

THE ROLE OF THE ECONOMY, SECURITY AND PARTY LEADER ACCEPTANCE IN FORECASTING THE 2020 GENERAL ELECTION IN JAMAICA

El papel de la economía, la seguridad y la aceptación de los líderes de partido en la previsión de los resultados de las elecciones generales del 2020 en Jamaica

O Papel da Economia, da Segurança e da Aceitação do Líder do Partido na Previsão das Eleições Gerais de 2020 na Jamaica

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Abstract

Three econometric models were built between January and March 2020 to predict the September 3, 2020 General Election in Jamaica. These are the economics and security model (model 1), the economics and security model with JLP leader acceptance (model 2), and the economics and security model with PNP leader acceptance (model 3). All three models accurately predicted a win for the Jamaica Labour Party. A Jack-knife resampling was performed for cross validation. These models show how the macro-economy, security concerns and party leader popularity influence election outcomes, with similar findings in the literature. However, there are peculiarities in the Anglophone Caribbean because the

Jamaican voters respond to economic and security concerns in different ways than the voters in the global north. For example, increases in the debt to GDP ratio and the homicide rate predicted a JLP win. This work should be replicated in the Caribbean and Latin America using panel data.

Palabras clave:
macroeconomía;
seguridad;
aceptación del
líder del partido;
resultados
electorales;
Caribe

Resumen

Entre los meses de enero y marzo del 2020 se construyeron tres modelos econométricos para predecir los resultados de las elecciones generales del 3 de septiembre de 2020 en Jamaica. El Modelo 1 era un modelo de economía y seguridad; el Modelo 2 un modelo de economía y seguridad con los niveles de aceptación del líder del Partido Laborista de Jamaica (JLP, por sus siglas en inglés), y el Modelo 3 un modelo de economía y seguridad con los niveles de aceptación del líder del Partido Nacional del Pueblo (PNP). Los tres modelos acertaron al proyectar una victoria electoral para el JLP. Como validación cruzada de los datos, se utilizó el método “Jack-knife” para realizar un remuestreo. Estos modelos demuestran que, como ya venían señalando otros estudios, los resultados electorales se ven influidos tanto por la macroeconomía, como por los problemas de seguridad y la popularidad del líder del partido. Sin embargo, se debe tener en cuenta la idiosincrasia del Caribe anglófono, ya que los votantes jamaicanos no responden a los problemas económicos y de seguridad de la misma manera que los votantes del Norte global. Por ejemplo, el aumento tanto del coeficiente deuda/PIB como de la tasa de homicidios llevaron a la proyección de una victoria electoral del JLP. Se necesitaría replicar el presente estudio en el Caribe y Latinoamérica utilizando datos de panel.

Palavras-chave:
macroeconomia;
seguridade;
aceitação do
líder do partido;
Resultados
eleitorais; Caribe

Resumo

Para prever as eleições gerais do 3 de setembro de 2020 na Jamaica, três modelos econométricos foram elaborados. Estes são: o modelo econômico e securitário (o modelo nr. 1), o modelo econômico e securitário com a aceitação do líder do JLP (o modelo nr. 2), e o modelo econômico e securitário com a aceitação do líder do PNP (o modelo nr. 3). Os três modelos previram corretamente a vitória do Partido Trabalhista da Jamaica (JLP). Para a validação cruzada, o método “Jack-knife” foi executado. Estes modelos, apoiados pelos achados semelhantes nos dados, indicam a medida em que a macroeconomia, as preocupações com segurança e a popularidade do líder do partido podem influenciar os resultados das eleições. Sem embargo, existem particularidades no Caribe anglófono devido ao fato de que os eleitores jamaicanos reagem às preocupações econômicas e securitárias de maneiras diferentes dos eleitores do hemisfério norte. Por exemplo, os aumentos da relação dívida/PIB e a taxa de homicídios previram uma vitória para o JLP. Este estudo deve ser reproduzido no Caribe e na América Latina com a aplicação de painel de dados.

INTRODUCTION

This study, describes and explains the indigenous forecasting models used to predict the 2020 General Election in Jamaica. There are few studies dealing with model-based election forecasting in developing states like Jamaica, so this study is a modest start to understanding the possible peculiarities of election outcomes in the global south. The models in this study should be somewhat helpful for election forecasting throughout the Caribbean and Latin America. The study starts with a discussion of election forecasting. Next, is a discussion of the macroeconomy and elections, crime and elections, followed by a discussion of party leadership. The method is outlined next, the election forecasting models are specified and their output interpreted and explicated.

ELECTION FORECASTING

Election forecasting is predicting which leader, candidates and/or political party will win an upcoming election. So, in essence, predicting the winner is seeing into the electoral future (Charles & Reid, 2016; Charles, et al., 2019; Jennings, et al., 2020). Forecast models are well established in the global north. There are several well-known models some of which are mentioned here. There is the vote function model which has revealed a strong association between macroeconomic variables and election outcomes in Canada (Bélanger & Godbout, 2010). The seat and vote models have incorporated the dynamic perspective and forecasted swings between the major political parties in Britain (Lebo & Northpoth, 2006). The election market model uses data on market participants who buy and sell the shares of candidates to predict several US presidential elections (Kou & Sobel, 2004). The political economy model uses political and economic variables to predict presidential elections in the United States and France (Jérôme, et al., 2020; Lewis-Beck, et al., 2008; Lewis-Beck & Tien, 2012).

These election-forecast models tend to be multifaceted and incorporate a range of economic and political variables with many data points over time. So, these models should be able to capture the imperceptible and subtle shifts in voter preference compared to polls that sometimes generate statistical dead heats (Kou & Sobel, 2004; Lewis-Beck, 2005). Despite their strengths, election forecast models are not prediction panaceas and caution is advised when uncertainty is being forecasted in turbulent election environments. Good models are parsimonious, have good lead time, and are transparent and accurate. Election forecasters should strive to achieve these benchmarks with their political economy models (Holbrook, 2001; Jennings, et al., 2020; Jérôme & Jerome-Speziari, 2012; Lewis-Beck & Tien, 2012; Royes & Cid Bastos, 2006).

THE ECONOMY AND VOTING BEHAVIOUR

One school of thought is that voters' perception of national economic performance, rather than their personal economic condition (their pocketbooks) significantly influences election outcomes, while another argues that pocketbook matters (Whiteley, 1984; Guseh, 1996). The context voters experience at the national level matters in economic voting because it affects the very nature and degree of this type of voting behaviour (Singer & Carlin, 2013). Voters attribute the state of the economy to political executives who strategically and frequently engage in economic rhetoric (Wood, 2004). Unemployment, inflation and growth in income are crucial predictors of election outcomes (Guseh, 1996). Dassonneville and Lewis-Beck (2014) reveal that a good economy rewards incumbents and a bad one punishes them. Positive economic growth has significantly less electoral effects than negative growth. Therefore, governments are more accountable to the electorate during hard times and Jamaica is no exception.

Jamaica is a middle-income developing country that has experienced marginal economic growth, high debt and high rates of poverty and inequality since political independence in 1962. Therefore, general elections are largely determined by "bread and butter" issues based on voters' economic perceptions. The incumbents engage in a lot of public spending in the election year (the political business cycle) to attract voters which contradicts the agreements with the International Monetary Fund (IMF) (Stiglitz, 2012; Stone, 1980, 1989; World Bank, 2020). The JLP government through the 2016-2020 electoral cycle engaged the people about the economic targets it wanted to achieve and what it had "achieved" (Charles, 2020).

Crime and Elections

Vote share in the United States tends to be influenced by the crime rate which confirms the responsibility hypothesis, but less so compared to economic indicators, because citizens weight crime and economic domains differently (Hagerty, 2006). Crime and violence are also major societal issues in Latin America. However, candidates who have campaigned with plans to address these issues, have had varying electoral success for several reasons. These are the extent of the security services organization, and the extent to which repression recently occurred in the country; there are also candidates with civilian backgrounds who balance security with other important campaign issues and so tend to have greater success (Uang, 2013). The organized crime syndicates that perpetrate high profile violence in certain regions of Mexico make voters living in these regions cautious about voting. The impact of criminal contexts on voter turnout goes beyond people's victimisation experiences (Ley, 2018).

Crime and violence are also serious problems in Jamaica. Escalating gun-related homicides in Jamaica led to the passing of the Gun Court Act in 1974 which provides for most firearm offences (except where murder is committed) to be tried by only a judge. The act had the support of 80 per cent of Jamaicans. The Suppression of Crime Act, also passed in 1974, suspended the use of warrants and other constitutional protections that secured the rights of citizens and was also very popular, as well as the 1976 Period of Emergency (POE) to deal with escalating political violence. The popularity of this POE helped the government to win the 1976 General Election (Ellis, 1991; Gendreau & Surridge, 1978; Stone, 1980).

Jamaica has a homicide rate of 40.1 per 100,000 of the population, the fourth highest in the world. A 2019 *Jamaica Gleaner* Don Anderson Poll found that 90 percent of the persons polled supported the POEs and 73 percent supported the zones of special operations (ZOSO) and POEs established across the country since 2017 in response to the high homicide rate. Some 67 percent disagreed with the PNP Opposition which did not support the government's extension of the POE (Virtue, 2019). These measures remained popular with the electorate and helped the government to win the 3 September 2020 General Election (Charles, 2020; Charles & Dempster, 2020).

Party Leaders and the Party

The dominance of Westminster party leaders extend beyond the party and the government to the society because party supporters generally vote for the party leader more so than for the party in national elections. The colossal influence these leaders possess have led to an increasing number of political parties moving the leader selection process from the control of a small party elite to election by rank and file party members (Denham, 2017). Some political leaders in parliamentary democracies who are dubbed prime minister heir apparent, tend to underperform when they become maximum leaders despite the many years they spent in office with diverse ministerial responsibilities so they become unpopular (Helms, 2020). Some party leaders are populist making it difficult to employ forced exits. Populist leaders tend to be political entrepreneurs with favourable political appeals who makes use of the existing opportunity structures (González & Young, 2017). Populist leaders pose a threat to liberal democracies when institutional weaknesses exist that create vulnerabilities that these leaders can exploit, and when societal crises give them a large support base that they use to override institutional constraints on power (Weyland, 2020). These leaders usually have charisma driven connections with subordinates and followers. This relationship should be understood in relation to parties that have constitutional roles, because democracies cannot exist without them. The weakness of parties can lead to the

rise of populist leaders. These leaders' influence can be curbed by citizens with the support of the state backing and facilitating parties (Barber, 2019).

High party leader acceptance in Jamaica backed by the party-political culture of the People's National Party (PNP) and the Jamaica Labour Party (JLP) made internal party electoral challenges to the leader taboo between 1962 and 1990. Populist leaders tend to have a higher level of party acceptance than non-populist leaders, and, more often than not, they do not face leadership challenges. Jamaica has had two populist party leaders among its nine prime ministers since independence in 1962. These are the JLP's Alexander Bustamante (on the right) from 1962 to 1967 and the PNP's Michael Manley (on the left 1974-1980) between 1972 and 1992. These leaders were charismatic, identified with the poor and engaged in more redistributive policies compared to other leaders (Charles, 2009, 2020).

Both the JLP and PNP have experienced several leadership challenges since 1990. Challengers find it very difficult to defeat party leaders in internal party elections because the majority of the rank and file party delegates tend to converge around the leader in the Westminster system (Charles, 2009; Stone, 1977, 1981, 1987, 1989). However, leadership challenges generally divide the major political parties and lead to chronic disunity if the loser refuses to embrace and support the winner (Charles, 2009, 2020; Edie, 2011).

Purpose of the Present Study

The objective of this study is to build indigenous election forecasting models to accurately predict the 2020 General Election in Jamaica. Several macroeconomic indicators, migration rate, the annual homicide rate and party leader acceptance from 1962 to 2020 were used to see how these predictors influence election outcomes. How voters feel about the state of the economy, how they feel about the level of security in the country, and the extent to which the party leaders are accepted are important in general election outcomes. The research question states: which of the two major political parties, JLP or the PNP were likely to win the general election held in 2020?

METHOD

Data

Data on inflation rate, employment rate, interest rate, the exchange rate, and debt to gross domestic product (GDP), the number of persons emigrating from

Jamaica, and the annual homicide rate were collected from 1962 to 2019. Data on general election results were also collected from annually from 1962 and 2020.

The online archives of the *Jamaica Gleaner* and the *Jamaica Observer* were searched for news stories on party leadership challenges between 1962 and 2020. The stories found were read repeatedly and used to help identify the number of leadership challenges in the JLP and PNP, when the challenges occurred, and who were the party leaders and challengers. The news story data were triangulated with pertinent scientific publications on party leadership challenges.

Procedure

This study uses integrated method because the quantitative economic, demographic and homicide variables (the economic and security model) were combined with the qualitative JLP leader acceptance (LA) and PNP leader acceptance (LA) variables. The annualised average was calculated for inflation, employment, interest rate, and the exchange rate and external debt to GDP, as well the annual homicide rate for each electoral cycle between 1962 and 2019. Exponential smoothing was used to project the 2020 data from the economic, demographic and homicide variables because data for 2020 were not available when the models were built. The homicide data is used as a proxy for the level of security in the country.

Leadership conceptualised as party leader acceptance was added to the model. Party leader acceptance is the extent to which the party members and party supporters embrace the party leader. The level of party leader acceptance might be undermined by electoral leadership challenges and/or party factions undermining the leader. A leadership challenge is defined as a party member running against the party leader (who was elected or selected) in an internal party leadership election to take over leadership of the party. How and when a leadership challenge occurs and the repercussion it has in the party largely determines party leader acceptance. The acceptance the leader has in the party ranges from low to moderate, to high.

Low leader acceptance in the party means that the party leader (1) was selected by the MPs (not the rank and file party delegates) and went into a general election without majority support of rank and file party delegates; (2) has won at least one internal party electoral leadership challenge and the loser and his or her supporters refuses to embrace and support the leader; (3) has not been challenged by members of the senior party leadership electorally because they fear for their safety but clandestinely undermine the leader; (4) has been challenged within two years of a general election. A leader who experiences one or more of the scenarios above has low acceptance in the party and receives a score of 1.

Moderate leader acceptance in the party means that the party leader was elected by the majority of the rank-and-file party delegates in a leadership contest and has prevailed in at least one leadership challenge. However, there is some disquiet in the party made public by one or more party factions supported by some senior party leaders. Therefore, the party remains somewhat divided because the leadership issue remains unsettled. A leader with moderate party acceptance receives a score of 2.

High leader acceptance means that the party leader has not been challenged or has won at least one leadership challenge. Despite this challenge, there is no disquiet in the party made public about the leader because the large majority of party members and supporters including all the senior leaders have converged around the leader so the party is united because the leadership issue is settled. A leader with high party acceptance receives a score of 3.

Each PNP and JLP party leader between 1962 and 2020 was given a leader acceptance score between 1 and 3. Two party LA variables were created, a PNPLA variable, and a JLPLA variable. The PNPLA variable and the JLPLA variable were added separately to the economic and security model as predictors of party in power (PNP/JLP) in two logistic regression models.

The economic and security model was built and ran in January 2019 eight months before the 3 September 2020 General Election. The PNPLA and the JLPLA were added to the economic and security model and ran in March 2019, five months before the general election.

The output of the economic and security model forecasting a JLP win was reported at the writers' retreat hosted by the Faculty of Social Sciences, University of the West Indies, Mona from 10-12 January 2020. Abstracts for the forecasting models were submitted on 10 January 2020 in two abstracts to the World Association for Public Opinion Research (WAPOR) for paper presentations at the 2020 conference. The abstracts were accepted. The outputs for models 1, 2 and 3 were also reported to senior officials of the JLP and the PNP in April 2020. Negotiations for public release of the forecasts via major media outlets in Jamaica hit a snag because of a preference for, and hence bias towards pre-election polls. Therefore, we were only able to nationally release the forecasts publicly in the last two weeks before the general election on *Beyond the Headline* on Radio Jamaica, and in the Jamaica Gleaner newspaper (Charles, 2020).

RESULTS

Table 1 shows the definitions of the independent and dependent variables used in models 1-3. Table 2 shows the variables used in Model 1, the economics and security model. A logistic regression was performed to forecast the effects of migration, inflation, interest rate fluctuation, exchange rate, debt to GDP ratio, and homicide rate on the likelihood of determining party in power. The logistic regression model was statistically significant, $\chi^2(7) = 58.139$, $p < .0005$. The model explained 83.6 % (Nagelkerke R²) of the variance determining party in power and correctly classified 89.8 % of cases. In respect of interest rates, every unit increase is associated with an 84.1% decrease in the odds of the JLP being in power and for exchange rates, every unit increase is associated with a 20 % decrease in the odds of the JLP being in power.

Both increasing debt to GDP ratio and homicide rate were associated with an increased likelihood of the JLP being in power.

Table 1. Definition of Variables

Variable Name	Definition
<i>Dependent Variables</i>	
Party in Power	Dichotomous Variable 0= Peoples National Party (PNP) 1= Jamaica Labour Party (JLP)
<i>Independent Variables</i>	
Unemployment Rate	Continuous Variable A continuous measure ranging from 9 - 31
Migration (000)	Continuous Variable A continuous measure ranging from negative -1 - 38
Inflation (Avg)	Continuous Variable A continuous measure ranging from 0 - 80
Interest Rate (Avg.)	Continuous Variable A continuous measure ranging from 3 - 42
Currency Exchange Rate per USD	Continuous Variable A continuous measure ranging from 0 - 130
Debt to GDP Ratio (%)	Continuous Variable A continuous measure ranging from 7 - 159

Variable Name	Definition
Homicide Rate per 100,000	Continuous Variable A continuous measure ranging from 4 - 63
JLP/PNP Leadership Attributes	Categorical Variable 1 - Low party acceptance 2 - Moderate party acceptance 3 - High party acceptance

Source: Authors' own elaboration

Table 2. Variables in Model 1

	B	S.E.	Wald	Exp(B)	95 % C.I. for EXP(B)	
					Lower	Upper
Step 1 ^a Unemployment Rate	-.477	.327	2.128	.621	.327	1.178
Migration ('000)	-.144	.109	1.735	.866	.699	1.073
Inflation (Avg)	-.097	.115	.720	.907	.724	1.136
Interest Rate	-1.871*	.788	5.632	.154	.033	.722
Exchange Rate	-.223**	.083	7.173	.800	.680	.942
Debt to GDP %	.234*	.097	5.883	1.264	1.046	1.527
Homicide Rate	.318*	.154	4.271	1.374	1.017	1.857
Constant	15.826	8.887	3.171	7467032.657		

Note. N= 59. The test of hypotheses of B=0 are based on Wald's χ^2 , df=1. Hosmer and Lemeshow Goodness-of-Fit= 1.494, -2 Log L= 23.500^aLow. *p< 0.05, **p< 0.01.

Source: Authors' own elaboration

Table 3 shows the variables used in the JLPLA model (model 2). A logistic regression was performed to forecast the effects of migration, inflation, interest rate fluctuation, exchange rate, debt to GDP ratio, homicide rate and JLP leadership acceptance on the likelihood of determining party in power. The logistic regression model was statistically significant, $\chi^2(9) = 65.337$, $p < .0005$. The model explained 89.4 % (Nagelkerke R²) of the variance determining party in power and correctly classified 91.5 % of cases.

Table 3. Variables in Model 2 JLPLA

	B	S.E.	Wald	Exp(B)	95 % C.I. for EXP(B)	
					Lower	Upper
Step 1 ^a Unemployment Rate	-.896	.573	2.441	.408	.133	1.256
Migration ('000)	-.206	.142	2.117	.814	.616	1.074
Inflation (Avg)	-.130	.088	2.178	.878	.738	1.044
Interest Rate	-2.517*	1.121	5.044	.081	.009	.726
Exchange Rate	-.381*	.186	4.220	.683	.475	.983
Debt to GDP %	.308*	.129	5.690	1.361	1.057	1.753
Homicide Rate	.442	.233	3.607	1.555	.986	2.453
JLP_LA ^a			3.425			828229.832
JLP_LA(1)	6.618**	3.576	3.425	748.650	.677	
JLP_LA(2)	-7.402	11442.526	.000	.001	.000	
Constant	26.499	15.451	2.941	3.224E+11		

Note. N= 59. The test of hypotheses of B=0 are based on Wald's χ^2 , df=1. Hosmer and Lemeshow Goodness-of-Fit= 4.255, -2 Log L= 16.302 ^aLow leadership acceptance is the reference category. *p< 0.05, **p< 0.10.

Source: Authors' own elaboration

Increasing interest rate and exchange rate were associated with a reduction in the likelihood of the JLP being in power, while increasing debt to GDP ratio and homicide rate were associated with an increased likelihood of the JLP being in power. Moderate JLPLA was statistically significant at the 10 percent level with a p-value 0.64. Moderate JLPLA increased the odds of the JLP winning the general election as opposed to low JLPLA.

Table 4 shows the variables in Model 3, PNPLA. A logistic regression was performed to forecast the effects of migration, inflation, interest rate fluctuation, exchange rate, debt to GDP ratio, homicide rate and PNP leadership acceptance on the likelihood of determining party in power. The logistic regression model was statistically significant, $\chi^2(9) = 61.257$, $p < .0005$. The model explained 86.0% (Nagelkerke R²) of the variance determining party in power and correctly classified 91.5% of cases. Increasing interest rate and exchange rate were associated

with a reduction in the likelihood of the JLP being in power, while increasing debt to GDP ratio and homicide rate were associated with an increased likelihood of the JLP being in power.

Table 4. Variables in Model 3 PNPLA

	B	S.E.	Wald	Exp(B)	95 % C.I. for EXP(B)	
					Lower	Upper
Step 1 ^a Unemployment Rate	-.951***	.524	3.298	.386	.138	1.078
Migration ('000)	-.173	.121	2.052	.841	.664	1.066
Inflation (Avg)	-.124	.138	.805	.884	.674	1.158
Interest Rate	-2.541**	.977	6.764	.079	.012	.535
Exchange Rate	-.206**	.075	7.617	.814	.703	.942
Debt to GDP %	.291**	.106	7.586	1.338	1.088	1.646
Homicide Rate	.559*	.246	5.171	1.749	1.080	2.832
PNP_LA ^a			2.823			
PNP_LA(1)	-9.881	17050.623	.000	.000	.000	
PNP_LA(2)	-15.471***	9.208	2.823	.000	.000	13.156
Constant	27.344*	13.721	3.972	7.505E+11		

Note. N= 59. The test of hypotheses of B=0 are based on Wald's χ^2 , df=1. Hosmer and Lemeshow Goodness-of-Fit= 1.643, -2 Log L= 20.382 ^aLow leadership acceptance is the reference category. *p< 0.05, **p< 0.01, ***p< 0.10

Source: Authors' own elaboration

Both unemployment and high PNPLA were statistically significant at the 10 percent level with a p-value 0.69 and of 0.093 respectively. Increasing unemployment reduces the odds of the JLP being in power, as well as high PNPLA reduced the odds of the JLP winning the general election as opposed to low PNPLA. However, the magnitude of the effect is small.

Since the economic and security model predicted which party will win the 2020 General Election and not the share of the vote, it is very important to show how well the model does for previous general elections. Therefore, a Jack-Knife

resampling was done where the year being forecasted (2020) was left out of the data for estimation and forecasting (cross validation).

How close do these results of the leave out one cross validation (LOOCV) models compare to the full model, where all 59 observations were included? Assuming there are no major outliers, the coefficients in the full model should be similar to the mean/median columns in the table below.

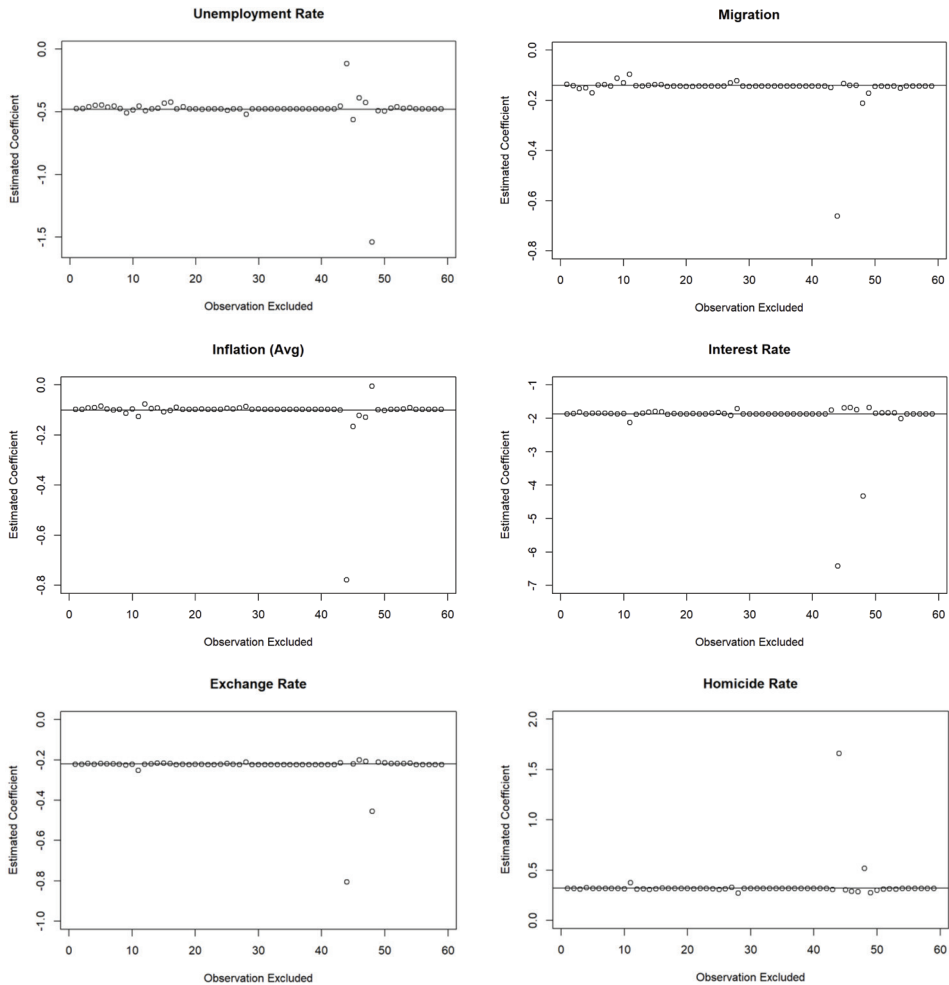
Table 5. Summary Statistics

Variable	N	Mean	SD	Min	Pctl. 25	Pctl. 50	Pctl. 75	Max
Unemployment rate	59	-0.485	0.149	-1.54	-0.477	-0.477	-0.469	-0.115
Migration rate	59	-0.152	0.069	-0.662	-0.144	-0.144	-0.142	-0.097
Inflation rate	59	-0.109	0.09	-0.779	-0.098	-0.097	-0.096	-0.005
Interest rate	59	-1.972	0.675	-6.425	-1.871	-1.869	-1.847	-1.682
Exchange rate	59	-0.235	0.082	-0.806	-0.223	-0.222	-0.219	-0.20
Debt to GDP	59	0.246	0.081	0.212	0.232	0.234	0.234	0.783
Homicide rate	59	0.341	0.177	0.272	0.313	0.318	0.318	1.659
Prob Party in power	59	0.48	0.434	0	0.01	0.497	0.979	1

Source: Authors' own elaboration

Below are the plots (Figure 1) of the estimated coefficients for each variable across all 59 models. The horizontal line indicates the estimated coefficient for that variable in the full model; deviations away from this horizontal line indicate the presence of likely outlying observations. For instance, excluding observation 48 (i.e., year = 2009) has a dramatic impact on the estimate for the impact of unemployment rate on the probability of the JLP being the party in power.

Figure 1. Estimated coefficients



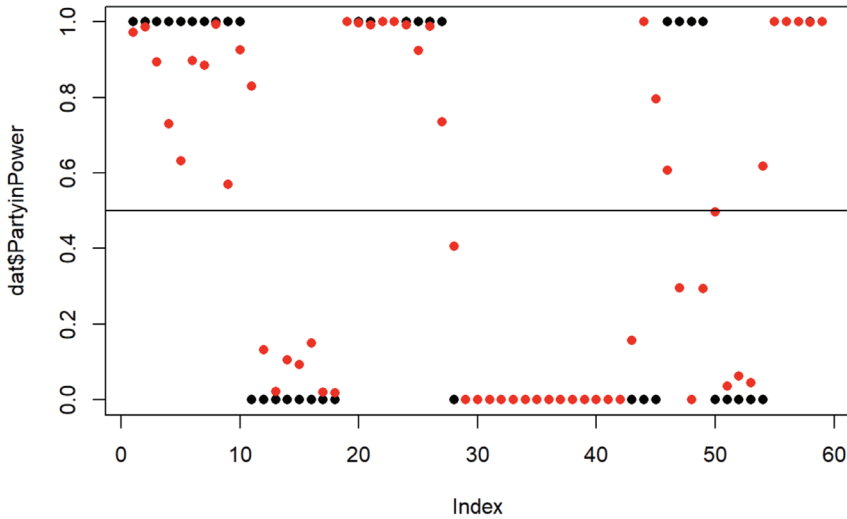
Source: Authors' own elaboration

If we exclude one observation (and use it as the test set), how well would the model predict the Y variable?

Of 59 total observations, we misclassified 7. In 4 observations, the PNP was the party in power; yet, the model(s) predicted JLP. In 3 observations, the JLP was in power; yet the model(s) predicted PNP instead.

To see how the true values compared to the predicted probabilities, Figure 2 above presents the true values of the Party in Power variable (shown in black) vs. the predicted probability of Party in Power variable that the JLP was in power (shown in red). The horizontal line is at 0.5.

Figure 2. True values of the Party in Power variable (black) vs. the predicted probability of Party in Power variable that the JLP was in power (red)



Source: Authors' own elaboration

DISCUSSION

This study built three election forecast models using macroeconomic, demographic, security and party leader acceptance indicators to predict the 2020 General Election in Jamaica and performed a Jack knife resampling (cross validation) test. The significant predictors in Model 1 (the economic and security model) which accurately predicted a JLP victory, were interest rate, exchange rate and debt to GDP ratio and the homicide rate. Decrease in the interest rate and the exchange rate increased the odds of the JLP winning the election and an increase in the debt to GDP ratio also increased the odds of a JLP victory. The model explained 83.6 percent of the variance in party in power. The Jamaican voters' economic perceptions, it seems, are driven by their pocketbooks, as noted by Whitely (1984) and Guseh (1996), because voters get better prices for goods and services with a decrease in the exchange rate and more access to loans with a decrease in the interest rate.

Whitely (1984), Guseh (1996), Singer and Carlin (2013), and Dassonneville and Lewis-Beck (2014) all show that the economy matters to voters. The findings by Wood (2004) that voters' perception of the state of the economy is partly influenced by the frequent economic rhetoric of the government, appears to be the case in Jamaica, because the Andrew Holness-led JLP Government engaged the public in frequent positive rhetoric about the economy (Charles, 2020).

Despite the IMF push for macroeconomic stability and a reduction in public spending (Edie, 2011; Stone, 1989; World Bank, 2020), governments tend to engage in the massive public spending during the political business cycle in the election year to woo voters. This massive public spending with a refusal to raise taxes, which is at variance with IMF stipulations, partly explains why an increase in the debt to GDP ratio increased the likelihood of a JLP victory. Another plausible explanation of this economic anomaly is that the voters chose short-term gains (state patronage) of the political business cycle over the long-term gain of significantly reducing the debt to GDP ratio, where everyone would have been better off economically with lower debt. Also, voters in Jamaica have less income compared to voters in developed countries and so are more likely to accept handouts from politicians. The government also benefits from borrowing more, because it provides the opportunity to renegotiate a new IMF deal, and restructure and reschedule the debt which voters view as good economic management, but this makes the country economically worse off in the long run.

The rise in homicides influencing the likelihood of a JLP win was another anomaly because voters tend to punish governments when they do not feel safe, because of rising homicides, by voting them out of office. However, the works of Ellis (1991) and Gendreau and Surridge (1978) show that tough policing measures like the Suppression of Crimes Act and the Gun Court Act in 1974, and the POE in 1976 in response to the spiking homicide rate were very popular. Recall that, more recently, a Don Anderson Poll capturing the views of Jamaicans about the ZOSOs and POEs since 2017, revealed that these tough policing measures were also very popular although the homicide rate remained high. There was homicide suppression in the targeted hotspots but the overall homicide rate remained high. Also, the majority of people wanted the crime suppression measures implemented throughout the country despite their failure (Virtue, 2019). Voters like the tough security measures that governments implement following spikes in homicides so the government becomes popular. The findings of model 1 also corroborates the findings of Ley (2018) that the influence of criminal context on voters is more than their victimization experiences. Model 1 also supports the findings of Hagerty (2006) that voters tend to weight economic and crime factors differently in relation to their preference for one political party over another. Model 1 shows that the Jamaican voters do not act "rationally" when it comes to the increasing debt to GDP ratio and the increasing homicide rate.

Models 2 and 3, respectively, added JLPLA, and PNPLA to the economic and security model to understand how the acceptance of the party leader influences party in power. The significant predictors in Model 2 are exchange rate, interest rate, debt to GDP ratio, homicide rate as well as moderate JLPLA. Moderate JLPLA, relative to low LA, strongly increased the chances of the JLP winning. Model 2 explained 89.4% of the variance in election outcome. In model 3, the significant predictors are unemployment, interest rate, exchange rate, debt to GDP ratio, homicide rate and high PNPLA. High PNPLA, relative to low LA, would reduce the odds of the JLP winning but the effect size is small. Model 3 explained 86.0% of the variance in party in power. Models 2 and 3 also predicted a JLP general election win in 2020. These two models reveal that the extent to which the leader is accepted in the party is very important for electoral victories. The acceptance of the leader is influenced by whether there is a leadership challenge. If there is a challenge, how early in the election cycle the party leader is challenged for leadership, and the extent of the loser's acceptance of and support for the winner are crucial to future electoral success. Even without an electoral challenge to the party leader, party unity and cohesion are very important because party leaders with low to moderate acceptance in the party are more likely to lose a general election.

None of the party leaders that experienced a leadership challenge since 1990, such as Edward Seaga, Andrew Holness, Portia Simpson-Miller and Peter Phillips, fall into González and Young's (2017) definition of populist leaders, denoted as charismatic political entrepreneurs, with widespread political appeals that made use of the opportunity structures that were available. One possible reason why Jamaica has had only two populist leaders to date (Alexander Bustamante and Michael Manley) is that the JLP and PNP were established political parties with strong institutional structures before Jamaica became independent. Therefore, these large, entrenched, dominant and popular political parties, make the rise of populist leaders in these institutions difficult (Barber, 2019). It should also be noted that all of the party leaders in Jamaica, including the two populist ones now deceased, have shown commitment to the principles of liberal democracy, and have never tried to remove the institutional constraints on their power, unlike what occurred with the populist leaders discussed by Weyland (2020).

The models presented in this study have all met the evaluation criteria of parsimony, transparency, lead time and accuracy, the gold standard for election forecast models (Jennings et al., 2020). These models replicated the work of some election forecast scholars in the global north which showed that politics and economics matter. See, for example, Bélanger and Godbout (2010) vote function model which shows that in Canada there is a strong relationship between macroeconomic variables and election outcomes, and the political economy model (Jérôme et al., 2020; Lewis-Beck et al., 2008; Lewis-Beck & Tien, 2012) which used political and economic indicators to forecast presidential elections in France and the United States.

Two major limitations of Models 1-3 are that they deal with a single country with only 59 data points. These limitations will be addressed in the future by collecting panel data on macroeconomic, leadership and homicide variables in the Caribbean and Latin America to predict election outcomes in these regions. Models 1-3 have contributed to our understanding of the influence of the macroeconomy, security and leadership in election outcomes in Jamaica. One of the most poignant contribution of this study is the use of homicides as a predictor of election outcomes showing that when homicides increase, governments tend to implement tough policing measures that increases the popularity of the government.

CONCLUSION

Studying the influence of voter motivations, voter preferences and voting behaviour on election outcomes are important for understanding voting as nuanced collective behaviour in modern democracies. The majority of the election forecast models created for this purpose have been applied to the developed societies of the global north. The use of election forecast models in the global south, especially in the small states of the Caribbean, is relatively new. It is important to understand voting behaviour and elections in these developing countries compared to developed countries because voters should respond to economic and security concerns in rich and poor countries in different ways. These developing countries have their own histories and political cultures that may yield new insights on the influence of institutions, personalised populist leadership, authoritarianism, public opinion, corruption, crime, violence, voter preferences, campaigning, and voter turnout on election outcomes. We therefore need to understand how voter microlevel characteristics, meso-level patterns of relationships and macro-level institutions influence election outcomes within and across the Caribbean and Latin America.

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