

The Psychology of Homicide, Divorce and Issues in Marriages: Mental Health and Family Life Matters

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ABSTRACT: Introduction: *The homicide pandemic has continued unabated and no empirical enquiry has emerged in criminology, sociology, psychology or public health in Caribbean literature which evaluates whether or not divorce has any effect on homicide. Objectives:* *The aims of this study are to 1) evaluate factors that explain the interplay between homicide and divorce and marriages in Jamaica; and 2) provide theories for the uxoricides. Materials and methods:* *The data for this study was obtained from various Jamaica Government Publications. The period for this work was from 1950 through 2013. Ordinary least square (OLS) regression analyses and curve estimations were used to determine models and best fitted models. Results:* *The factors of divorce were homicide, population and GDP per capita, with those variables explaining 77.5% of the variance in divorce. A strong correlation between homicides and divorce still emerged after controlling for GDP per capita (or income; $r_{xy} = 0.843$, $P < 0.0001$). Poverty rate and the exchange rate accounted for 83.8% of the variance in homicides. Of the seven selected variables used at once in the OLS, three emerged as factors for divorce rate (exchange rate, mortality rate and poverty rate). Both factors determined 61.4% of the variance in the divorce rate. Poverty accounted for 47.0% of the variability in the marriage rate and was inversely related to the marriage rate. Hence, lower rates of poverty mean greater number of marriages and vice versa. Conclusion:* *Divorce produces issues, which are sometimes not fully captured in the data. Further studies on the psychology of divorce are needed from a qualitative perspective to unearth real meaning behind the behaviour of depressed adults and psychological deficient children following romantic relationship separation. We are therefore proposing that poverty and divorce as well as separation from sexual partner should be treated with the same degree of urgency and significance as non-communicable diseases. The destruction of families from divorce is such that we are forwarding it to be a psychosocial disease likened to an infectious disease that can cause a pandemic if not probably cauterized.*

Key words: *Divorce, homicide, intimate partner homicide, intrinsic friction, psychological fear individuality, parental homicide, psychological desired adaptability, marriage, mortality, uxoricide*

INTRODUCTION

The issue of homicide is a growing public health concern, globally, but it is even more so in developing countries such as Jamaica. Recent studies and/or reports have shown that homicide has risen to pandemic levels and the rates have continued unabated (March & Bourne, 2011; Bourne & Solan, 2012; Bourne et al., 2012, Bourne et al., 2014), with homicide being correlated to ill-health (Bourne, 2012). Furthermore, no empirical enquiry has emerged in criminology, sociology, psychology or public health in Caribbean literature that evaluates whether or not divorce has an effect on homicides or vice versa as well as the factors that determine divorce, homicides and marriages rates. This study was conducted in order to fill the gap in the literature by extending the knowledge on the effect that divorce or intimate partner separation may be having on homicide rate or vice versa.

Divorce has been on the upswing since the early 1960s; however, there has been variations in these reports as decline in the rates were evident during the 1980s. These variations and event rises in the rates may have changed due to changes in laws, which allow for

the unilateral initiation of divorce (Engemann & Owyang, 2008). Changes in the divorce laws in the United States have resulted in most States adopting the unilateral divorce policy in which only one party would be required to consent to the divorce (Engemann & Owyang, 2008).

Legal partner separations have significant psychological and financial impact on the individuals involved as well as on the society. Where children are involved this can have an even more devastating mental health effect, which oftentimes results in longer term consequences. McNeal & Amato (1998) noted in a long term study that there was evidence of severe repercussion when there was violence in the marriage, even if the marriage ended in divorce (McNeal & Amato, 1998). Furthermore, the study also revealed a much lower emotional health, which leads to potential violence in future relationship with their spouses and family members (McNeal & Amato, 1998). These findings may explain the vicious cycle of psychology violence in intimate partner relationships especially when the relationship is dissolving, separating or sadly ending in a divorce. The consequences of intimate partner separation, especially marriage dissolution, are far reaching to include the state (i.e., courthouse time and costs) and futuristic psychological impact on the individuals and not to mention their child/ren. Despite the psychiatric disorders

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of divorce to include uxoricides (women being murdered by her romantic partner), the economics of divorce and psychology of divorce on homicides as well as marriages are omitted from public health literature in the English-speaking Caribbean.

In a 2004 study, in which the US Census data for the period between 1960 and 1990 was used to assess the impact of unilateral divorce on crime, the researchers discovered that those who were exposed to divorce during their formative years reportedly have a much lower educational and financial achievement, marry at an earlier age, tend to separate more often, and have higher risk of adult suicide (Caceres-Delpiano, & Giolito, 2008). Embedded in Caceres-Delpiano & Giolito's perspective is the psychology of divorce and its cyclical psychological impact on people from one generation to the next, and the ease in which psychiatric issues may emerge from the separation that would lead to uxoricides. Christensen & Patterson (2010) noted in their research that there is little doubt of the positive relationship between the divorce and homicide as evident in the number of studies that have been done in this area (Shackelford et al., 2000; Steeves & Parker, 2007; Mize et al., 2011; Kouyoumdjian et al., 2013). Divorce leads to the 'disintegration in society' for either one or both parties, and, where there is an increase in the societal disintegration the rates of crime and violence increase (Christensen & Patterson, 2010). From Daly & Wilson (1988) and Shackelford's (2000, 2001) works, there is compelling evidence that divorce cannot directly be tied to murder. The accounts for the killings associated with divorce are the unresolved conflicts that exist in the intimate unions.

Although there might be some sense of relieve from the ending of a relationship to solve marital problems (or intimate disagreements), this could potentially turn more tragic (i.e., uxoricides) than a real resolution of the problems. Mouzos & Rushforth (2003), very succinctly noted that in Australia there are approximately 129 family homicides on a daily basis, with approximately 60% percentage of these killings occurring between intimate partners. Studies have supported the fact that although the relationship may have dissolved, quite often the risk of victimization does not end at the point of dissolution (Harris-Hendriks, Black & Kaplan, 2000; Steeves & Parker, 2007). Although the violence may be present, which result in the separation or divorce, this violence could increase even further leading to injury and unfortunately death of either one or both individuals (Mouradian, 2000). The children must face the psychology issues of their parents' behaviour thereafter. The conflicts in marriages such as disagreements, individual opportunistic ends, physical, psychological and sexual violence may result in intimate partner violence, which can be psychologically devastating to the children who sometimes witnessed or discovered the corpse of a parent. The psychological challenges of growing up thereafter including relocation (Black & Kaplan, 1988; Gindes, 1998; Kaplan, Black, Hyman & Knox, 2001; Steeves & Parker, 2007) are quite impactful.

Divorce is a clear indication that there were unresolved issues in an intimate partner relationship. Among the issues that divorce express are conflicts arising from sexual infidelity (Shackelford, Buss & Peters, 2000) and sexual strategies employed by men over women (Mize et al., 2011), which may result in uxoricides. There is a psychology to marriage and divorce that must be taken into account in health discourse. The issues of marriage, divorce and homicide as public health problems in Jamaica must be addressed with urgency, especially because of the homicide pandemic and violence being public health phenomenon as well as a psychiatric disorder. Despite the high rates of divorce and homicides in Jamaica, divorce has never been empirically linked to violence, especially homicide, with the absence of research we continue to plan without a comprehensive understanding of the impact of divorce on murders. The goal of this research is to illuminate these issues and to identify the factors that impact marriage, divorce and, homicide. The researchers plan

to ascertain whether the development and implementation of more robust policies can mitigate the loss of innocent lives and minimize the psychological effects due to divorce and intimate partner violence.

ECONOMETRIC MODEL

The economics of crime was developed by Gary Becker in the 1960s, which has popularized the use of econometric analyses in crime data (Becker, 1968). Becker's pioneering work on the economics of crime called *utility maximization crime* employed an econometric framework that allowed for the examination of crime as a function of many variables. He theorized that people's engaged in criminal activities is a function of:

$$y = f(x_1, x_2, x_3, x_4, x_5, x_6, x_7) \dots\dots\dots [1]$$

where y = hours spent in criminal activities,

x₁ = wage for an hour spent in criminal activity,

x₂ = hourly wage rate in legal employment,

x₃ = income other than from crime or employment

x₄ = probability of getting caught,

x₅ = probability of being convicted if caught,

x₆ = expected sentence if convicted, and

x₇ = age

The *utility maximization crime function* indicates that engagements into criminal activities are associated with the risk factors, benefits and punishments as deterrents (Becker, 1968). Hence, the economic benefits associated with criminal activities may be such that people will risk the likelihood of being caught if the economic benefits outweigh the risks associated with being caught. Such a seminal work by Becker sets the premise for its application in homicide events in Jamaica and those factors that are likely to influence these events. Unlike Becker's research that did not examine divorce and marriage in the economics of crime, Musai, Tavasoli, & Mehrara's (2011) examination of this area used econometric analysis to model factors that influence divorce rate. Their function was

$$D_t = C + \beta_1 Gin + \beta_2 I + \beta_3 E + \beta_4 T + \beta_5 B \dots\dots\dots [2]$$

D: indicates the number of occurred divorces per ten-thousands.

Gin: indicates the Gini coefficient.

I: per capita income by thousand Toman.

E: indicates Iranian household monthly expenses by thousand Toman.

T: indicates the urbanism rate and equals to urban population/country population ratio

B: is the literacy rate

With neither Becker's work nor Musai, Tavasoli, & Mehrara's empirical model adequately cover the topic in this study, we will employ various econometric model that will examine homicide, divorce and marriages in Jamaica. For this study, we have used econometric analyses to model three functions – homicide, divorce and marriage models in Jamaica:

$$D_t = k + \beta_1 Pop_t + \beta_2 GDP \text{ per capita}_t + \beta_3 H_t \dots\dots\dots [3]$$

$$H_t = k + \beta_1 Pop_t + \beta_2 M_t + \beta_3 D_t \dots\dots\dots [4]$$

$$M_t = k + \beta_1 Pop_t + \beta_2 GDP \text{ per capita}_t + \beta_3 N_t + \beta_4 L_t \dots\dots\dots [5]$$

where:

H_t: indicates number of homicide events in time t

Pop_t : indicates the number of people in the population at time t

M_t : indicates the number of marriages that occurred in time t

D_t : denotes the number of divorces that were granted by the courts in time t

L_t : means the number of deaths that occurred and registered at time t

N_t : indicates the number of net international migrants in time t

k : denotes a constant

In addition to Equations [3] to [5], using macroeconomic indicators such as poverty, inflation, unemployment and the exchange rate as well as mortality, homicides, marriages and divorce rate, we modeled how the former will influence the latter.

$$\hat{H}_t = k + \beta_1 P_t + \beta_2 E_t + \beta_3 U_t + \beta_4 I_t \dots \dots \dots [6]$$

$$\Theta_t = k + \beta_1 E + \beta_2 Mor_t + \beta_3 P + \beta_4 Mor_t \dots \dots \dots [7]$$

$$M_t = k + \beta_1 P \dots \dots \dots [8]$$

where \hat{H}_t : denotes the homicide rate per 100,000 population in Jamaica at time t

Θ_t : indicates the divorce rate per 100,000 population in Jamaica at time t

P_t : means the poverty rate in per cent at time t

E_t : denotes the exchange rate of the 1 USD to Jamaican dollar at time t

Mor_t : indicates the mortality rate per 10,000 population in Jamaica at time t.

U_t : symbolizes the unemployment rate in Jamaica at time t.

I_t : means the inflation rate in Jamaica at time t.

MATERIALS AND METHODS

The data for this study are taken from various Jamaica Government Publications including the Demographic Statistics (1950-2013) from the Statistical Institute of Jamaica. Demographic Statistics provided data on mortality, population, and deaths. Jamaica Constabulary Force and Planning Institute of Jamaica and the Statistical Institute of Jamaica provided data for murders; gross domestic product per capita (i.e., GDP per capita). Those governmental agencies are responsible for collecting data for the purpose of planning by the government of Jamaica. The period for this work is from 1950 through 2013. Data were recorded, stored and retrieved using the Statistical Packages for the Social Sciences (SPSS) for Windows, Version 21.0. The level of significance that is used to determine statistical significance is less than 5% (0.05) at the 2-tailed level of significance. Ordinary least square (OLS) regression analyses and curve estimations were used to determine models and best fitted models. Prior to the use of the OLS, the researchers tested for normality of the variables (i.e., linearity and skewness including Durbin-Watson test). The validity of the data is relatively high as these have been tested and modified owing to previous studies (McCaw-Binns et al., 1996, 2002; Mathers et al., 2005). We also tested for the likelihood of Type I and Type II Errors, by using one-tailed and two-tailed test of significance. Based on the data on poverty, which commenced in 1989, we use data for inflation, poverty, exchange rate, and unemployment from 1989 to 2013 in order to have a standard measurement for those variables.

Operational Definitions

Divorce is legal separation and it is used as proxy sexual separations. **Death**: The absence of life. **Marriage**: According to the Statistical Institute of Jamaica (STATIN), in the 2009 Demographic Statistics, marriage is “The act, ceremony or process by which the

legal relationship of husband and wife is constituted” (Statistical Institute of Jamaica, 1950-2013). **Decades**: The studied period is 1950 to 2013, which means that there are 6 decades: 1950-1959; 1960-1969; 1970-1979; 1980-1989; 1990-1999, and 2000-2009.

Homicide (or **Murder**): unlawful killing (a crime causing death without a lawful excuse) by other person(s) within a particular geopolitical zone (excluding police killings or homicides). For this work, murders represent the total number of murders for each year.

Mortality means the total number of deaths that occurred within the population for a particular period, which is usually per year. The quality of mortality statistics in Jamaica is relatively good as research conducted by McCaw-Binns and her colleagues (1996, 2002) established that in 1997, the completeness of registration of mortality was 84.8%; in 1998 it was 89.6%. The quality of completeness of mortality registration has been established by the World Health Organization (WHO), ICD classification (Mather et al., 2005). A completeness of 70-90% is considered to be medium quality while more than 90% is considered high quality data. Within the context of the WHO’s classification, death statistics in Jamaica is medium quality and is relatively close to being high quality. In keeping with the completeness of mortality data the Statistical Institute of Jamaica (STATIN) has adjusted the information to reflect the 100 completeness of mortality figures (Bourne, Solan, Sharpe-Pryce et al., 2014). GDP per capita is income per capita. Jamaica began collecting data on poverty since 1990 therefore; the model relating to poverty will be from 1990 to 2013.

RESULTS

Table 1 presents descriptive statistics as well as mean value for six decades ending 2009. Of the six decades for this study, the average numbers of homicides were 647 ± 484 , 95% CI: 513-780. The rate of change in the numbers of homicides for each period increased by an exponential rate (Annex 1), which is equally the case for the numbers of divorces. In the 1950s, there were 35 homicides in Jamaica and 5 decades later the numbers of murders were 38.4 times more. This means that in the 1950s on average, 1 person was murdered every 100 days compared to 368 in the 2000 period. In 1990s, on average, two people are murdered daily compared to approximately 4 in 2000s. On examination of the homicides for the 6 decades in Jamaica, the matter became a pandemic in 1970s, when for the first time daily homicide was 1 compared to 10 in 100 days in the 1950s and 24 in 100 days in the 1960s. Comparatively, the rate of change in divorce was slower than the rate of change in homicides (Annex 2), with the rate of change in marriages is exponentially similar to those in homicides for the same periods. Furthermore, a positive statistical association emerged between average number of homicides and average number of divorce for the six decades ($r_{xy} = 0.968$, $R^2 = 0.9378$ – Annex 2), which was equally the case for general homicides and divorces ($r_{xy} = 0.870$, $R^2 = 0.757$ – Annex 2).

Table 2 presents Ordinary Least Square (OLS) models for homicides by certain explanatory factors. Using stepwise OLS, Model 1, commences with the most important factor determining homicides in Jamaica, population. Three factors (i.e., population, marriage and divorce) accounted for 84.2% of the variance in homicides in Jamaica. The population accounted for 79.3% of the variance in homicides, followed by marriage which explained 3.6% and divorce which accounted for 1.3%. Furthermore, all the factors are positively correlated with homicide. This means that for example, taking population, a rise in the human population in Jamaican will correspond to an increase in the number of homicides and vice versa, which is also the case for marriages and divorce.

Using stepwise OLS, Table 3 presents those factors that explained changes in homicides in Jamaica. In this case, we simplify the model by excluding population and from among the other variables, marriage emerged as the most influential factor for homicide (explaining 75.3%), this was followed by divorce

Table 1.

Descriptive statistics for numbers of Homicide, Marriage, Divorce, Mortality and GDP per capita.

Details	Mean	±	95% CI	Mean for each decade					
				1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009
Numbers of Homicides	647	484	513 – 780	35	88	266	488	762	1,344
Numbers of Marriages	14,178	6,480	12,392 – 15,964	7,798	8,265	9,051	9,702	18,079	22,948
Numbers of Divorces	1,091	544	941 – 1,241	336	599	658	749	1,301	1,610
Numbers of Mortalities	14,740	1,252	14,395 – 15,086	15,909	14,142	14,528	13,869	14,657	15,725
GDP per capita (in %)	3.2	2.0	2.7 – 3.8	No data	4.7	3.1	1.3	2.4	4.1

Table 2.

Ordinary Least Square (OLS) Estimates, using Stepwise Method, for modeling Homicides with Divorce, Marriages and Population in Jamaica, 1950-2013

Model	Characteristic	Unstandardized Coefficients		B	t-statistic	P	Correlations		
		B	Std. Error				Zero-order	Partial	Part
1	Constant	-2243.40	203.87		-11.004	<0.0001			
	Population	0.001	0.000	0.893	14.279	<0.0001	0.893	0.893	0.893
2	Constant	-1656.23	252.18		-6.568	<0.0001			
	Population	0.001	0.000	0.593	5.692	<0.0001	0.893	0.623	0.324
	Marriage	0.027	0.008	0.358	3.437	0.001	0.855	0.434	0.195
	Constant	-1349.98	274.82		-4.912	<0.0001			
	Population	0.001	0.000	0.449	3.830	<0.0001	0.893	0.476	0.209
3	Marriage	0.021	0.008	0.283	2.702	0.009	0.855	0.357	0.147
	Divorce	0.220	0.094	0.246	2.344	0.023	0.847	0.315	0.128

Dependent Variable: Homicides

Model 1: F [1, 52] =203.89, P<0.0001; Adjusted R² = 0.793Model 2: F [2, 51] =129.05, P<0.0001; Adjusted R² = 0.829Model 3: F [3, 50] =95.44, P<0.0001; Adjusted R² = 0.842**Table 3.**

Ordinary Least Square (OLS) Estimates, using Stepwise Method, for modeling Homicides with Divorce, Marriages and Mortality, 1950-2013

Model	Characteristic	Unstandardized Coefficients		Beta	t-statistic	P	95% Confidence Interval	
		B	Std. Error				Lower Bound	Upper Bound
	Marriage	0.064	0.005	0.854	11.699	<0.0001	0.053	0.075
2	Constant	-317.847	73.988		-4.296	<0.0001	-466.456	-169.239
	Marriage	0.037	0.008	0.498	4.874	<0.0001	0.022	0.053
	Divorce	0.401	0.091	0.450	4.409	<0.0001	0.218	0.583

Dependent Variable: Homicides

Model 1: F [1, 59] =183.44, P<0.0001; Adjusted R² = 0.753Model 2: F [2, 58] =143.91, P<0.0001; Adjusted R² = 0.827

(explanatory power = 7.4%). By way of the stepwise method, this method excluded 1) mortality, 2) net external migration, and 3) GDP per capita.

A strong direct statistical correlation existed between divorce and marriage in Jamaica, using over 6 decades of data points (1950-2013) – Table 4. Marriages accounted for 75.3% of the variance in divorce rates assuming that no other variables are present in the model. Such an assumption is simple, but it still provides critical information on the issues examined.

Divorce is influenced by population and GDP per capita (Table 5.1). The two aforementioned factors accounted for 76.6% of the variance in divorces in Jamaica, with population being the more influential of the two (explained 69.6% of the total variance in divorce). It should be noted here that marriage is spuriously correlated with divorce as the correlation between the two variables disappeared on the inclusion of t population. Hence, it is the number of human population, particularly those beyond 18 years, in Jamaica that has an impact on the divorce rate. We sought to examine whether marriage is a factor of divorce, when many variables were included simultaneously, the final model was established by way of stepwise OLS which is captured in Table 5.2.

Table 5.2 presents the final model for divorce in Jamaica by way of the stepwise OLS technique. The factors of divorce are homicide,

population and GDP per capita, with those variables explaining 77.5% of the variance in divorce. In fact, homicide events have more impact on people's willingness to divorce than economic resources or increase in population.

Using the enter method to carry out this OLS; of the five variables (i.e., GDP per capita, external migration, population, mortality and divorce) four emerged as factors for marriages in Jamaica. The four factors of marriages (i.e., GDP per capita, net external migration, population and divorce) accounted for 78.2% of the variability in marriages. Population had the most impact on marriage (beta = 0.740) followed by GDP per capita (beta = 0.199), mortality (beta = 0.173) and lastly by net external migration (beta = -0.137). Only net external migration was inversely correlated with marriages (b = -0.118) which indicated that when less people enter Jamaica marriages are low and vice versa. Furthermore, with the direct correlation between marriages and GDP per capita, population and marriages, and marriages and mortality, it means that death, economic prosperity and increases in population offer rationale for increased marriages (Table 6).

Table 7 presents statistical correlation between homicides and divorce controlled for by selected variables. On examination of the statistical correlations between homicides and divorce, what emerged was that separations in sexual unions are likely to result in murders. Based on Table 7, the degree of the association following

Table 5.1.

Ordinary Least Square (OLS) Estimates for Modeling Divorce with Mortality, Marriages and Population, 1950-2013

Characteristic	Unstandardized Coefficients		Beta	t-statistic	P	95% Confidence Interval	
	B	Std. Error				Lower Bound	Upper Bound
Constant	149.73	112.10		1.336	0.188	-75.32	374.77
Marriage	0.066	0.007	0.791	9.219	<0.0001	0.052	0.081

Dependent variable: Divorce

Enter method: F [4, 48] = 41.70, $P < 0.0001$; Adjusted $R^2 = 0.758$ ¹Model 1: F [1, 51] = 120.12, $P < 0.0001$; Adjusted $R^2 = 0.696$ ²Model 2: F [2, 50] = 86.09, $P < 0.0001$; Adjusted $R^2 = 0.766$ **Table 5.2.**

Ordinary Least Square (OLS) Estimates, using stepwise method, of Divorce as a function of Homicide, Population, and GDP per capita, 1950-2013

Model		Unstandardized Coefficients		Beta	t-statistic	P	95% Confidence Interval	
		B	Std. Error				Lower Bound	Upper Bound
1	Constant	478.155	68.033		7.028	0.000	341.573	614.737
	Homicides	0.948	0.085	0.844	11.219	0.000	0.778	1.118
2	Constant	-806.160	488.768		-1.649	0.105	-1787.880	175.560
	Homicides	0.529	0.177	0.471	2.988	0.004	0.173	0.885
	Population	0.001	0.000	0.418	2.651	0.011	0.000	0.001
3	Constant	-1551.957	513.359		-3.023	0.004	-2583.591	-520.323
	Homicides	0.310	0.179	0.275	1.732	0.090	-0.050	0.669
	Population	0.001	0.000	0.605	3.828	0.000	0.000	0.002
	GDP per Capita	58.764	19.149	0.221	3.069	0.003	20.282	97.246

Dependent variable: Divorce

Model 1: F [1, 51] = 125.87, $P < 0.0001$; Adjusted $R^2 = 0.706$ Model 2: F [2, 50] = 73.88, $P < 0.0001$; Adjusted $R^2 = 0.737$ Model 2: F [2, 50] = 60.69, $P < 0.0001$; Adjusted $R^2 = 0.775$ **Table 6.**

Ordinary Least Square (OLS) Estimates for modeling Marriages with Mortality, GDP per capita, net external Migration, Divorce and Population, 1950-2013

	Unstandardized Coefficients		Beta	t-statistic	P	95.0% Confidence Interval	
	B	Std. Error				Lower Bound	Upper Bound
Constant	-36563.41	6923.34		-5.281	<0.0001	-50491.371	-22635.444
GDP per Capita	632.39	243.94	0.199	2.592	0.013	141.645	1123.127
Net External Migration	-0.118	0.057	-0.137	-2.053	0.046	-0.233	-0.002
Population	0.014	0.003	0.740	5.430	<0.0001	0.009	0.020
Mortality	0.896	0.415	0.173	2.158	0.036	0.061	1.731
Divorce	0.470	1.639	0.040	0.287	0.775	-2.826	3.767

Dependent variable: marriage

Enter method: F [5, 47] = 38.22, $P < 0.0001$; Adjusted $R^2 = 0.782$

the controlled event varied on the set of controlled parameters. When homicides and divorce were controlled for by mortality, GDP per capita, marriage and net international migration, a moderate statistical correlation existed between the two studied phenomena. In fact, the strong correlation between homicides and divorce which still emerged even after controlling for GDP per capita (or income; $r_{xy} = 0.843$, $P < 0.0001$) indicated that the issues were embedded in a relation that were likely to lead to homicides which have nothing to do with economic resources. This means that there is a potential for mental health issues arise when there is separation in sexual unions. The only time the bivariate correlation between homicide and divorce cease to exist is when the researchers controlled for the exchange rate ($P = 0.202$).

Table 8 forwards information on the correlation between homicides and marriages when controlled for by different selected variables. The highest correlation after being controlled for by a variable was with GDP per capita ($r_{xy} = 0.852$, $P < 0.0001$). This means that the issues that are resulted in murders among couples have little or nothing to do with economic resources. We can go further to say that homicides between couples will still exist even if there is no divorce, mortality, and net international migration indicating the fundamental psychosis in some marriages in Jamaica.

Divorce rate, poverty, inflation rate, unemployment rate and mortality are factors of homicide rate. Those factors accounted for 81.2% (adjusted R^2) of the variance in homicide rate (see Table 9).

Of seven selected variables including macroeconomic indicators, four emerged as factors of homicide rates in Jamaica (Table 10). The four factors are poverty rate, the exchange rate, unemployment and the inflation, accounting for 86.2% of the variance in homicides. The exchange rate, inflation and unemployment rates positively impacted homicide rates, with poverty inversely correlated with homicide rate. The exchange rate had a greater influence on homicide rates than the exchange rate ($r^2 = 81.5\%$). Furthermore, when the exchange rate is added as a variable in the model, divorce becomes a spurious relationship

With the absence of the exchange rate in the OLS model, four factors (i.e., homicide, poverty, inflation and mortality) accounted for 45.8% of the variance in the divorce rate (Table 11). In such a case, homicide rate has the most impact on divorce rate (23.9%) followed by poverty rate (14.0%).

Table 12 presents macroeconomic indicators such as poverty rate, unemployment rate, exchange rate and inflation rate as well as other variables including homicide rate. Of the seven selected variables used at once in the OLS, four emerged as factors of the divorce rate (i.e., exchange, mortality, inflation and poverty rates). Those factors determine 63.2% of the variance in the divorce rate. Poverty rate positively influenced the divorce rate as well as the exchange rate. The positive bivariate statistical correlation between the divorce rate and the homicide rate ($r_{xy} = 0.489$, $P < 0.0001$) was a spurious one.

Table 7.

Pearson's Product Moment Correlation controlled for selected Variables

Controlled variable		Variables	
		Homicides	Divorce
Population	Homicides	1.00	0.438***
	Divorce	0.438***	1.00
GDP per capita	Homicides	1.00	0.843***
	Divorce	0.843***	1.00
Mortality, GDP per capita & marriage	Homicides	1.00	0.534***
	Divorce	0.534***	1.00
Mortality, GDP per capita, marriage & Net External migration	Homicides	1.00	0.530***
	Divorce	0.530***	1.00
Mortality, GDP, per capita, marriage, net external migration & population	Homicides	1.00	0.279*
	Divorce	0.279*	1.00
Poverty	Homicides	1.00	0.283**
	Divorce	0.283**	1.00
Poverty, inflation, unemployment, GDP per capita	Homicides	1.00	0.429**
	Divorces	0.429**	1.00
Exchange rate	Homicides	1.00	-0.164
	Divorces	-0.164	1.00

*** denotes P<0.0001; ** P<0.01, *P<0.05

Table 8.

Pearson's Product Moment Correlation controlled for selected Variables

Controlled variable		Variables	
		Homicides	Marriage
Divorce	Homicide	1.00	0.558
	Marriage	0.558***	1.00
Population	Homicides	1.00	0.521***
	Marriage	0.521***	1.00
Population & divorcet	Homicides	1.00	0.429**
	Marriage	0.429**	1.00
Population, divorce & mortality	Homicides	1.00	0.303*
	Marriage	0.303*	1.00
GDP per capita	Homicides	1.00	0.852***
	Marriage	0.852***	1.00
Population, divorce, mortality & Net international migration	Homicides	1.00	0.288*
	Marriage	0.288*	1.00

*** denotes P<0.0001; ** P<0.01, *P<0.05

Of the eight macroeconomic and social variables entered in the OLS model, five emerged as factors of marriage rate in Jamaica. The five factors are poverty, inflation, exchange rate, GDP per capita and unemployment, which accounted for 67.4% of the variability in marriage rate (adjusted R²). On examination of OLS estimates in Table 13, more marriages in Jamaica were predicated on increased income, lower economic misfortune and a better economic environment. The positive bivariate correlation between marriage and homicide rate in Jamaica ($r_{xy} = 0.439$, P<0.0001) was a spurious one. Embedded in the socio-economic determinants of marriages is the psychology of economic property in marriage decisions.

DISCUSSION

In the last half of a decade (i.e., 1999-2013), the marriage rates in Jamaica have declined with the reverse being the case for the divorce and homicide rates. There is a psychology to marriage, which is captured in financial stability, futuristic economic maximization of welfare and individualistic gamesmanship by each partner. Marriage is simply not a religious act or an expression of love; it is a game of individualistic choices and a web of conflicts. Jamaicans enter into marriages because of group financial stability compared to individual financial insecurity. This study found that poverty is indirectly correlated with the marriage rate in Jamaica and that poverty accounted for 47% of variances in marital unions. It can be deduced from this research that marriages were entered into as an individual refuge than as a matter of love or compatibility. Therefore,

a decision to become married to one person and not another is based on the economics of rational choices.

The inverse statistical correlation between poverty and marriage indicated that individually people are calculating the economic fortunes with that of individual singleness in economic resources versus the combined efforts. If the calculated result indicates that economic prosperity will be greater with that individual they will rationally chose to be married to that person and not another, indicating that the marriage was predicated upon futuristic economic resources. We can go further to say that the rationality of marriage was based on the economic maximization of welfare, meaning that the choice to be married to a certain individual will be based on the maximum futuristic returns and not on economic misfortunes or prolonged individual economic downturn. With there being a positive statistical association between GDP per capita (i.e., income per capita), and the number of marriages, marriage is an economic choice which is rationally made by the individual. In order to better understand the individual rationality of economic concept of marriages, this must be examined with the gender of the parties to marriages. It is this same economics of marriage that accounted for the divorces and determined the positive correlation between divorce and poverty.

In Jamaica, males are substantially wealthier than females, and they received more income comparative to females (see Planning Institute of Jamaica, 1990-2013), which explains that the individual rationality economic concept is more employed by the female. The

Table 9.

OLS estimates of selected Macroeconomic Variables, Marriage and Mortality Rates, 1990-2012.

Variables	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval		Contribution of each factor
	B	Std. Error	B	t	P	Lower Bound	Upper Bound	
Constant	-6.651	16.403		-0.405	0.687	-39.511	26.209	
Divorce Rate per 100000	0.474	0.064	0.414	7.385	0.000	0.345	0.602	0.165
Poverty rate	-1.980	0.191	-1.168	-10.371	0.000	-2.362	-1.597	0.554
Inflation rate	0.434	0.105	0.547	4.141	0.000	0.224	0.644	0.061
Unemployment rate	1.386	0.534	0.172	2.594	0.012	0.316	2.456	0.028
Marriage Rate per 10000	0.048	0.069	0.059	0.706	0.483	-0.089	0.186	NA

Dependent variable: Homicide rate per 100,000 populations

Enter method: F [7, 14] = 45.521, $P < 0.0001$; Adjusted $R^2 = 0.812$ **Table 10.**

OLS Estimates of Homicide rate per 100,000 by selected Variables, 1989-2013

Variables	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval		Contribution of each factor
	B	Std. Error	B	t	P	Lower Bound	Upper Bound	
Constant	13.617	14.713		0.925	0.359	-15.869	43.102	
Divorce Rate per 100,000	0.128	0.093	0.112	1.386	0.171	-0.057	0.314	NA
Poverty rate	-1.130	0.246	-0.667	-4.593	0.000	-1.623	-0.637	0.021
Inflation rate	0.278	0.096	0.351	2.900	0.005	0.086	0.470	0.025
Unemployment rate	1.091	0.462	0.135	2.363	0.022	0.166	2.017	0.012
Marriage Rate per 10,000	0.034	0.059	0.041	0.577	0.566	-0.084	0.152	NA
Mortality Rate per 10,000	0.137	0.218	0.037	0.629	0.532	-0.300	0.574	NA
Exchange rate	0.334	0.072	0.556	4.624	0.000	0.190	0.479	0.815

Dependent variable: Homicide rate per 100,000 populations

Enter method: F [7, 14] = 16.529, $P < 0.0001$; Adjusted $R^2 = 0.862$ **Table 11.**

OLS Estimates of Divorce rate per 10,000 by selected Variables, 1989-2013

Variables	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval		Contribution of each factor
	B	Std. Error	B	t	P	Lower Bound	Upper Bound	
Constant	47.178	23.529		2.005	0.050	0.043	94.313	
Poverty rate	1.985	0.405	1.340	4.905	<0.0001	1.174	2.795	0.140
Inflation rate	-0.525	0.163	-0.759	-3.222	0.002	-0.852	-0.199	0.063
Unemployment rate	-1.075	0.826	-0.153	-1.302	0.198	-2.730	0.579	NA
Mortality Rate per 10,000	-0.737	0.344	-0.227	-2.144	0.036	-1.426	-0.048	0.045
Homicide rate per 100,000	1.042	0.141	1.192	7.385	<0.0001	0.759	1.324	0.239
Marriage Rate per 10,000	-0.102	0.101	-0.142	-1.007	0.318	-0.304	0.101	NA

Dependent variable: Divorce rate per 100,000 populations

Enter method: F [7, 14] = 9.719, $P < 0.0001$; Adjusted $R^2 = 0.458$

female, therefore, rationally computes the economic returns of being with a certain male and after which the decision to marry this person is based on the maximum economic return in opportunism. The maximizing theory of the marriage market (see Becker, 1973) explains the direct correlation between income and marriage which has been empirically found in other studies (Burgess et al., 2003), which is concurred by the current research. One study by Oppenheimer (1997) found that this income marriage does not hold true for female as they are more likely to seek divorce on economic independence and the opposite for male (Hoffman & Ducan, 1997; South & Spitzite, 1986). Therefore the choice to be married by a female and stay married is based on individual economic opportunistic behaviour and account for the present positive correlation between divorce and poverty. Males, on the other hand, do not understand the economics of the psychological impact of marriage for women and therefore invest with a totally different opportunistic behavior. This unawareness of the opportunistic economic goal of the female will result in separation and possibly divorce. The psychology of this twain opportunistic ends of the male and the female in the marital union is likely to be confrontational when these opportunistic ends are not met and so many mental health and psychological issues arise on the onset and during the separation and/or divorce or, uxoricides.

There is individual economic opportunistic end of marriage by way of maximum welfare that accounts for divorce in Jamaica, which is equally the case in Iran (Musai et al., 2011). A time-series study conducted by Musai et al. (2011) found that income is a factor in divorce which is concurred with by this research. The conflicting issue between this research and that of Musai et al. (2011) is the fact that the current study results were positive versus negative results in the study conducted by Musai and others. It appears irrational that a positive statistical relationship could exist between divorce and income (i.e., GDP per capita), but there is an explanation behind this empirical evidence. As we noted earlier, the individual economic opportunistic maximization rationality of females for entering into marriages was primarily responsible for them staying therein. The marriage is worthwhile for the female when they are able to find and have a partner that will provide the maximum economic welfare, and when the married male is unable to provide the economic opportunistic welfare, she desires out of the marriage. Hence, when income increases for married females and this supersedes that of the male, the married females are likely to seek a divorce. It is for this very rational why poverty is inversely correlated with the married rates in Jamaica. Our findings are not mythical as empirical evidence existed that showed the inverse relationship between males' income

Table 12.
OLS Estimates of Divorce rate per 100,000 by selected variables, 1989-2013

Characteristic	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval		Contribution of each factor
	B	Std. Error	B	t	P	Lower Bound	Upper Bound	
Constant	60.186	19.590		3.072	0.003	20.927	99.445	
Poverty rate	1.789	0.336	1.208	5.320	<0.0001	1.115	2.462	0.205
Inflation rate	-0.405	0.137	-0.585	-2.968	0.004	-0.679	-0.132	0.046
Unemployment rate	-0.575	0.689	-0.082	-0.835	0.407	-1.956	0.805	NA
Marriage Rate per 10,000	-0.070	0.084	-0.097	-0.832	0.409	-0.237	0.098	NA
Mortality Rate per 10,000	-0.933	0.286	-0.287	-3.256	0.002	-1.506	-0.359	0.039
Exchange rate	0.520	0.100	0.989	5.208	<0.0001	0.320	0.719	0.367
Homicide rate per 100,000	0.263	0.190	0.301	1.386	0.171	-0.117	0.643	NA

Dependent variable: Divorce rate per 100,000 population
Enter method: F [7, 14] = 16.091, P = 0.003; Adjusted R² = 0.632

Table 13.
OLS Estimates of Marriage by selected Macroeconomic and Social Variables, 1990-2012

Characteristic	Unstandardized Coefficients		Standardized Coefficients			95% Confidence Interval	
	B	Std. Error	B	t	P	Lower Bound	Upper Bound
Constant	82.791	25.492		3.248	0.002	31.682	133.900
Poverty rate	-1.837	0.631	-0.892	-2.909	0.005	-3.103	-0.571
Inflation rate	-0.867	0.180	-0.900	-4.817	<0.0001	-1.227	-0.506
Exchange rate	-0.650	0.201	-0.890	-3.239	0.002	-1.053	-0.248
Divorce Rate per 100,000	-0.181	0.175	-0.130	-1.032	0.306	-0.531	0.170
Mortality Rate per 10,000	-0.551	0.415	-0.122	-1.329	0.190	-1.383	0.281
GDP per Capita	22.380	4.178	1.544	5.357	<0.0001	14.003	30.756
Homicide rate per 100,000	0.110	0.251	0.091	0.439	0.662	-0.393	0.614
Unemployment rate	-2.812	1.022	-0.287	-2.751	0.008	-4.861	-0.763

Dependent variable: marriage rate per 100,000 populations
Enter method: F [1, 20] = 17.049, P<0.0001; Adjusted R² = 0.674

and divorce (Hoffman & Duncan, 1997), indicating that the married female will remain in the marriage for the individual economic opportunistic returns (see also, Weiss & Willis, 1997; South & Spitze, 1986). Wives therefore compare the consequences of divorce, the cost of finding a better player in the marriage market as it relates to economic returns before option for divorce as their choice to divorce could result in economic misfortunes. A study by Weitzman (1985) found that females economic status after divorce declined by 73% and males' by 42%, which was later refuted by Hoffman and Duncan (1988) to be about 33% for females. The fact is the economic consequences of divorce seem to be more burdensome for females than males. Hence, when South (1985) empirically established that divorces increase in periods of recession and that of Musai et al. (2011) who showed that psychological spousal stressors rise in times of economic recession that matter was empirical explained by this study. We found that poverty was inversely related to marriage and that the poverty was positively correlated with divorce, indicating that the psychological decisions that go into the choice to be married are predicated on individual economic opportunistic success and not economic failure.

So when Nunley (2007) stated that inflation, unemployment, GDP growth and female's education influence Americans' divorce rate, we somewhat agreed with those findings. The present study did not include education and so no evaluation can be provided thereby, unemployment is not correlated with the divorce rate of Jamaicans. While inflation and poverty make it increasingly difficult for the individual to remain in a marriage, high exchange rate of the domestic currency to hard current like the US dollar makes it less to remain in a marriage and divorce become more attraction for the intimate partners and disrupt the family. Furthermore, inflation increases the cost of living of the individual, but if both married parties are employed this is cushioned. We went further and found that poverty and mortality were also associated with the divorce rate of Jamaicans and that homicide is correlated with divorce and vice versa when the exchange rate is omitted from such an OLS model. What Nunley did

not examine was the economic maximization principle of marriage, which was offered by Becker (1973, 1974) as an assumption for marital unions. So when Becker, Lamder & Michael (1977) offered an explanation that extraordinary and unexpected events increase the divorce risk owing to the modification of the marital incomes, this is in keeping with the psychology of marriage, economic opportunistic maximization end, moreso from the standpoint of the married woman.

Even when Spitze & South (1985) indicated that there is a direct statistical correlation between the female's working hours and marriage instability, the psychology of marriage as well as the psychology of divorce and the mental health issues were not examined. This means that there is a psychology of marriage for female, which is completely different for male, which is why economically independent female does not need to stay in a marital union (Oppenheimer, 1997), even if the economic opportunistic returns from the male is the maximum, as she needs him lesser than in time of economic dependence (see Becker, et al. 1997). Wilkinson-Ryan & Small (2008) opined that "Evidence suggests, however, that this contractarian ideal is not borne out by the current reality in which females are at a financial disadvantage to their male counterparts after divorce. Females, with or without children, experience an average decline in standard of living of about one-third upon divorce. Males, however, experience a slight increase in standard of living because their family size decreases while they maintain their personal income" (109), which still emphasizes the individual economic opportunistic end of marriages. Becker (1981) theorizing on 'production complementary' did not speak to the individual economic opportunistic end of marriages, but it was implied as he offered that marriage are formed when both husband and wife are more productive together than apart, indicating that the opportunity cost of marriage is the alternative forgone of individual economic opportunistic cost. It follows therefore that divorce result of the individual economic opportunistic costs are greater apart than together.

One of Becker's (1973) assumptions is that there is equilibrium in marriage market, because no partner to the marriage can exchange his/her spouse for a better one. Such an assumption is clearly fictitious as divorce and remarriage as well as cohabitation following legal separation is an indicator of partner choice in switching and seeking a better alternative. In fact, if there was equilibrium in the marriage market, then remarriage to the same partner would never be possible, but it happens. Becker's assumption, therefore, does not hold true in most societies as the issue of the divorce rate, remarriage and increased cohabitation over the last decade is a clear indication that the equilibrium assumption in the marriage market must be removed from the thinking of marital unions. According to McKinnizh (2007), people are continuously seeking a better alternative with more information and this is expressed in greater divorce rates at work places where there is a high percentage of members in the opposite, simply because 'another form of on-the-job search' as there is no equilibrium in the marriage market as more information changes choices of likely partner. In fact we are proposing that the marriage market has a 'psychoastatic compromise'. This is where each partner continuously seeks his/her opportunistic ends and he/she is psychologically willing to compromise with the relationship although he/she is having undergo adverse challenges and personality changes of the other partner. The partners do not stay together because they are both satisfied with the quality of the relationship (i.e., a state of rest that is called an equilibrium); but this is what we refer to as 'psychoastatic compromise' (i.e., astatic compromise). Hence, what Becker observed was not equilibrium in the true sense of the word but an astatic compromise in which the each partner's psychological state allows the marriage to progress even if they are not communicating, dissatisfied with the relationship or communicating at the time. This may be due to having young children, employment of one partner, the stereotype associated with divorce and sense of failure with the dissolution of the marriage. It is when the astatic compromise cannot be reached by at least one partner that the marriage will disintegrate and lead to separation, divorce and/or uxoricide.

The issue of spouse switching has also been increased with the advent of the internet (Griscom, 2002) and this medium as well as choices at work places and universities account for more divorce or people opting out of their present marital relationship to cohabit with another or society being more accepting of this behaviour. There can be no denial that the individual economic opportunistic end is continuously working in marriages over the lifecourse of the partners, and that equilibrium (or state of rest) is only attained on the death of one partner. The current findings showed that divorce is influenced by macroeconomic indicators (such as the exchange rate and poverty) and mortality, indicating that economic failure is highly likely to see one partner in the marriage opting out because no equilibrium exist with that partner. Again, this speaks to the psychology of divorce and marriages that cannot be overlooked in explaining how homicide and divorce pandemic affect various societies, particularly in uxoricides (Adinkrah, 2008; Steeves & Parker, 2007). An analysis of marriage and divorce from an economic perspective is therefore lacking and must be expanded upon urgently. All studies on and particularly those that have examined marriages from an economic perspective have failed to see the psychology of divorce and marriages that are outside of an economic perspective and that are critical parts of understanding the high rates of divorces and uxoricides in particular societies, still outside of an economic theorizing (Adinkrah, 2008). The issue of the non-economics of marriages is even supported by the current study that showed that only 47% of macroeconomic indicators determine marriages, 61.4% of divorces are explained by macroeconomic indicators and mortality. With mortality impacting on divorce this suggested that psychology of divorce increases with a rise in deaths. This also supported the refutation of Becker's assumption that there is equilibrium in the marriage market as people opt out of this

union during their lifecourse if economic misfortune arises in the relationship (Becker, 1973, 1974, 1981). Hence, death is the finality to staying in the marriage and as such equilibrium is only attained at this point. We can extrapolate from the aforementioned finding that people are opting out of marriage before death, because there is a psychology behind marriages that they desire.

Dnes & Rowthorn's (2002) perspective highlight the economic focus of divorce and little emphasis on the psychology of marriages and divorces. "They may be able to salvage little of their original investment should the marriage fail, and it is often the wife who has more to lose by divorce" noted Dnes & Rowthorn, which is difficult to explain with empirical data (Dnes & Rowthorn, 2002, 4). In one study, the researchers opined that "Ideally, prenuptial contracts, divorce settlements, and child custody agreements each require the parties involved to negotiate effectively in order to maximize the joint welfare of the spouses, ex-spouses, and children. Evidence suggests, however, that this contractarian ideal is not born out of the current reality in which women are at a financial disadvantage to their male counterparts after divorce" (Wilkinson-Ryan & Small, 2008, 2), which is difficult to understand why 1) there is so much bitterness from divorce, particularly from the man's perspective, 2) males kill their female partners, and, 3) male's economic welfare rose from divorce compared to that of females and 4) the reason males commit homicide.

The current findings showed that there is a strong bivariate statistical correlation between homicide and divorce which concurred with the literature (Christensen & Patterson, 2010); but this relationship ceased to exist with the opening of the economy (i.e., using the exchange rate) that was not discovered in literature. We found that poverty is secondary to exchange rate in determining the homicide rates and there are many cases of uxoricide which do not support equilibrium in the marriage market, especially with males being perpetrators of uxoricides. The question which cannot be answered from Dnes & Rowthorn's perspective is 'the reason why the winner in the case of a divorce wants to hurt the losing partner?' The perspective of Dnes & Rowthorn fails to examine 1) intrinsic friction, 2) psychological desired adaptability, and 3) psychological fear individuality, which are pivotal reinforcement in the psychology of divorce that are explaining homicides following marital separation, damaged children and depressed adults which we are forwarding as justifications instead of the economics of divorce. Our justification for the psychology of divorce and marriage is even further supported by a study conducted by South (1985), which empirically established that during periods of recession divorce increases and this recession induces stressors into the spouses. It can be forwarded here that there is a psychology in the economics of the marriage market that has not been examined using economic analysis of the marriage market.

Inter-Intrinsic Friction

There are personal psychological issues that confront the individual because of his/her economic opportunistic thinking and negative experiences during growing up, which when unresolved and unmet creates a cognitive turmoil and these are heightened and more so tested in periods of prolonged economic downturn. The psychological hurt which is produced when economic opportunistic ends are not met can be likened to incarceration as the mind's eyes interpret the happenings as individual failure in seeking to maximize economic welfare from the marital partnership. Although studies showed that males benefit economically more from a divorce than females (Hoffman & Duncan, 1988; David & Flory, 1989), there are disbenefits of the social failure, continued internal conflict as to choices in the marriage market (Shrubb, 2013) and the psychology of economics that he had not gotten right. It is this inter-intrinsic friction that is happening within the mind of each spouse and intra between the spouses that sometimes culminates into violence,

particularly if the male internalizes himself as the undervalued party or his 'machoism' is being tested or their state of control over the woman (Mize, Shackelford, & Weekes-Shackelford, 2011).

The inter-intrinsic friction accounts for the intimate partner violence and the positive correlation between divorce and homicides that emerged in this study. According to the World Health Organization, intimate partner violence is the "behaviour within an intimate relationship that causes physical, sexual, or psychological harm, including acts of physical aggression, sexual coercion, psychological abuse and controlling behaviours" (WHO, 2010), which is owing to the unresolved and untamed inter-intrinsic friction. The female in the marriage acts out her inter-intrinsic friction through psychological issues such as name calling, expressions of disappointments, withholding sex, and regret of involvement into the marriage some owing to these hidden conflict that are unfolding in her mind on a regular basis because of negative happening in childhood or adolescence (Kouyoumdjian et al., 2013). The male, on the other hand, acts out of his inter-intrinsic friction by way of physical assaults, little contact with his partner, longer hours outside the home and this deepens conflict and increases the probability of partner switching (Buss & Schmitt, 1993) only from the inter-intrinsic friction which could include and not limited to abuse during childhood, how he was socialized and negative labels during growing up (Rosenzweig, 1956). So when Kouyoumdjian, et al, (2013) indicated that the risk factors related to intimate partner violence included "... sexual abuse in childhood or adolescence, earlier age at first sex, lower levels of education, and forced first sex" (p. 1), which are a part of the inter-intrinsic friction that is at work in the present partner in the sexual union which when unresolved and are likely to create conflicts in the marriage. Hence, it is difficult to maintain a marriage and Shrub (2013) noted that this owes to mental health issues therein as well as non-mental health matters in the union.

Intimate partner violence is only an indicator of the inter-intrinsic friction that are unraveling in the marriage, an expression of mental health issues (e.g., depression, hopelessness, guilt, feeling down, change in sleeping pattern, worthlessness) and self-esteem issues that must be addressed with urgency before these escalate into marital dissolution and/or homicides if left unresolved. The rationales are that the inter-intrinsic frictions are psychology issues owing to the gender differences (Buss, 2005) and age disparity between the partners (Shackelford, 2001). Shackelford (2001) perspective that "Uxoricide risk generally increases with greater age difference between partners" (p. 284), reinforces the inter-intrinsic friction that is unfolding in each partner and these create intra-intrinsic conflicts that if left unresolved will escalate into psychological despair deficiency. The conflict that gives rise to the psychological despair deficiency may be a simple conflict or a complex one that is internalized by one partner, and the next action of that partner may be bloodshed or murder (Daly & Wilson, 1988; Shackelford, 2000). An example of a personal belief that is gender related, which create inter-intrinsic friction in marriage was given by Shackelford, Buss, & Peters (2000) "Men worldwide think, feel, and act as if their wife is their exclusive sexual property" (p. 273), which must guide a particular action which may or may not be in keeping with personality of their wives. The wife may stay depending on her economic inability and the husband's economic offerings. But, does money change this dynamics?

The present study showed that money (i.e., GDP per capita) was a factor for both marriage and divorce creating a space for the importance of money in marital unions. Money is important in pulling the couple together and is the same thing that is responsible for pushing them apart. Scholars like Becker, among others, have spent much time examining the economic issues in marriages or divorce, but they have failed to evaluate the role created by inter-intrinsic friction, and how the inter-intrinsic friction create the

atmosphere for intimate partner violence owing to the psychology of economics and more. The lack of money can create mental health issues such as depression, change of appetite, change in sleeping pattern, worthlessness, hopelessness and this fashion inter-intrinsic friction which is the agent for marital dissolution and homicides. It is this lack of money that opens the door for the economics of cheating, dishonest behaviour, encourages economic opportunism, and badly destroys the fabric of trust in the relation and such inter-intrinsic friction spreads to the point of combustion. There is a psychology to money that cannot be denied, and it is this same psychology that creates conflict when it is absent in the relationship.

Another inter-intrinsic friction that is unfolding in each partner in the marital union is the stigma of failure because of the marital dissolution. Marital dissolution results in lowered economic welfare which ranges from the short-run to the medium-run and has a different influence of the genders that could last in the long-run. A study by Wilks et al, (2008) found that one in every 5 Jamaican is depressed, with the one in every 4 females and 3 in every 20 males, and no one has sought to determine the rationale for women's psychological state including the inter-intrinsic friction caused by marital dissolution or broken sexual union. What Wilks and colleagues' work as well as the general body of public health literature in the Caribbean show is the effect of the psychology of divorce on mental health issues in children. Undoubtedly the literature shows that divorce causes psychological issues in children (Amato, 1994; Appel & Holden, 1998; Ayoub, Deutsch & Maraganorr, 1999; Belsky, Youngblade, Rovine & Volling, 1991; Cummings & Davies, 1994; Dadds, Atkinson, Turner et al., 1999) offering insights into the destruction of young minds in the games of marital dissolution or other family separation.

Psychological Desired Adaptability

Generally people do not want to be married, they desire economic prosperity and psychological comfort that accounts for their desire to psychologically adapt to the issue of marriage only because it is able to cater to their individual opportunistic demands. Like education which is a social mobility from one economic to another stratum of society, the right marriage is not different and it is this psychological fact that people are will to adapt to in order to cater to their individual economic opportunistic desire. With the economic consequences of divorce empirically established it is severe for women (Hoffman & Duncan, 1988; Weitzman, 1985), it should come as no surprise to anyone that there is a psychological desired adaptability of marriage if the economic welfare is high compared to singleness or another person in the marriage market.

Children are by-products of sexual union formations and they are a part of psychological desire adaptability of at least one of the partners. In high conflict-marriages (or sexual cohabitations), the psychological trauma of children may be more intense because apart of the game in the drive towards the divorce is the marginalization of the children and open expressions of them being played by one of the parent. During the good times children are welcomed, loved, and their welfare could be taken care of and this is radically changed in the game of the marital separation, which is totally different from the psychology of the formation. Oftentimes, one spouse who feels victimized is highly likely to commence psycho-physiological abuse of the child/ren, and disciplining of the child/ren takes on a harsher reality (Kline, Johnston & Tschann, 1991; Lieberman & Van Horn, 1998; McLanahan, 1999; McNeal & Amato, 1998), which explains the adjustments of children post-harsh marital separation (Kelly, 2000). During the period leading towards the divorce, the child/ren will be chronically abused in the home. These chronically abuse children become maladjusted adults and may have psychological issues in adapting to effective sexual unions, particularly if the separation ends up bitter and in an uxoricide – phobias, mood disorders, depression, denial and passivity (Steeves & Parker, 2007).

Psychological Fear Renewed Individuality

During the meeting of the individual economic opportunistic ends of marriage, the individual learn group psychological acceptance and his/her individuality are merged into a collective whole with the other partner. When the individual opportunistic ends are not met for an extended time or created because of economic recession, psychological or physical issues that incapacitate one party in the marital union individual from being able to cater to the individual economic opportunistic end of the other, the psychological fear of separation or divorce increases what we call psychological fear individuality. Psychological fear individuality is heightened for males whose psychology of marriage is equated to success and this is threatened by separation or divorce. The reality of the psychology of divorce, particularly for males, is embodied in a study by Gahler (2006) which found that divorcees have lower social network (see also, Daniels-Mohring & Berger, 1984; Rands 1988; Terhell, 2004), and psychological fear of individuality post marital dissolution threatens the fabric of image life created over time and a loss of this accounts for increased admissions into psychiatric hospitals and/or clinic owing to anxiety disorder, depression, loneliness and feeling of incompetence (Gahler, 2006; Kendlar et al., 2003). It should be easy, therefore, to understand the current findings that show the strong correlation between marital dissolution and homicides, and Weitoft et al. (2004) found that spouse's behaviour following legal separation lead to suicides, accidental events, homicides and other occurrence.

Psychology of Individuality

When Lambardo (1999), Grenstein (1990), Spitze & South (1985) and Oppenheimer (1997) examined marital unions they found that economic independence of females is usually associated with divorce increments or marriage instability, which must be framed around the psychology of individuality. Marriage is framed as a complement, better economic welfare, social stability, success and entrants forego their individuality in order for the group dynamics. In periods when individuality is low the marriage is highly likely to last; but this is tested and individuality arises to deal with the challenges of existence, the marriage is likely to fail. Initially people suppress their individuality to enter marriages and when this surfaces and become dominant in the marriage, the fabric upon which this union stands crumbles and it becomes increasingly difficult to sustain. Buss (1989) opined that each partner to the marriage has a different personal strategy and can be conflict as people have different individuality (or personality). Hence, marriages will continue to exist when there is an equilibrium group's individuality and the individual's individuality, which we hereby refer to as congruent individuality.

Psychology of Money

When Becker (1973) and others such as South (1985), Nunley (2007), Hoffman & Duncan (1997), and South & Spitze (1986) opined that income plays a critical role in the marriage or divorce of the sexes, and there is a difference in terms of the behaviour of each sex. Males are lesser likely to seek divorce when income increases with more income for females making them economically independent and therefore explaining why they desire divorce. Embedded in such economic viewpoint is the issue of the psychology of money. Money is associated with socio-economic options and more of it produces independence, which comes with a different psychology. There is a psychology behind money as it creates a belief of dominance and euphoria that comes with individuality, which can only be stopped with the risk of the absence of money or associated access.

It for this psychology of money that draws people into remarriage as according to Holden & Smock (1991), remarriage is the most important means to economic recovery following divorce. In the psychology of money is the power to decide on what the individual

wants, and females are drawn to power. It is for reason why they will be drawn to males with money, leave them when this is not present and might decide to be single if they can access this money without being in a marriage to a male. Males, on the other hand, employ the psychology of money over females and this psychology explains the sense of power they feel and exhibit in the relationship. Females are no different from the males as the psychology of money gives the same sense of power and explain why Trivedi et al, (2009 cited Thara, 2002) as saying that "with womenfolk becoming increasingly economically independent and more aware of their rights, there is a growing trend of refusal to continue in an abusive or unsatisfying marriage, and divorce rates too are on the increase" (p. 38).

Money provides this state of psychological power and the individual who holds this will determine his/her destiny, chart a path of individuality and play more by his/her drum. If the female is the economically dependent partner in the marriage, she is cognizant that marital dissolution will make her worse off (Smock, Manning & Gupta, 1999; Peterson, 1996) because the power player is the male (Wilson & Daly, 1993, 1996) and so she could decide to remain in the relationship inspite of issues such as infidelity, violence, psychological harm, sexual coercion, controlling behaviour and rape. However, when the power of money had by the female and she become economic independent, the psychology of money gives her the choice to address some of the deep issues that lingered in the union for years to which she had to succumb. It is for this very reason why the current study found the direct association between income per capita and divorce, because economic independence has psychology that completely different from economic dependence.

Marriage is therefore a game and each player who seeks to become engaged in this market is a temporary player until more information is had on a new player or economic resources. The psychology of ageing and other extraordinary events force the person to remain with the initial player. Each player in the market is not concerned about winning the game, but is willing to continue engagement in the activity if psychology of individual economic opportunistic welfare are met, new entrance devalue their inclusion, the psychology of money is maximize with the old player and children are likely to add welfare to the individual's psychology. Shackelford, Buss, & Peters (2000) opined that men are tactical beings in a sexual relationship by employing various tactics to control the female who have mastered the art of sexual strategies (see also, Buss, 1988, 1989; Buss & Shackelford, 1997). No equilibrium is ever possible in the game while the players are engaged therein, as switching is also possible and death of one player is the only event that creates a state of equilibrium. Because males are socialized into the psychology of power, authority, money, supremacy they will seek to remain in a marriage if it meets their economic psychology and likewise the females. This does not mean equilibrium but a state of temporary compromise and divorce is the best option out if the other player in the game does not match up to the economics of psychology. The problem therefore arise economics of psychology meets the social image and other part seek out of this game.

The psychology of the hurt, fear, distress, disappointment, and individual opportunistic end creates a mental turmoil and oftentimes culminate into homicide, suicide, and fractured adults and children. Homicide of sexual partner or uxoricides is an expression of mental health issues from the separation (Rosenzweig, 1956), as well as deviant behaviour of children from these homes, depression among player that did not retain their economics of psychology in the game of marriage. It can be better understood why children in broken marriages oftentimes undergo so much psychological trauma (Kaplan et al., 2001) because they are not players in the marriage game, do not understand this dynamic apparatus and therefore are thrust into ignorance of marriage market. Another part of the challenges for children who are caught in the game of divorce is the fact that they are unable to offer a position at the bargaining table

and their exclusion in the negotiation process creates even more bitterness and resent for the futuristic marriage market. Females, who seek desperately to retain the marriage and not accepting that separation is a must, can take the game to another extent by using the child/ren as the pawn by infiltrating their young minds with the psychology of the separation, the psychology of failure, and the psychology of the justification that the male is to be blame for the lowered economic welfare.

The irony of the game is that the pawn is sometimes played by the advantaged spouse, and when fierceness intensify the pawn will be brought through more psychological scares that may be life lasting deepening the viciousness of the pawn when he/she joins the game in later life, particularly if the pawn's economic opportunistic ends were not adequately met during the separation. The irony in the game of separation is that children and the family may be left by female who seek independence (Trivedi et al., 2009), the male is left to explain why the female abandoned the family and the children sometimes interpret this behaviour to be insecurity and instability. Hence the psychology of divorce is highly stressful to all parties including the court appearances and within the context of Dohrenwend et al., (1978); Holmes & Rahe, (1967) and Gahler's (2006) works marital dissolution is the most stressful events of a large number of life experiences, which would justify the reason homicide and legal separation are so highly correlated with each other. Another part of the puzzle in the psychology of the marriage game is aptly described by Daly & Wilson (1988 in Shackelford, 2000, 274) who postulated that "Men...strive to control women...women struggle to resist coercion and to maintain their choices. There is brinkmanship and risk of disaster in any such context, and homicide by spouses of either sex may be considered slips in this dangerous game (p. 205), which explains the ways in which children can be used as pawns in this general game to which there may not be a winner but a vicious ending of one partner (i.e. uxoricide) and emotional scared children (Amato, 1994; Ayoub, Deutsch, & Maraganorr, 1999; Cummings & Davies, 1994; Dadds et al., 1999; Emery, 1999). The severity of the divorce on children can extrapolated from a study done by Olbrich & Bojanousky (1981) that found that 50% of people who were married between 5 and 10 years were hospitalized one year after the legal separation, which highlight the challenges of children in these unions and these youngsters may easily resent sexual unions if they are not brought into therapy during this tumultuous period.

CONCLUSION

Intolerable conflicts such as sexual infidelity, differences in gendered sexual strategies, male sexual jealousy, maximization of economic welfare, and psychology of individuality in intimate partner relationships culminate into separation, divorce and sometimes uxoricides. Divorce, therefore, is an indication of the psychosocial ills that were unresolved in a sexual union and may be looked at as a justification for uxoricides and suicides because of unresolved matters in the intimate partner relationship. These unresolved matters extend beyond the two partners in the relationship to include children, family members, the community and the state. Divorce like homicide is an expression of deeper psychiatric issues that are embedded in a conflictory marriage. There are psychoeconomics to marriages which are continuously interfacing the partners on a daily basis and some people place more emphasis on economics of marriages without understanding the psychology of individuality in the decision making process of the union and how this determines a path to a satisfied marriage or divorce.

The game of marriage is played by each partner for his/her individualistic-opportunistic end, and this accounts for the conflicts in the relationship when these are unmet from a gendered perspective. While the game of marriage as divorce is based on a web of individualistic-opportunistic ends, the psychology of the conflict is a mere expression of the disequilibrium of the two partners'

opportunistic ends and the divorce is the primary expression of the challenges and dissatisfactions because of psychoeconomics in the opportunistic ends that are unmet.

The psychological issues that are embedded in marriages are rarely observed in periods of economic boom and this creates a falsified quality of the marital union. The mental health issues in marriages are uncovered in times of economic misfortunes, when each party to the game of marriage hides his/her economic opportunistic welfare plan and during economic recession these are allowed to come to the surface because one party may want out of the marital union. The inter-intrinsic friction pervades in periods of economic boom and is offset by the welfare that is offered by one party to the game, particularly the male. Hence, when the economic opportunistic welfare is low, non-existent and absent for an extending period in the marriage game, the psychology of the hurt, fear, distress, and disappointment begin to rise to the surface because an individual opportunistic ends are not met and this party may perceive that partner switching may provide greater economic welfare.

The mental health issues that are uncovered by the economics in the psychology of marital dissolution are usually never spoken of or believed to be brewing in periods of economic boom. Since marital dissolution is interpreted as failure (Kurdek, 1990; Hung et al., 2004), the psychology behind this thinking is oftentimes repulsive to males and uxoricide is, therefore, simply an indicator of the mental health issues that were brewing for some time leading up to the dissolution. The conflicts that are embedded in the union take on different paths when marital dissolution is considered, children become pawns, opportunistic welfare rises to a new high and murder is sometimes the end.

Marriage and marital dissolution are about formation and disintegration of families, which means that the actions of two people in a marriage may be such that the consequences extend to many others including children. The children who will not understand the games of marriage can exhibit various psychiatric disorders, which can cost the state by way of hospitalization and health care visitations. Some of these mental health symptoms are not curable and the sociology behind the psychology will be repeated for generations as the children when adults become passing on these to their children and the cycle continues throughout history. It is this fact that could hold the explanation for continued psychology of homicides, marital dissolution and formation of unions. The formation of sexual unions must extend beyond the economics of family law, economics of marriage and dissolution to include psychology of formation and dissolution of marriages.

Recommendations

Clearly, marital dissolution holds an explanation for the homicide pandemic in Jamaica and this cannot be simply seen as a social matter as it is obvious that there is a public health focus to this phenomenon. The discipline of public health in Jamaica must commence an inclusion of this phenomenon in public health inquiry. While the matter is extensive and scope spans many disciplines such as economics, psychology, counseling and sociology (i.e., criminology), public health can offer a myriad of approaches that can address intimate partner violence, marital dissolution and psychology in divorce and marriages. The business of marriage is a complex one and by merely instituting family laws will not address the psychology of the individuals therein nor the mental health issues that arise when there is a path of dissolution. Public health must begin to chart a path for studies on the psycho-pharmacology of marital dissolution in an effort to address the psychology of divorce and mental health matters that are present in marriages, and are equally destroying the quality of life of people on the verge or in marital dissolution.

Divorce constitutes a small percentage of sexual separations in any society, particularly Caribbean nations, compared to cohabitations; but it is accounting for pre-mature death as poverty. According to Shackelford (2001) females in cohabiting unions were nine times more likely to be murdered by their sexual partner compared to those in marital unions from which we can extrapolate that the extent of premature mortality in the Caribbean, especially Jamaica, is far more than divorce-homicide relationship. Such information, within the context of the current findings, means that premature death caused by romantic partner homicide is a justification for future research in the matter of uxoricide in Caribbean to include socio-demographic characteristics, rape as a result of sexual separations and postpartum depression following legal separations.

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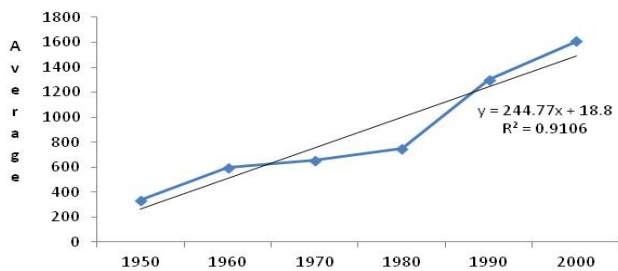
Annex 1.

Year	Mortality	Homicide	Population	Marriage	Divorce	Homicide rate per 100,000 pop	Marriage rate per 10,000 pop	Divorce rate per 100,000 pop	Mortality per 1,000 pop	Mortality per 10,000 pop	Divorce per 100 marriage	Average daily divorce
1950	17889	9	1396900	5542		0.64	39.67		12.81	128.06		-
1951	17233	25	1427900	6408	189	1.75	44.88	13.24	12.07	120.69	2.95	1
1952	16720	21	1457000	6763	172	1.44	46.42	11.81	11.48	114.76	2.54	0
1953	15450	15	1486100	7123	237	1.01	47.93	15.95	10.40	103.96	3.33	1
1954	16300		1517700	7654	325		50.43	21.41	10.74	107.40	4.25	1
1955	15330		1541700	8746	375		56.73	24.32	9.94	99.44	4.29	1
1956	14670	40	1563600	9538	431	2.56	61.00	27.56	9.38	93.82	4.52	1
1957	14130	43	1594500	9958	323	2.70	62.45	20.26	8.86	88.62	3.24	1
1958	14820	63	1630100	8543	451	3.86	52.41	27.67	9.09	90.91	5.28	1
1959	16550	61	1598400	7702	525	3.82	48.19	32.85	10.35	103.54	6.82	1
1960	14321	61	1628200	9230	498	3.75	56.69	30.59	8.80	87.96	5.40	1
1961	14193	57	1633400	8412	543	3.49	51.50	33.24	8.69	86.89	6.46	1
1962	14167	63	1659800	8301	455	3.80	50.01	27.41	8.54	85.35	5.48	1
1963	15159	77	1696200	8082	554	4.54	47.65	32.66	8.94	89.37	6.85	2
1964	13267	81	1738700	8340	674	4.66	47.97	38.76	7.63	76.30	8.08	2
1965	14084	65	1772605	8048	683	3.67	45.40	38.53	7.95	79.45	8.49	2
1966	14288	111	1807171	7487	663	6.14	41.43	36.69	7.91	79.06	8.86	2
1967	13295	104	1842411	7785	678	5.64	42.25	36.80	7.22	72.16	8.71	2
1968	14557	110	1878338	8223	623	5.86	43.78	33.17	7.75	77.50	7.58	2
1969	14094	153	1843800	8746	615	8.30	47.43	33.36	7.64	76.44	7.03	2
1970	14352	152	1869100	8936	555	8.13	47.81	29.69	7.68	76.79	6.21	2
1971	14078	145	1901100	8368	528	7.63	44.02	27.77	7.41	74.05	6.31	1
1972	13970	170	1932400	8802	598	8.80	45.55	30.95	7.23	72.29	6.79	2
1973	14157	227	1972000	8905	644	11.51	45.16	32.66	7.18	71.79	7.23	2
1974	14374	195	2008000	9021	740	9.71	44.93	36.85	7.16	71.58	8.20	2
1975	14004	266	2042700	10188	688	13.02	49.88	33.68	6.86	68.56	6.75	2
1976	14635	367	2096800	9166	652	17.50	43.71	31.10	6.98	69.80	7.11	2
1977	16092	409	2123500	8652	674	19.26	40.74	31.74	7.58	75.78	7.79	2
1978	14406	381	2149900	9523	748	17.72	44.30	34.79	6.70	67.01	7.85	2
1979	15207	351	2172900	8949	756	16.15	41.18	34.79	7.00	69.98	8.45	2
1980	14506	899	2133200	7781	766	42.14	36.48	35.91	6.80	68.00	9.84	2
1981	15352	490	2162300	7020	599	22.66	32.47	27.70	7.10	71.00	8.53	2
1982	14521	405	2200100	8757	496	18.41	39.80	22.54	6.60	66.00	5.66	1
1983	12548	424	2240800	8443	664	18.92	37.68	29.63	5.60	56.00	7.86	2
1984	13451	484	2279800	10410	738	21.23	45.66	32.37	5.90	59.00	7.09	2
1985	13867	434	2311100	11776	878	18.78	50.95	37.99	6.00	60.00	7.46	2
1986	13314	449	2335800	10721	894	19.22	45.90	38.27	5.70	57.00	8.34	2
1987	12459	442	2350800	10536	920	18.80	44.82	39.14	5.30	53.00	8.73	3
1988	12253	414	2356400	10429	863	17.57	44.26	36.62	5.20	52.00	8.28	2

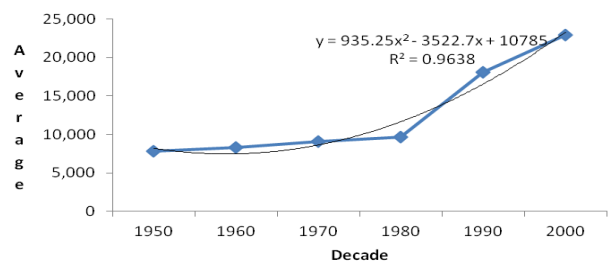
1989	16414	439	2374900	11145	672	18.48	46.93	28.30	6.91	69.11	6.03	2
1990	14213	542	2403000	13037	823	22.56	54.25	34.25	5.91	59.15	6.31	2
1991	13376	561	2425500	13254	1413	23.13	54.64	58.26	5.51	55.15	10.66	4
1992	13262	629	2448200	13042	1454	25.69	53.27	59.39	5.42	54.17	11.15	4
1993	13878	653	2434800	14352	1439	26.82	58.95	59.10	5.70	57.00	10.03	4
1994	13527	690	2459400	15171	1343	28.06	61.69	54.61	5.50	55.00	8.85	4
1995	15426	780	2488100	18015	1332	31.35	72.40	53.53	6.20	62.00	7.39	4
1996	16854	925	2515400	19133	1391	36.77	76.06	55.30	6.70	67.00	7.27	4
1997	14458	1037	2540300	21502	1266	40.82	84.64	49.84	5.69	56.91	5.89	3
1998	15901	953	2563700	24131	1426	37.17	94.13	55.62	6.20	62.02	5.91	4
1999	15672	849	2581800	29155	1131	32.88	112.93	43.81	6.07	60.70	3.88	3
2000	15945	887	2589400	27028	1106	34.26	104.38	42.71	6.16	61.58	4.09	3
2001	16239	1191	2604100	22308	1691	45.74	85.66	64.94	6.24	62.36	7.58	5
2002	14989	1045	2615200	23070	1745	39.96	88.22	66.73	5.73	57.31	7.56	5
2003	14729	975	2625700	22476	1600	37.13	85.60	60.94	5.61	56.10	7.12	4
2004	14513	1471	2638100	21670	1739	55.76	82.14	65.92	5.50	55.01	8.02	5
2005	15065	1674	2650400	25937	1806	63.16	97.86	68.14	5.68	56.84	6.96	5
2006	15321	1340	2663100	23181	1768	50.32	87.05	66.39	5.75	57.53	7.63	5
2007	16614	1574	2675800	20250	1140	58.82	75.68	42.60	6.21	62.09	5.63	3
2008	16371	1601	2687200	22152	1654	59.58	82.44	61.55	6.09	60.92	7.47	5
2009	17467	1680	2695600	21412	1853	62.32	79.43	68.74	6.48	64.80	8.65	5
2010	17007	1428	2695543	20489	2371	52.98	76.01	87.96	6.31	63.09	11.57	6
2011	16926	1125	2699838	20685	1960	41.67	76.62	72.60	6.27	62.69	9.48	5
2012	16998	1095	2707805	20175	2409	40.44	74.51	88.97	6.28	62.77	11.94	7
2013	15427	1200	2714734	18835	2410	44.20	69.38	88.77	5.68	56.83	12.80	7

Annex 2.

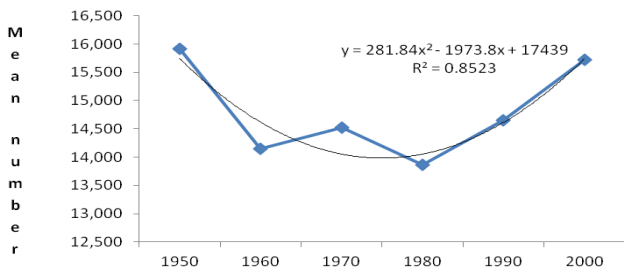
Number of Divorce



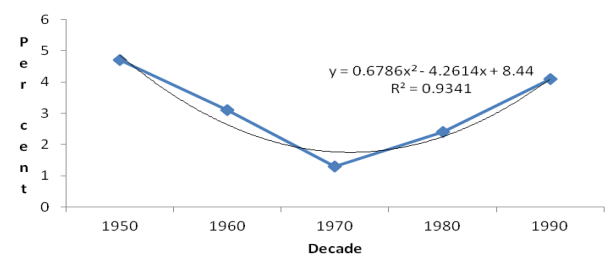
Number of Marriages



Mortality



GDP per capita



Number Homicides

