-1}$ FCF$_t$ 1.56 -2.402 -6.76 13.92 -0.0062	$a_t = e_t / (1 - \emptyset_2 B^2)$ $\emptyset_2 = -0.196$
DXC	Revenue(1)$_t$	Mean DER(1)$_t$ 3.77 -563.30	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.063$
EOG	Revenue(1)$_t$	Mean Unempl(1)$_{t-1}$ EPS$_t$ FCF(1)$_t$ -32.87 -377.19 133.42 0.271	$a_t = e_t / (1 - \emptyset_2 B^2)$ $\emptyset_2 = -0.338$
ENR	Revenue(1)$_t$	Mean EPS$_{t-1}$ FCF$_{t-3}$ FCF$_{t-4}$ 32.78 -48.14 0.437 -0.467	$a_t = e_t / (1 - \emptyset_1 B^1$ $- \emptyset_2 B^2)$ $\emptyset_1 = -0.263$ $\emptyset_2 = -0.602$
EQC	Revenue(1)$_t$	Mean DER(1)$_{t-2}$ FCF$_t$ 2.49 113.64 -0.0086	$a_t = e_t / (1 - \emptyset_1 B^1$ $- \emptyset_2 B^2 - \emptyset_3 B^3)$ $\emptyset_1 = -0.949$ $\emptyset_2 = -0.776$ $\emptyset_3 = -0.616$
FOR	Revenue(1)$_t$	Mean GDP(1)$_{t-1}$ Unempl(1)$_t$ FCF$_t$ -4.027 0.000091 -9.12 -0.082	$a_t = e_t / (1 - \emptyset_4 B^4)$ $\emptyset_4 = 0.514$
FTK	Revenue$_t$	Mean EPS$_t$ 43.56 12.34	$a_t = e_t / (1 - \emptyset_1 B^1$ $- \emptyset_4 B^4)$ $\emptyset_1 = 0.243$ $\emptyset_4 = 0.616$
GS	Revenue$_t$	Mean FFR(1)$_t$ FFR(1)$_{t-1}$ EPS$_t$ FCF$_{t-4}$ ROA$_t$ 6184.9 2714.2 -2777.0 226.48 -0.043 2306.1	$a_t = e_t / (1 - \emptyset_1 B^1$ $- \emptyset_2 B^2)$ $\emptyset_1 = 0.510$ $\emptyset_2 = -0.446$
GSL	Revenue(1)$_t$	Mean CPI(1)$_{t-2}$ FFR(1)$_{t-5}$ FFR(1)$_{t-6}$ CR(1)$_t$ 0.157 4.17 4.91 23.02 8.30 ROA(1)$_t$ 0.679	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.352$
HOV	Revenue(1)$_t$	Mean EPS$_{t-2}$ FCF$_{t-1}$ ROA$_t$ 11.89 0.804 -0.130 -1.863	$a_t = e_t / (1 - \emptyset_4 B^4)$ $\emptyset_4 = 0.941$

IPI	Revenue(1)$_t$	Mean GDP(1)$_{t-2}$ EPS$_t$ -1.12 0.000031 0.406			$a_t = e_t/(1- \text{ø}_1 B^1 - \text{ø}_2 B^2)$ $\text{ø}_1 = -0.330$ $\text{ø}_2 = -0.413$
KMB	Revenue$_t$	Mean EPS$_t$ 4882.6 -47.20			$a_t = e_t/(1- \text{ø}_4 B^4)$ $\text{ø}_4 = 0.560$
MRO	Revenue$_t$	Mean FCF$_{t-2}$ 4893.7 -0.516			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = 0.932$
MTW	Revenue(1)$_t$	Mean CPI(1)$_t$ FCF$_{t-4}$ -89.83 67.45 -0.326			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = -0.455$
NOG	Revenue$_t$	Mean CPI(1)$_t$ GDP(t)$_{t-3}$ FFR(1)$_{t-1}$ ROA(1)$_t$ 14.87 -106.24 0.00015 165.10 1.43			$a_t = e_t/(1- \text{ø}_1 B^1 - \text{ø}_3 B^3)$ $\text{ø}_1 = 0.452$ $\text{ø}_3 = 0.547$
NRG	Revenue(1)$_t$	Mean GDP(1)$_t$ EPS$_t$ -82.04 0.0034 65.78			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = -0.587$
NSC	Revenue(1)$_t$	Mean CPI(1)$_{t-1}$ GDP(1)$_{t-1}$ FFR(1)$_{t-2}$ DER(1)$_{t-2}$ -71.27 123.29 0.00031 -113.78 -357.14			$a_t = e_t/(1- \text{ø}_4 B^4)$ $\text{ø}_4 = 0.527$
ONTO	Revenue(1)$_t$	Mean GDP(1)$_{t-3}$ FFR(1)$_{t-3}$ CR$_t$ CR$_{t-1}$ -0.654 0.000028 -17.09 -5.46 6.20			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = 0.100$
PBI	Revenue(1)$_t$	Mean CPI(1)$_t$ GDP(1)$_t$ EPS$_{t-3}$ 54.20 -51.45 0.00031 -150.01			$a_t = e_t/(1- \text{ø}_1 B^1 - \text{ø}_2 B^2)$ $\text{ø}_1 = -0.532$ $\text{ø}_2 = -0.363$
PRO	Revenue(1)$_t$	Mean GDP(1)$_{t-1}$ CR$_{t-1}$ EPS(1)$_{t-1}$ FCF$_t$ 7.76 3.3598E-6 -2.83 9.51 0.047			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = -0.132$
PYX	Revenue$_t$	Mean CPI(1)$_t$ Unempl(1)$_{t-2}$ CR$_{t-4}$ EPS$_t$ ROA(1)$_{t-3}$ 224.57 -45.60 -14.05 147.36 6.49 8.19			$a_t = e_t/(1- \text{ø}_4 B^4)$ $\text{ø}_4 = 0.795$
TEL	Revenue$_t$	Mean CPI(1)$_{t-1}$ FFR(1)$_{t-1}$ CR$_t$ 3994.2 205.63 296.93 -521.06			$a_t = e_t/(1- \text{ø}_1 B^1)$ $\text{ø}_1 = 0.463$

ABM	Revenue(1)$_t$	Mean CPI(1)$_t$ Unempl(1)$_{t-2}$ FCF$_{t-1}$ ROA(1)$_t$ 10.68 48.50 -20.91 -0.340 14.72	$a_t = e_t / (1 - \emptyset_1 B^1 - \emptyset_2 B^2 - \emptyset_3 B^3)$ $\emptyset_1 = -0.682$ $\emptyset_2 = -0.640$ $\emptyset_3 = -0.720$
AMG	Revenue(1)$_t$	Mean GDP(1)$_{t-1}$ EPS$_t$ EPS$_{t-1}$ 5.19 0.000051 7.02 -7.81	$a_t = e_t / (1 - \emptyset_2 B^2)$ $\emptyset_2 = 0.388$
TK	Revenue$_t$	Mean DER$_t$ EPS$_{t-2}$ FCF$_t$ 0.165 -0.076 0.087 0.999	$a_t = e_t / (1 - \emptyset_2 B^2)$ $\emptyset_2 = -0.397$
TRV	Revenue(1)$_t$	Mean CPI(1)$_{t-1}$ GDP(1)$_{t-1}$ FCF(1)$_t$ -1.32 34.91 0.00071 0.0338	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = -0.660$
UTL	Revenue$_t$	Mean EPS$_t$ 83.40 45.33	$a_t = e_t / (1 - \emptyset_4 B^4)$ $\emptyset_4 = 0.611$
TPR	Revenue$_t$	Mean GDP(1)$_{t-1}$ 1154.8 0.00042	$a_t = e_t / (1 - \emptyset_1 B^1)(1 - \emptyset_4 B^4)$ $\emptyset_1 = 0.708$ $\emptyset_4 = 0.992$
BANC	Revenue(1)$_t$	Mean DER(1)$_t$ 1.69 -6.549	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = -0.324$
BK	Revenue$_t$	Mean CPI(1)$_t$ EPS$_t$ 3899.7 -222.52 749.82	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.948$
BLK	Revenue(1)$_t$	Mean CPI(1)$_{t-1}$ CPI(1)$_{t-2}$ GDP(1)$_{t-1}$ FFR(1)$_t$ -27.07 143.81 -209.93 0.00045 -161.80 DER(1)$_{t-1}$ FCF$_t$ 149.20 0.078	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = -0.370$
BRFS	Revenue(1)$_t$	Mean EPS$_t$ FCF$_{t-1}$ 71.12 1013.1 -0.530	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = -0.493$
BLDR	Revenue(1)$_t$	Mean Unempl(1)$_{t-3}$ EPS(1)$_t$ FCF(1)$_t$ 79.45 -93.53 441.40 -0.379	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = 0.313$
BMY	Revenue(1)$_t$	Mean Unempl(1)$_t$ Unempl(1)$_{t-8}$ DER$_t$ -1081.8 346.64 -1008.3 808.19	$a_t = e_t / (1 - \emptyset_1 B^1)$ $\emptyset_1 = -0.662$

BX	Revenue$_t$	Mean$\quad$FFR$_t\quad$EPS$_t\quad\quad$ROA$_t$ 1409.5$\quad$-1508.5$\quad$912.18$\quad\quad$75.32	$a_t = e_t/(1- ø_1 B^1)$ $ø_1 = 0.781$
CLW	Revenue(1)$_t$	Mean$\quad$GDP(1)$_{t-4}\quad$CR(1)$_{t-1}$ -0.066$\quad$0.0000495$\quad$-33.57	$a_t = e_t/(1- ø_1 B^1)$ $ø_1 = 0.002$
CNX	Revenue$_t$	Mean$\quad\quad$CR$_t\quad\quad\quad$EPS$_t$ 509.51$\quad\quad$244.09$\quad\quad\quad$159.07	$a_t = e_t/(1- ø_2 B^2 - ø_4 B^4)$ $ø_2 = 0.260$ $ø_4 = 0.599$
CBU	Revenue(1)$_t$	Mean$\quad$FFR(1)$_{t-1}$ 1.63$\quad\quad$5.63	$a_t = e_t/(1- ø_1 B^1)$ $ø_1 = 0.043$

The symbol (1) refers to the first difference.

TABLE 2. VARIABLES THAT WERE SIGNIFICANTLY RELATED TO GROWTH, AS A PERCENT ACROSS FIRMS

Variable	Positive relationship	Negative relationship
EPS 28 (56%)	23 (46%)	5(10%)
GDP 15 (30)%	15 (30%)	0
CPI 15 (30%)	9(18%)	6(12%)
CR 11 (22%)	4(8%)	7(14%)
DER 12 (24%)	6 (12%)	6(12%)
FFR 12 (24%)	5 (10%)	7(14%)
Unempl 10 (20%)	2 (4%)	8(16%)
FCF 20 (40%)	9(18%)	11(22%)
ROA 10 (20%)	8(16%)	2 (4%)

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