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Trade Openness and GDP Growth Nexus in South Africa

By Mike Nyamazana Sikwila, Ndoda Gladys Ruvimbo & Teboho Jeremiah Mosikari

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Abstract- In this article, the authors look at whether trade openness has had positive effects on growth and development in South Africa. A time series regression method that depicts the long and short term effects of trade openness on the South African economy was used. We carry out a long and short term regression analysis using quarterly data for the period 1994 through to 2013. The results of the regression analysis indicate that there was an enormous long and short term influence of trade openness on growth and development in South Africa.

Keywords: *trade-openness, long-term, short-term' gross domestic product, growth.*

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Trade Openness and GDP Growth Nexus in South Africa

Mike Nyamazana Sikwila ^α, Ndoda Gladys Ruvimbo ^σ & Teboho Jeremiah Mosikari ^ρ

Abstract- In this article, the authors look at whether trade openness has had positive effects on growth and development in South Africa. A time series regression method that depicts the long and short term effects of trade openness on the South African economy was used. We carry out a long and short term regression analysis using quarterly data for the period 1994 through to 2013. The results of the regression analysis indicate that there was an enormous long and short term influence of trade openness on growth and development in South Africa.

Keywords: trade-openness, long-term, short-term' gross domestic product, growth.

1. INTRODUCTION

This paper is a follow-up to our earlier paper regarding the importance of trade openness on less developing economies in Africa such as that of South Africa (Mosikari & Sikwila, 2013). However, this work differs from our previous paper in that we have included focal theory on trade extending the data from 2008 to 2013, and concentrated on the short- and long term effects of trade to economic growth. In the literature trade – openness was measured by the ratio of aggregate exports and imports over gross domestic product ((Dollar, 2003). The rapid Asian countries economic growth over the last two decades has sparked debate on trade openness and economic growth (Sachs & Warner, 1995). The desire to achieve faster economic growth and move out of poverty is important for countries in the Sub-Saharan African region. Although South Africa is relatively developed compared to other countries in the Sub-Saharan region, unemployment and poverty levels are still high in the country (du Toit, 2005). Compounded with the poverty, is the inequality which is depicted by the higher Gini coefficient which increased in the period 1994 through to 2013 (Musterd & Ostendorf, 2013), and the manifestation of poverty as depicted by industrial unrest such as strikes (Hedley, 2014). The South African economy has registered relatively low levels of economic growth in the period under study compared to countries in the BRICS (Brazil, Russia, India, China and South Africa) union of which South Africa is a member (World Bank, 2013). We argue that the poor economic

growth in South Africa in the period 1994 to 2000 through to 2013 might have been affected by relatively restrictive trade policies compared to those in the BRICS and these policies were expected to negatively impact on the wider economic growth.

The current literature highlights a link between GDP growth and Trade openness across countries (Frankel & Romer, 1999; Sachs & Warner, 1995). The purpose of the study is to investigate whether trade openness and other related variables had an impact on economic growth in South Africa. The objective was to establish the long- and short term effects of trade openness particularly on the wider economic growth of a country. The motivating factor for this study was that countries that have pursued export oriented policies (trade openness) happen to have an impressive economic growth rates, for instance, Hong Kong, Taiwan, South Korea, Brazil, India, China, and Singapore (Nassem, 2003:637; World Bank, 2013). The existing research in the area of trade openness and growth connection has been based on large cross-country studies using cross-section data (Frankel & Romer, 1999; Sachs & Warner, 1995; Ben-David, 1993). This kind of approach has methodological limitations in that, what is true for one country does not necessarily carry over to other countries. But authors have used same measures across countries in disregard of different degrees of country openness. In addition, the current literature suffers from conceptual drawback in that most of the studies have used policy variables to explain openness and growth connection (Dollar, 1992; Vamvakidis, 2002; Sachs & Warner, 1995; Rodriguez & Rodrik, 2000). Our research, to bridge this interstice, will therefore, provide a case study of South Africa using aggregate trade data rather than using policy variables which are difficult to measure, and that there was policy instability and inconsistency within and across-countries in less developing countries (Rodrik, 1990 & 1991). Moreover, the lack of data for the policy variables has persuaded previous authors to use surrogate variables (Edwards, 1993). Further, our study differ from these studies in two ways, first, we choose to use a sub-Saharan African country that has potential for growth; second, we employed a time-series for a single country than using a group of countries and we examine both short- and long term effects of trade on economic growth and development for South Africa. The results

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from our study indicate that import- GDP ratio was significant implying that South Africa was relatively open to world trade (Romer, 1993; Jin, 2000). Correspondingly, the Exports- GDP ratio was significant and positively related to growth in South Africa, implying that when export share expand, economic growth improves (Jin, 2000). The study is expected to be useful to policy makers in countries experiencing relatively low economic growth rates and poverty levels. In addition, the study adds to recent literature in the area of trade openness and growth.

II. LITERATURE REVIEW

Although the theory of infant industry is popular among developing countries, particularly in Sub-Saharan Africa, and other regions where colonialism was manifest, the theory of infant industry propagates that, the domestic newly born industries could not effectively compete with foreign firms; therefore, they needed protection to enable them to mature. However, the infant-industry theory has been challenged in literature (Baldwin, 1969). Baldwin (1969) questioned the efficacy of the tariff levies in achieving an effective resource allocation in infant industries in order for them to grow and contribute to economic growth. As Edwards (1993) also points out that there was ample evidence that suggested that open and export oriented economies performed better than countries which followed inward oriented policies (Edwards, 1993:1359). Another widely used strategy by developing countries in their effort to develop domestic industries and economic growth was import substitution policy. To protect domestic consumer goods and encourage their production at home; extensive quantitative restrictions, subsidies and high tariffs rates, were employed. The countries that favoured import substitution policies assume that economic growth would be achieved by inward oriented trade policies. The restrictions under import substitution inhibit competition and innovation and economic growth (Barro & Sala-i-Martin, 1995). Moreover, new theories of endogenous economic growth supported the connection of trade openness and growth (Romer, 1986; Lucas, 1988). The question is, Does trade protection foster economic growth better than open trade policies? Or put in another way, is there a connection between trade openness and economic growth? In an attempt to answer this question, several cross-country studies for both developed and developing countries have examined the relationship between trade openness and economic growth (Edwards, 1993; Awok use, 2008; Morley & Morgan, 2008; Sato & Fukushima, 2007; and Flatters & Stern, 2007). These empirical studies have shown that trade openness had a positive effect on economic growth as noted by Vamvakidis (2002) and Awok use (2008). Nevertheless, there is still an incongruity among

economist concerning the character of the relationship between trade and economic growth. The main difference was on the proxies used for trade openness and the data used in these studies.

Turning to previous empirical work on trade openness, countries that had policies that supported trade also improved factor productivity growth, and thereby economic growth (Economidou & Murshid, 2007). As Economidou and Murshid (2007) explains, factor productivity growth for manufacturing industries across OECD countries substantially improved resulting from trade in the period between 1978 and 1997 and this had a positive influence on economic growth. Also, supporters of export promotion point out that the development of the export sector permits countries to have access to higher levels of technology and technologically rich capital, an example could be the East Asian countries, Taiwan, Singapore, Hong Kong and South Korea (Naseem, 2003). The acquired technology subsequently leads to high economic growth. The inflow of foreign capital and transfer of technology would not have been possible without the export sector providing the means for payment.

Vamvakidis (2002) explains that the issue of the connection between trade openness and growth is far from resolved. The author asserts that several studies involving regression analysis of cross-country data had found a positive correlation between trade openness and growth, these include: Frankel & Romer, 1999; Sachs & Warner, 1995; Harrison, 1996. However, there are other studies (Rodriguez & Rodrik, 1999; Levine & Renelt, 1992; Ben-David, 1993) that are skeptical of these results and argued that the positive relationship between trade openness and growth was not robust, perhaps, due to problems of different measures of openness and model specifications employed in the regression equations. Vamvakidis (2002) employs a historical cross-country data for 1970 to 1990 to estimate a regression equation using the following proxy for openness to trade- Sachs and Warner (1995) openness dummy, average trade share, average ratio of import duty revenue to total imports, average trade share purchasing power parity (PPP) adjusted, average tariff, and non-tariff barrier coverage. The results indicate that PPP adjusted trade share, trade share and openness dummy were positive and statistically significant at the 5% level of significance. The average tariff rate recorded a negative sign, but was statistically significant at the 5% level of significance, while the duty ratio and non-tariff variables had a negative sign and insignificant. Dollar (1992) in an effort to measure openness for 95 less developing countries for the period 1976-1985, computes an outward orientation index that fused the effects of both distortion and variability of the real exchange rate. Dollar estimates a cross-country index of real exchange rate distortion (regression

analysis) using price data compiled by Summers and Huston (1988). The author concluded that Asian economies that includes the gang of four - Taiwan, Hong Kong, South Korea and Singapore were most open, and thereby outward oriented than countries in Africa and Latin America included in the sample. Nevertheless, Rodriguez and Rodrik (2000) argue that the cross-country index of exchange rate distortion used by Dollar (1992) had conceptual deficiency as a measure of trade restrictions. Also, variability in the exchange rate, though robust was, perhaps, a measure of instability only.

Although economists differ on the causes of rapid economic growth in Asia, the export push strategies followed in 1965-90s by these countries (Taiwan, South Korea, Hong Kong and Singapore) could explain their impressive economic growth and development (Naseem, 2003; World Bank, 1993; Radelet & Sachs, 1997). To summarize, the recent literature on the connection between trade openness and growth have revealed glaring contradictions in methodology and conceptual approach, in particular, the difficulty in finding appropriate proxies for measuring openness across-countries is apparent. Most of the data used in these studies was a cross-country data, but specific situations for individual countries remained concealed, and thereby difficult for policymakers to appreciate the results. Notwithstanding the challenges, studies have shown that countries that have implemented outward oriented trade policies have grown faster¹ than those that followed trade protectionism policies. However, empirical studies differ on the determinants that led to faster economic growth, and thereby prompting the need for further research in order to identify plausible effects of trade openness on GDP growth.

III. RESEARCH METHODOLOGY

We follow a mixed methodology of quantitative and qualitative analytical approach. We use quarterly data covering the period 1994Q1– 2013Q4 to determine the relationship between trade openness and GDP growth rates in the South African economy. The quarterly data begins from 1994Q1 since this was the start of South Africa data series without the effects of Apartheid policies. The study uses secondary data collected from the South African Reserve Bank, which is an official source of economic statistical data. Following Jin (2003 ; Awokuse, 2008) the model variables are-GDP growth rates the dependent variable and volume of exports (X), volume of imports M, were used to obtain the export to GDP ratio (X/ GDP), imports to GDP ratio (M/GDP) and the gross capital formation was used to

get the gross capital formation to GDP ratio (Kinv/ GDP) the dependent variables. The capital formation captures the attractiveness of foreign investment induced by the trade liberalization. We assume that investors can easily repatriate their profits in an economy that is liberalized. The import variable indicates the import permeations which represent the degree of the country's trade openness (Jin, 2000:8). Openness indicates relatively less protectionism. Like all times series data, prior to estimation of the model adopted, an Augmented Dickey-Fuller (ADF) test was employed to check for first order unit roots. A cointegration test was also applied to determine whether the variables were cointegrated. The long run function is given as;

$$GDP = f (M/GDP; X/GDP; Kinv/GDP; \epsilon) \quad (1)$$

The linear form of equation (1) is given as:

$$GDP_t = \alpha + \beta_1 (M/GDP)_t + \beta_2 (X/GDP)_t + \beta_3 (Kinv/GDP)_t + \epsilon_t \quad (2)$$

Where GDP is gross domestic product in levels, α and β are parameters to be estimated, X, M, Kinv, (X/GDP), (M/GDP) and Kinv/GDP are defined as observable variables representing factors affecting gross domestic product in South Africa, is the time, ϵ_t is a random error term with a mean of zero, representing measurement error and unmeasured and immeasurable factors and equations (2) is estimated using quarterly time series data.

The Long run Cointegration results

Cointegration determines the long term relationship between gross domestic product and the independent variables. Hence the estimate of equation (2) is run at levels and the residuals obtained were tested for stationarity and used for the estimation of the short run equation (6). The co-integration test indicates that all variables were found to be integrated of order one I (1). The long run regression equation is presented as

$$GDP_t = \alpha + \beta_1 (M/GDP)_t + \beta_2 (X/GDP)_t + \beta_3 (Kinv/GDP)_t + \epsilon_t \quad (2)$$

The capital investment (Kinv) and Exports volume (X) are expected to be positively related to GDP, while the imports volume is negative, ϵ_t is the error term. In estimating equation (2) the results are presented in table 3, for the long run, it shows that all the independent variables have a positive impact on GDP growth. There is a positive indication of trade openness measured by exports and imports ratios to GDP, where exports seem to be more significant than import.

¹ For example: the four East Asian countries; Taiwan, Hong Kong, South Korea and Singapore.

Table 3 : Dependent Variable: GDP growth: Long run model

Variable	Coefficient	Std. Error	t- statistics
C	97751.58	18595.88	5.26
X/GDP	1561.74	514.54	3.04
M/GDP	-324.32	1195.98	-0.27
Kinv	2.68	0.29	8.99

Observations = 60; R-squared = 0.93; D.W statistics = 2.3

The residuals computed from the long run were tested for stationarity and found to be stationary and were included in the estimation of the error correction model.

Error-Correction Model (ECM)

The short run equation captures seasonal variations that include industrial unrest (strikes) and poor

harvest that are expected to impinge on trade and economic growth. The short run equation using the ratios of exports and imports to GDP is presented as;

$$D \text{ Log (GDP)} = f \{ \log D (X/GDP)_t, \log D (M/GDP)_t, \log D Kinv_t, \log GDP_{-1}, (X/GDP)_{-1}, (M/GDP)_{-1}, \xi(-1) \} \quad (6)$$

Where, D, is the first difference of variables over time, log is the logarithm, GDP is the domestic product, X is gross exports, M is gross imports, (-1) indicates a

lagged variable and $\xi(-1)$ is a random disturbance. Equation (6) can be presented in a linear form as:

$$\log D (GDP)_t = \alpha + \log \beta_1 D Kinv_t / GDP + \log \beta_2 D (M/GDP)_t + \log \beta_3 D (X/GDP)_t + \log D GDP_{-1} + \log \beta_5 D (X/GDP)_{-1} + \log \beta_6 D (M/GDP)_{-1} + \xi(-1) \quad (7)$$

Equation (7) is then estimated to obtain the results shown in table 4.

Table 4 shows the results of the estimation of the short run ECM equation (7), all the variables are

expressed in their first difference. In the short run the capital formation, DLOG (Kinv), is significant at the 5% level of significance, implying that investment promotes economic growth.

Table 4 : Dependent variable GDP: Error-correction model

Variable	Coefficient	Std. Error	t- statistics
C	- 0.0074	0.036	- 0.21
DL OG(X/GDP)	0.0097	0.078	0.125
DL OG(M/GDP)	0.273	0.138	1.96
DLOG (Kinv)	0.282	0.123	2.31 **
DLOG(GDP ₋₁)	- 0.428	0.123	- 3.52 **
(X/GDP) ₋₁	0.027	0.045	0.600
(M/GDP) ₋₁	- 0.043	0.063	- 0.630
(ξ) (-1)	-0.266	0.149	-1.779

**Statistically significant at 5% level

Observations = 60; R-squared = 0.41; Durbin-Watson statistics = 1.94

IV. DISCUSSION

It follows that capital inflows are possible in an economy that was relatively liberalized. The ratio of imports to GDP variable, $\Delta \log (M/GDP)$, which is a proxy of openness (Harrison, 1996; Jin, 2000) is statistically significant at the 5% level in the short run, implying that import share indicates import penetration and is significant in the case of South African economy. The result of the study indicates relatively more imports of goods and services flowing into the country. In addition, the significant capital formation to GDP ratio is consistent with the view that an open economy allows foreign direct investment to flow in the country (Selelo & Sikwila, 2012). This indicates that openness leads to more investment in the form of imported machinery and equipment like those in textiles and motor industries, among others. The residuals variable, $(\xi) (-1)$, was significant at the 10% significant level and it indicates an 18% spend of adjustment of GDP growth to its long term levels following shocks in the economy. In the short term exports ratio exhibits the expected positive impact on GDP growth, but insignificant. The lagged import share $(M/GD)_{-1}$, export ratio, $(X/GDP)_{-1}$ and GDP (-1) are all insignificant in the short term. However, the log-lagged change variable, $\Delta \log (GDP_{-1})$, are significant at the 5% level, implying that previous growth rate impact on the current GDP. The significant import share variable indicates the relatively openness of the south African economy compared to other Sub-Saharan countries. Furthermore, the results shows that trade openness was an important factor that led to economic growth in the South African economy and other similar less developing countries, implying that a rise in trade improved balance of payment, employment, and thereby economic growth and development.

V. CONCLUSION

We investigated the influence of trade openness on the economic growth of the South African economy. The study used quarterly data (1994Q1-2013Q4) aggregate GDP, export, import and capital formation time-series data for South Africa which is different from recent current study that employ cross-country policy variables. We employed regression equation and cointegration method to estimate the Openness-GDP nexus for South Africa. The results showed that there was long-run relationship (positive correlation) between exports, imports and gross fixed capital formation with GDP growth. The relationship between trade openness and GDP growth in South Africa was investigated by estimating the short- and long term effects. The ratio of imports to GDP as a proxy for openness was significant, implying that South African economy was relatively open unlike other African countries which have maintained high trade barriers through tariffs and quantitative

restrictions. The challenge for the South African authorities is to continue improving the trade openness policy in order to sustain economic growth and development whilst continually evaluating implementation in order to counteract policy reversals and conceivable adoption of half measures that can, possibly, undermine the intended objectives of boosting trade and exports thereby collapsing protectionism. Evidence suggested that strengthening and additional trade liberalisation strategy enhanced export diversification pointing to the importance of policies that afford South Africa access to inputs at world prices as well as comparative-competitive exchange rates. We, therefore, recommend that openness trade policy is an appropriate strategy for South African economy in the long term, using the period of transition to global economy, creating competitiveness enhancing infrastructures and strengthening institutions involved in the promotion of trade openness, exerting major influence on the composition and aggregate growth of trade.

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Appréhension Du Risque Et Perception Par Les Consommateurs: Cas Des Médicaments Dans La Ville De Dschang-Cameroun

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Abstract- The unavailability and high prices of medicines are the cause of the infringement and its impact on consumer satisfaction. We offer ourselves to assess the level of perceived risk of counterfeit medicines among consumers. Indeed, this study was conducted on the basis of a questionnaire to a sample of 250 people. We had a dependent variable frequency of purchase. Purchase frequency was explained by the perceived risk factor initially been apprehensive; this factor comprising a number of variables all inspired by the literature review. Drawing on the methodology of Mallet (2004), we conducted an analysis at two levels, namely descriptive and explanatory.

Descriptive analysis showed that the variable that best assess the risk is felt Risk incurred. Estimating a multinomial logistic regression, it appears that users do not perceive significant risks associated with the use of counterfeit drugs. In addition, the perception of risk is not sufficient to explain the frequency of purchase of counterfeit medicines.

Keywords: risk perception, counterfeiting and pharmaceutical drugs.

GJMBR-B Classification: JEL Code: A19



APPREHENSION DU RISQUE ET PERCEPTION PAR LES CONSOMMATEURS CAS DES MEDICAMENTS DANS LA VILLE DE DSCHANG CAMEROUN

Strictly as per the compliance and regulations of:



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Mba Fokwa Arsène ^α, Kayou Tayou Clémence ^σ & Ndeumen Angèle Chislaine ^p

Abstract– The unavailability and high prices of medicines are the cause of the infringement and its impact on consumer satisfaction. We offer ourselves to assess the level of perceived risk of counterfeit medicines among consumers. Indeed, this study was conducted on the basis of a questionnaire to a sample of 250 people. We had a dependent variable frequency of purchase. Purchase frequency was explained by the perceived risk factor initially been apprehensive; this factor comprising a number of variables all inspired by the literature review. Drawing on the methodology of Mallet (2004), we conducted an analysis at two levels, namely descriptive and explanatory.

Descriptive analysis showed that the variable that best assess the risk is felt Risk incurred. Estimating a multinomial logistic regression, it appears that users do not perceive significant risks associated with the use of counterfeit drugs. In addition, the perception of risk is not sufficient to explain the frequency of purchase of counterfeit medicines. It would be possible for organizations that protect the rights of consumers to focus on the risks to alert consumers to significantly reduce the purchase and the consequences associated with the use of counterfeit drugs¹.

Keywords: *risk perception, counterfeiting and pharmaceutical drugs.*

Resume- L'indisponibilité et les prix élevés des médicaments sont à l'origine de la contrefaçon et ses conséquences sur la satisfaction des consommateurs. Nous nous proposons d'apprécier le niveau de perception du risque des médicaments contrefaits chez les consommateurs. En effet, cette étude a été réalisée sur la base d'un questionnaire auprès d'un échantillon de 250 personnes. Nous avons eu pour variables dépendante la fréquence d'achat. La fréquence d'achat a été expliquée par le facteur risque perçu qui a d'abord fait l'objet d'une appréhension; ce facteur comprenant un certain nombre de variables toutes inspirées d'une revue de littérature. S'inspirant de la méthodologie de Mallet (2004), nous avons procédé à une analyse à deux niveaux à savoir descriptive explicative.

De l'analyse descriptive, il ressort que la variable qui permet le mieux d'apprécier le risque est le Risque lié aux sensations encourues. De l'estimation par une régression logistique multinomiale, il ressort que les usagers ne perçoivent pas significativement les risques liés à l'utilisation des médicaments contrefaits.

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En outre, la perception du risque n'est pas suffisante pour expliquer la fréquence d'achat des médicaments contrefaits. Il serait possible pour les organismes qui protègent les droits des consommateurs d'insister sur les risques encourus pour sensibiliser les consommateurs afin de réduire significativement l'achat et les conséquences liées à l'utilisation des médicaments contrefaits.

Mots clés: *perception du risque, contrefaçon et Médicaments pharmaceutiques.*

I. INTRODUCTION

L'augmentation du prix des médicaments à la suite de la dévaluation du taux de change provoque des retards de paiements pour les centrales d'achat et de nombreuses ruptures de stock. Les médicaments ne sont plus disponibles en quantité suffisante dans les centres de santé. Le manque de confiance des populations envers les formations de santé publiques qui en découle constitue un véritable tremplin pour les activités de vente informelle de médicaments. Cette incapacité de la part du secteur officiel ouvre les portes au commerce de contrebande pour l'introduction sur le marché pharmaceutique de médicaments bon marché mais de qualité douteuse.

Dans le contexte de pénurie, les commerçants du secteur informel ont commencé à vendre des médicaments, exerçant ainsi une pression concurrentielle sur les pharmacies officielles. Les prix sont devenus rapidement plus intéressants dans la rue que dans les pharmacies, et la débrouillardise des acteurs informels a rendu les « Médicaments de la rue » plus disponibles que les médicaments du secteur formel.

Ce phénomène de contrefaçon s'est donc fortement implanté dans divers milieux et aucun secteur n'est épargné. Le cas des médicaments est très préoccupant et fait l'objet de toutes les attentions: celui des trafiquants parce qu'il leur est lucratif; des malades qui n'ont parfois pas d'autres choix pour avoir accès aux soins; de l'industrie pharmaceutique qui perd non seulement des parts de marché, mais aussi leur crédibilité; des gouvernements et autres instances mondiales qui s'inquiètent des conséquences sanitaires et économiques de ce fléau. Cependant quelques chiffres permettent de se rendre compte de l'ampleur du phénomène.

Le rapport de l'AMOAPI² en 2005 souligne quelques-unes de ces conséquences: 15 entreprises

¹ L'appréhension se fait avec une analyse descriptive et la perception se fait avec une analyse explicative.

membres du Groupement Inter-patronal du Cameroun (GICAM) ont connu des pertes au niveau de leurs chiffres d'affaires de l'ordre de 62,008 milliards de francs CFA. Par ailleurs, 850 personnes ont perdu leur emploi, les recettes fiscales et douanières avaient connu une perte d'environ 5,058 milliards de francs CFA.

C'est dans cette optique de lutte contre les médicaments contrefaits et la criminalité pharmaceutique au Cameroun que près de 160 tonnes de médicaments ont été confisquées du 27 au 29 Mars 2012 dans les 3 régions que sont le Centre, le Littoral et l'Ouest. Cette confiscation a eu lieu à la faveur de l'opération dénommée « Cobra » menée par le gouvernement camerounais en collaboration avec l'organisation Interpol.

Malgré de nombreux efforts pour lutter contre ce commerce, ce marché très lucratif ne cesse de se développer à travers le monde, en affectant principalement les pays en voie de développement. La mauvaise qualité des médicaments mise à la disposition des populations représente potentiellement un risque sanitaire majeur en termes de morbidité et de mortalité³. Le risque perçu peut influencer fortement le comportement du consommateur. En effet, Dowling et al. (2004) soutient le fait que le risque perçu influence les cinq étapes du processus décisionnel du consommateur, à savoir: la reconnaissance d'un problème, la recherche d'informations, l'évaluation des alternatives, la décision d'achat, le comportement post-achat. Ainsi, le risque perçu peut très bien influencer l'attitude du consommateur envers un bien ou service donné.

Selon Cordell et al. (1996), Les marchés illicites augmentent la chance d'entrée des produits contrefaits. Ainsi, les consommateurs qui achètent des produits vendus sur les marchés illicites augmentent les probabilités d'acheter de la contrefaçon et font donc face à plusieurs types de risques parmi lesquels figurent les risques de performance et de sécurité financière ainsi que les risques psychologiques et sociaux.

L'objectif de cet article est d'apprécier le niveau de perception du risque des médicaments contrefaits chez les consommateurs. Le reste de ce papier est

structuré en quatre sections à savoir la revue de la littérature, la méthodologie, les résultats et la conclusion.

II. REVUE DE LA LITTÉRATURE

a) Développement Théorique

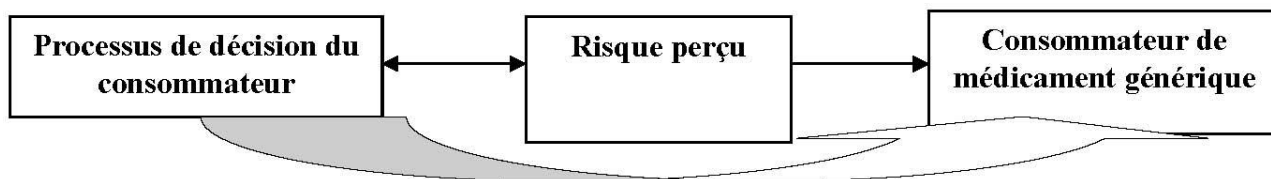
Le concept de risque perçu en psychologie du consommateur est un chantier important de recherche en marketing. Depuis son introduction par Bauer (1960), de nombreux travaux sur le risque perçu ont été publiés, montrant l'intérêt de l'intégration de cette notion dans l'étude du comportement du consommateur et, plus particulièrement, dans l'étude du processus de délibération et de prise de décision.

Les auteurs de chaque discipline se concentrent sur des aspects spécifiques de ce concept. Pour Bauer, premier à utiliser le concept dans le domaine de l'étude du comportement du consommateur: « Le comportement du consommateur implique un risque dans le sens où l'achat va engendrer des conséquences parfois négatives qu'il ne peut anticiper avec certitude ». Ainsi, Knight (1964) voit le risque comme une probabilité d'encourir des pertes. Alors que pour Solomon et al. (1991), le risque perçu par le consommateur est une caractéristique de la décision mesurant à quel point il existe une incertitude en ce qui concerne les résultats potentiellement significatifs et/ou décevants pouvant découler d'une décision.

En somme, nous pourrions définir le risque comme la perception d'une incertitude relative aux conséquences négatives potentiellement associées à une alternative de choix. Ainsi, pour Volle (1995), « le risque est la possibilité de subir des pertes à l'occasion de l'achat ou de la consommation d'un produit (bien ou service) »

Il existe plusieurs types de risque liés à l'achat d'un produit. Leurs nombres varient de quatre à six selon les auteurs, mais on retrouve généralement cinq types de risques: financier, physique et de performance, perte de temps, psychologique et social (Bauer, 1960).

Figure 1 : le risque perçu



Source : Bauer (1960)

²L'AMOAPI : Association des Mandataires agréés auprès de l'OAPI (Organisation Africaine de la propriété intellectuelle)

³ Ce qui correspond à une satisfaction nulle.

La double flèche de la figure 1 montre que le consommateur arbitre entre risque et décision de consommer avant de choisir de consommer ou pas le médicament générique.

Yates et Stone (1992) soulignent l'absence d'un consensus clair et net sur la définition du risque. Depuis l'apport de Bauer (1960), l'étude du risque perçu n'a pas cessé d'évoluer et d'intéresser les chercheurs. En effet, Bauer (1960) s'intéresse uniquement au risque subjectif (donc perçu), et non au risque objectif. En marketing, ce sont les perceptions bien plus qu'une réalité soi-disant objective qui intéressent (Bielen et Sempels, 2006). Murray (1991) stipule que les consommateurs cherchent les informations suffisantes pour réduire les conséquences négatives d'achat et comptent principalement sur leurs propres expériences, si ces dernières sont appropriées

Notre raisonnement dans cette étude s'appuie sur la subjectivité inhérente au concept du risque perçu tel qu'élaboré dans la littérature sur la prise de décision, sur la nature même du risque. Ainsi, le risque perçu n'est, en réalité, qu'une problématique de choix. Le consommateur final n'a pas à sa possession toutes les informations nécessaires pour son achat des médicaments et se construit lui-même des hypothèses concernant son environnement. C'est la raison pour laquelle le consommateur doit faire preuve de subjectivité pour pallier à ce problème.

En résumé, le construit de risque perçu est totalement subjectif (ce qui corrobore l'affirmation de Currim et Sarin (1983). Certains consommateurs tendent à percevoir des degrés élevés de risque dans des situations de consommation variées tandis que d'autres tendent à percevoir peu de risque pour les mêmes contextes. Ce qui prouve que tous les consommateurs n'ont pas les mêmes degrés de perception du risque.

a) *Revue De La littérature Empirique*

L'achat d'un produit est souvent source d'incertitude pour le consommateur; à fortiori, l'achat d'un produit contrefait est entouré de risques. La plupart des risques classiques liés au processus d'achat s'appliquent à l'achat de produits contrefaits. Ces risques sont en principe regroupés autour de 6 catégories (Roselius, 1971; Jacoby et Kaplan, 1972); risque fonctionnel (quelles seront les performances du produit); le risque financier (le consommateur en aura-t-il pour son argent?); le risque physique (le produit peut-il être dangereux pour l'utilisateur?); le risque psychologique (le consommateur aura-t-il des remords ou une mauvaise estime de soi s'il achète des contrefaçons?); le risque social (est-ce que l'acheteur de contrefaçons sera mal jugé par son entourage?) et le risque de perte de temps (est-ce que cela prendra

plus de temps ou moins de temps d'acheter un produit contrefait?).

Ces différents risques sont évoqués dans les travaux portant sur l'achat de contrefaçons (Bloch et al., 1993; Chakra borthy et al. 1996; Wee et al., 1995). Wee et al. (1995) n'ont cependant pu valider l'hypothèse que les risques social, financier et fonctionnel aient un impact sur l'intention d'acheter des contrefaçons. Cela ne signifie pas pour autant qu'ils ne constituent pas des déterminants de l'attitude à l'égard de la contrefaçon en général. Bloch et al. (1993) ont en revanche démontré que les personnes qui achètent des originaux ont une meilleure estime de soi que ceux qui achètent des contrefaçons ce qui laisse supposer que le risque psychologique aura un impact sur l'attitude à l'égard de la contrefaçon en général.

De plus, il semble que le risque perçu varie en fonction de l'origine perçue de la contrefaçon (Chakra borthy et al. 1996). En ce qui concerne l'achat de contrefaçon, le consommateur peut percevoir un risque supplémentaire: le risque juridique, c'est-à-dire la possibilité de voir le produit saisi et de payer des amendes. Les chercheurs qui ont étudié le comportement criminel ont montré que la sévérité perçue des sanctions pénales était négativement reliée au comportement criminel (Grasmik et Bryjack, 1986).

Dans un contexte marketing, il a été démontré que le comportement du consommateur pouvait être déterminé par la crainte des sanctions (O'Shaugnessy, 1987). Il existe également une relation négative entre la probabilité perçue de se faire prendre et le comportement de fraude du consommateur.

Selon D'Astous et al. (2006) L'évaluation du risque associé à une situation d'achat ne peut être objective, car cette évaluation peut différer d'une personne à une autre. Elle peut apparaître risquée pour une personne et, au contraire, banale pour une autre. D'où la notion du risque perçu. Ainsi, le risque perçu peut très bien influencer l'attitude du consommateur envers un bien ou un service donné.

III. METHODOLOGIE

a) *Echantillonnage*

i. *Population de l'étude et source des données*

La population étudiée dans notre travail est l'ensemble de personnes majeures vivant dans la ville de Dschang. Dans l'impossibilité de recueillir les informations auprès de chaque personne, nous avons opté de travailler avec un échantillon suffisamment représentatif de la population. Pour y parvenir, nous avons pris pour unité statistique le chef de ménage. Celui-ci pouvant être remplacé par un de ses membres majeurs. C'est-à-dire, un seul questionnaire

est administré par ménage et rempli de préférence par son chef qui est généralement le prescripteur dans l'acte d'achat des médicaments.

ii. Méthode d'échantillonnage adoptée

Nous avons adopté la technique d'échantillonnage par choix raisonné⁴. En effet, nous avons administrés nos questionnaires à deux cent soixante-dix personnes généralement les chefs de ménage dont les habitations sont situées le long des principales rues des principaux quartiers de la ville de Dschang.

iii. Le choix de l'instrument de collectes des données

Dans cette partie, nous allons expliquer la manière dont notre outil de recherche a été construit et ensuite nous exposerons en détail chaque partie du questionnaire.

a. La construction du questionnaire

Le questionnaire a été construit en tenant compte de l'ensemble des variables détecté dans la revue de la littérature et pouvant influencer le comportement d'achat des consommateurs face aux médicaments contrefaits.

Le questionnaire a été soumis à une vérification et un pré-test avant son élaboration finale, ceci afin de vérifier la pertinence et la validité des questions au niveau de la forme et du fond. Ce test a été mené auprès de 20 ménages. Par la suite, des corrections ont été effectuées, ce qui a permis d'obtenir une version finale qui a été utilisée pour l'enquête.

b. La structure du questionnaire

Le questionnaire présenté à l'annexe comprend vingt questions organisées en quatre parties: identification du répondant; l'habitude d'achat des médicaments du répondant; la perception de la contrefaçon des médicaments et la sensibilité de celui-ci à certains facteurs influençant (positivement ou négativement) l'achat des médicaments contrefaits.

-identification du répondant

Cette première partie du questionnaire est composée de cinq questions (Q1, Q2, Q3, Q4 et Q5) et a pour objectif de nous renseigner sur les variables sociodémographiques de chaque répondant.

-habitude d'achat des médicaments,

Les questions Q6, Q7, Q8, Q9 et Q10 nous donnent les informations relatives aux lieux d'achat (pharmacies et marchés illicites) et la fréquence d'achat des médicaments sur ces lieux; mettant ainsi en exergue l'habitude d'achat des consommateurs pour les médicaments en général

- les informations générales sur la contrefaçon des médicaments et sa perception par le répondant

Cette troisième partie du questionnaire regroupe six questions (Q11, Q12, Q13, Q14, Q15 et Q16). Ces questions nous permettent d'apprécier le niveau de connaissance sur le phénomène de contrefaçon des médicaments, la perception de l'efficacité des médicaments des divers lieux (pharmacies et marchés illicites) et enfin l'attitude du répondant sur la contrefaçon des médicaments en générale

-la sensibilité du répondant à certains facteurs influençant (positivement ou négativement) à l'achat des médicaments contrefaits.

Cette dernière partie du questionnaire est constituée des questions, Q17, Q18, Q19 et Q20. Les deux premières questions de cette partie renseignent sur la perception du risque lié à l'utilisation des médicaments contrefaits alors que les deux autres montrent le degré d'influence de certains facteurs dans la motivation à l'achat des médicaments contrefaits. L'échelle de Likert de 5 points allant de « pas du tout important » à « très important » est utilisée à cet effet. Cette même échelle est utilisée aux questions Q5, Q8, Q13, Q14 et Q18 selon diverses appréciations. En effet, elle a été utilisée par plusieurs chercheurs à l'instar de Huang, Lee et Ho (2004) afin de mesurer l'attitude des consommateurs envers le marché des médicaments contrefaits. Ils ont utilisé une échelle dont la validité et la fiabilité ont été admises.

c. Description des variables

Dans le cas de cette recherche, nous avons jugé nécessaire de grouper les items permettant de percevoir le risque (nige) en une grande composante pour en faire une variable indépendante. Ces items sont ceux obtenus de l'enquête exploratoire. Ce sont :

- Risque de se faire mal juger par son entourage (risa)
- Risque que le médicament peut être nocif ou inefficace (risb)
- Risque lié aux sensations encourues (risc)
- Risque lié à l'absence d'un suivi crédible par le vendeur (risd)
- Sanctions juridiques relative à l'achat des médicaments sur les marchés illicites (saju)
- Efficacités des campagnes anti- contrefaçons (juca)

Les variables dépendantes sont la fréquence d'achat (frac) et le risque perçu (nige). A la variable risque, correspond six items (risa, risb, risc, risd, saju, juca) dont les meilleurs seront sélectionnés par une analyse factorielle des correspondances afin d'intervenir dans la régression qui détermine le niveau du risque.

d) Méthode de traitement des données

i. -Le dépouillement du questionnaire

Avant d'effectuer le dépouillement du questionnaire, nous avons au préalable prévu pour effectuer ce travail une grille de codification dans laquelle sont codifiées les informations. Ainsi il est

⁴ L'échantillonnage par choix raisonné est une méthode d'échantillonnage non aléatoire car tous les individus n'ont pas la même chance d'être choisis.

définit un code pour chacune des variables et éventuellement pour chacune des modalités de ces variables. (Voir tableau 1)

Nous avons procédé par la suite à une relecture systématique du contenu de tous les questionnaires pour éliminer ceux qui étaient incomplets, vérifier la lisibilité des réponses, s'assurer de la pertinence et la cohérence des réponses à partir de certaines questions

filtres. A l'issu de cette investigation 227 questionnaires ont été retenues pour notre analyse ; soit un pourcentage de 84,07% Au départ notre échantillon était constitué de 270 répondants, en éliminant les questionnaires manquant d'informations ou ayant des valeurs aberrantes nous nous retrouvons avec 227 répondants au final.

Table 1: Tableau du codage des variables

Syntaxe	Codage
Sexe	Sexe
Ages	Ages
Situation professionnelle	Sipr
Niveau d'étude	Nive
Lieu d'achat des médicaments	liac
Fréquentation des autres lieux de vente de médicaments	frau
La part de dépense de santé sur les dépenses totales	pard
Connaissance de l'existence des médicaments contrefaits	saco
Possibilité de retrouver les médicaments contrefait en pharmacie ou sur les marchés illicites	poco
Jugement sur l'efficacité des médicaments vendu sur les marchés illicites	juil
Fréquence d'achat des médicaments sur les marchés illicites	frac
Jugement sur l'efficacité des médicaments vendu dans les pharmacies	juag
Sanctions juridiques relative à l'achat des médicaments sur les marchés illicites	Saju
Risque de se faire mal juger par son entourage	Risa
Risque que le médicament peut être nocif ou inefficace	Risb
Risque lié aux sentions encourues	Risc
Risque lié à l'absence d'un suivi crédible par le vendeur	Risd
Niveau général des risques liés aux utilisations des médicaments	nige
Prix relativement faible	prix
Faible estime de soi	esti
Disponibilité des médicaments	disp
Qualité de service	qual
Possibilité d'achat en détail et sans obligation de présenter une ordonnance	poss
Satisfaction antérieure	sati
Consultation non payante	cons
Ordre d'influence du prix	opri
Ordre d'influence pour faible estime de soi	oest
Ordre d'influence pour disponibilité des médicaments	odis
Ordre d'influence pour qualité de service	oqua
Ordre d'influence pour la possibilité d'achat en détail	opos
Ordre d'influence pour la satisfaction	osat
Ordre d'influence pour la consultation	ocon
Lutte contre la vente des médicaments sur les marchés illicites	luti
Efficacités des campagnes anti-contrefaçons	Juca

Source : auteur

ii. Les différentes relations à tester

Ces modèles mettent en relation une variable dépendante avec plusieurs variables explicatives (mesurées par plusieurs items). Pour notre étude nous commençons par donner les relations fonctionnelles entre nos variables dépendantes et nos variables indépendantes et par la suite suivra le modèle logistique proprement dit.

- Relation fonctionnelle entre risque perçu et items du risque Nige=f (saju, risc, juca).

- Relation fonctionnelle entre la fréquence d'achat et risque perçu $\text{Frac} = f(\text{saju, risa, risb, risc, risd, nige, juca})$ avec f l'opérateur fonction.

iii. Specification Du Modele

Ce modèle est inspiré de Mallet (2004). Dans une modélisation logistique à K modalités, la probabilité d'occurrence de la modalité j s'écrit :

$$P(Y = j|i) = \frac{e^{(XB(j,0))}}{\sum_{j=0}^K e^{(XB(i,0))}}$$

Où Y est la variable expliquée, X le vecteur de variables explicatives, j une modalité correspondant à la variable expliquée et i une modalité correspondant à la variable explicative.

IV. PRESENTATION DES RESULTATS

Les résultats comportent une partie descriptive et une autre partie explicative.

a) Analyse descriptive

i. Description numérique

Notre analyse descriptive a reposé sur l'AFC⁵ et cette AFC nous a permis de réduire nos infos d'un

espace de 34 axes à un espace à deux axes principaux de valeurs propres respectives ;

Y1= 2,678

Y2= 2,438

Nous avons ensuite recherché les items les plus déterminants de la composante risque perçu (Frac, Saju, Risa, Risb, Risc, Risd, Nige, Juca) à parti de nos 2 axes principaux comme le montre le tableau ci-dessous.

Table 2 : Analyse exploratoire

Variables(items)	sexe	ages	sipr	nive	liac	frau	pard	saco	poco	juil	frac	juag
Axe1(vecteur propre)	-0.0450	-0.3563	-0.0955	0.3278	0.0540	0.2160	-0.0293	0.1828	0.0050	0.0709	-0.0812	0.1035
Axe2(vecteur propre)	0.1310	-0.1546	-0.0670	0.0030	0.2924	-0.0763	0.0712	-0.0276	0.0616	0.2560	-0.2145	-0.0209
Variables(items)	saju	risa	risb	risc	risd	nige	prix	esti	disp	qual	poss	sati
Axe1(vecteur propre)	-0.0944	0.1585	-0.1040	0.2357	-0.2206	0.1499	-0.2284	0.2072	-0.0299	0.2479	-0.1974	0.0912
Axe2(vecteur propre)	0.1220	-0.1120	0.0493	0.0141	0.0100	-0.0406	0.2992	0.2681	0.4398	0.3015	0.2019	0.1266
Variables(items)	cons	opri	oest	odis	oqua	opos	osat	ocon	luti	juca		
Axe1(vecteur propre)	0.0742	-0.1518	0.1786	-0.0644	-0.2998	0.0193	-0.1358	0.0530	0.0142	0.1990		
Axe2(vecteur propre)	-0.4261	-0.0149	0.0219	0.1627	-0.0078	0.1670	0.2825	-0.0794	-0.2089	-0.1819		

Source : auteur à partir du logiciel stata

Poursuivant notre analyse, la composante qu'est le risque perçu (nige), est expliquée par six variables ;Saju,Risa, Risb, Risc, Risdet Juca.

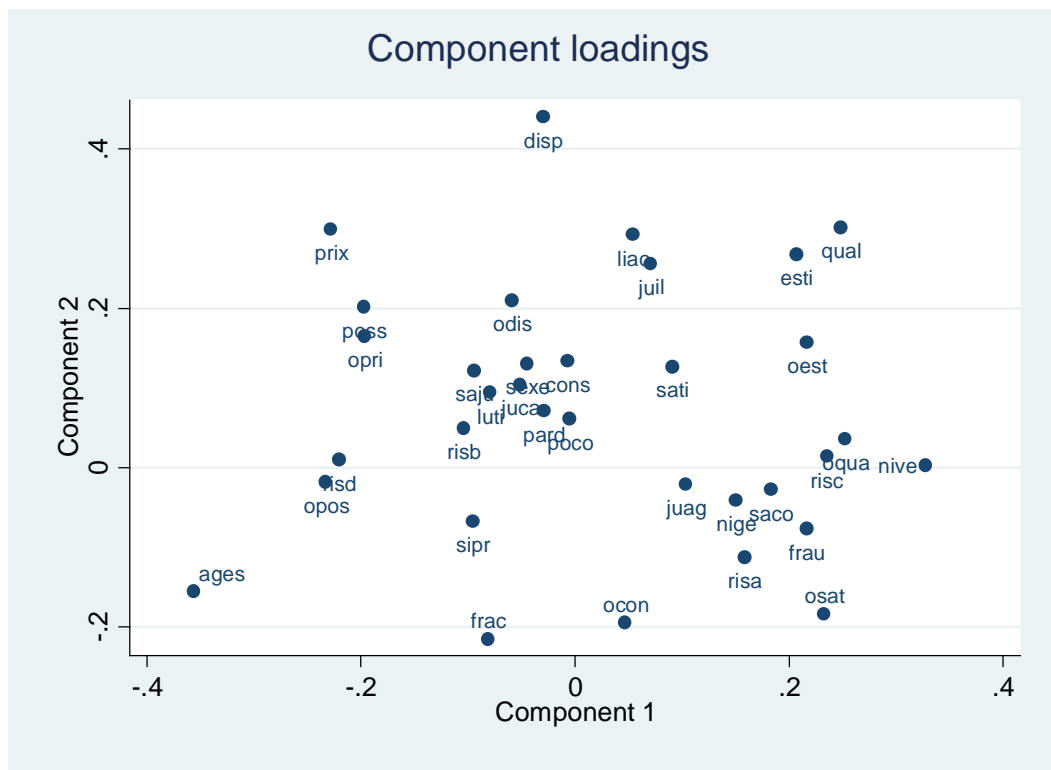
Lorsque nous comparons les valeurs des vecteur propres de ces six variables sur nos deux axes principaux nous constatons que les variables Frac, Risa, Risc et Nige sont expliquée par l'axe 1et la variable Risc qui a la plus grande valeur parmi celles-ci est plus expliquée par l'axe1 suivie de la variable Saju qui est la plus expliquée par l'axe2.Les variables Risb, Risd et Juca sont également expliquées par l'axe 2. De tous ces variables, celle qui a la plus grande valeur propre est la variable Risc ; par conséquent, les sanctions encourues expliquent le plus les risques perçus liés à l'utilisation des médicaments contrefaits.

Dans un contexte marketing, il a été démontré que le comportement du consommateur pouvait être déterminé par la crainte des sanctions. Donc l'existence des sanctions encourues pour de tel achat explique le mieux les risques perçus par les consommateurs de médicaments contrefaits et en même temps freinent leur volonté d'achat sur ces marchés illicites. Il existe également une relation négative entre la probabilité perçue de se faire prendre et le comportement d'achat du consommateur.

ii. Description graphique

Pour corroborer les résultats que nous avons eu ci-dessus concernant la description numérique, nous avons utilisés le graphique ci-dessous;

⁵ Analyse Factorielle des Correspondances car toutes les variables sont qualitatives.



Source : auteur à partir du logiciel stata

Figure 1 : Nuage de variables rapporté sur deux axes

La composante le risque perçu lié à l'utilisation des médicaments contrefaits est expliquée par l'item Risc qui expliquée le mieux par l'axe1 a le plus long vecteur que les variables Frac, Saju, Nige et Juca.

b) Analyse explicative

i. test de corrélation de Rho de Spearman

L'analyse explicative consiste à faire les tests d'hypothèses. Dans un premier temps nous allons faire

le test de corrélation de Spearman pour vérifier que les variables tels que le sexe, l'âge la situation professionnelle et le niveau d'étude aient oui ou non une relation directe avec nos deux principales variables dépendantes que sont; la fréquence d'achat et le risque. Cette analyse est résumé dans le tableau qui suit

Table 3 : Test de corrélation de Rho de Spearman

VARIABLES (items)	FRAC		NIGE	
	Spearman Rho	prob>/t/	Spearman Rho	prob>/t/
SEXE	-0,0356	0,5938	-0,0438	0,5110
AGES	-0,0015	0,9821	-0,0699	0,2944
SIPR	0,1086	0,1025	-0,0941	0,1577
NIVE	0,0967	0,1464	0,0319	0,6325

Source : auteur à partir du logiciel stata

Tous les coefficients de corrélation de Spearman calculés sont très inférieures à 1 en valeur absolu et ne sont pas significatif lorsqu'on compare les probabilités calculées au seuil de signification de 5% (si la probabilité est supérieure au seuil de signification choisi <5% >, le coefficient correspondant à la variable n'est pas significatif) .Cela montre qu'il y a une relation quasi inexistence entre nos deux variables

dépendantes Frac et Nige et les variables; sex, ages, sipr et nive. Cette faible corrélation nous fait rejeter ces variables dans nos explications.

Dans un second temps il est question pour nous de procéder à une régression logistique multinomiale parce que nous disposons des variables dépendantes nominales à plusieurs modalités.

ii. *Perception du risque et effet sur la fréquence d'achat*

a. *Perception du risque*

Si $\text{laprob(probabilité)} > /z/ > 5\%$ le coefficient de la variable n'est pas significatif; si $\text{Prob (probabilité)} > \chi^2 > 5\%$ le modèle n'est pas globalement significatif. Le tableau ci-dessous nous permet de voir que l'équation est globalement significative avec la constante significative alors qu'aucun paramètre n'est significatif. On observe que les usagers des médicaments contrefaits ne perçoivent pas significativement les dangers pendant l'achat et après consommation de ces médicaments dangereux. Donnons-en quelques conséquences de la perception non significative du risque par les consommateurs.

Dans la plupart des pays africains, des réseaux de vente de médicaments se développent en dehors du circuit officiel constitué par les officines de pharmacie, les dépôts pharmaceutiques du secteur privé et les formations sanitaires du secteur public. Ces médicaments peuvent être achetés au coin de la rue ou sur les marchés, sans ordonnance comme n'importe quel produit de consommation. La vente de médicaments illicites est devenue aujourd'hui un problème public compte tenu des catastrophes sanitaires et économiques. Le recours à l'automédication est fréquent pour des raisons économiques et sociales. Le faible pouvoir d'achat favorise en outre le développement d'un marché parallèle de distribution de médicaments.

Dans un pays comme le Cameroun, le marché illicite de médicaments s'est développé dans toutes les villes et tous les villages où les médicaments sont vendus comme des denrées alimentaires. Dans ces marchés, boutiques, échoppes, comptoirs de fortunes, à travers les rues et carrefours, le médicament côtoie les fruits, légumes, cigarettes, livres et autres produits. Un antibiotique s'acquiert aussi banalement que denrées alimentaires. Pourtant, le médicament ne saurait être considéré comme une «marchandise» au même titre que les autres. La qualité du médicament de rue ne

rassure pas non plus du fait que comme l'avoue un vendeur, il arrive, qu'après la date de péremption, on change la boîte du produit périmé en l'introduisant dans un autre étui ayant une date de péremption lointaine. Confidence effrayante pour qui sait que le médicament périmé est un poison grave pour un être humain. L'approvisionnement du marché illicite se fait à partir des pays de la sous-région et sont essentiellement des médicaments sans étiquettes, des médicaments périmés ou falsifiés et des médicaments sous-dosés. De plus des médicaments détournés du marché licite international et national alimentent la distribution des médicaments de la rue.

Il apparaît aussi que les différentes législations des pays africains ne sont pas toujours favorables à la répression du marché illicite de médicaments qui représente 30 à 60 % du marché formel. La lutte contre les circuits parallèles de distribution des médicaments est actuellement organisée auprès du grand public par de grandes campagnes internationales d'information qui n'ont pas toujours eu d'écho favorable auprès des destinataires, les bénéficiaires ne comprenant pas les objectifs de l'action menée et ne se sentant en aucune façon impliqués. Il a ainsi été organisé des saisies massives de médicaments accompagnées d'incinérations publiques à grand renfort de tapage médiatique. Ces campagnes s'accompagnent également d'une sensibilisation des populations des zones rurales et urbaines sur les dangers des médicaments de rue. Des slogans sont diffusés tels le médicament de la rue tue, n'achetez vos médicaments que dans les pharmacies. Ou encore femmes handicapées, mères, protégez vos familles des dangers du médicament de la rue. Cependant, la matérialisation de ces bonnes intentions tarde à se faire sentir. Sur le terrain, la propagande a manifestement l'effet inverse de celui escompté. L'activité prospère au su et au vu de tous sans que cela ne semble vraiment émouvoir populations et autorités. Beaucoup s'interrogent sur la volonté réelle de l'Etat d'arrêter ce commerce.

Table 4 : Nige = f (saju, risc, juca).

. mlogit nige saju risc juca

Iteration 0: log likelihood = -336.34798
Iteration 1: log likelihood = -327.96459
Iteration 2: log likelihood = -323.48776
Iteration 3: log likelihood = -321.61868
Iteration 4: log likelihood = -319.92584
Iteration 5: log likelihood = -319.17732
Iteration 6: log likelihood = -318.97824
Iteration 7: log likelihood = -318.93715
Iteration 8: log likelihood = -318.92947
Iteration 9: log likelihood = -318.92861
Iteration 10: log likelihood = -318.92844
Iteration 11: log likelihood = -318.9284
Iteration 12: log likelihood = -318.92839

Multinomial logistic regression
Log likelihood = -318.92839

Number of obs = 227
LR chi2(15) = 34.84
Prob > chi2 = 0.0026
Pseudo R2 = 0.0518

	ni ge	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
0						
	saj u	30. 92594	2704. 052	0. 01	0. 991	- 5268. 918 5330. 77
	ri sc	- 60. 03459	3506. 88	- 0. 02	0. 986	- 6933. 393 6813. 324
	ju ca	7. 601723	589. 0631	0. 01	0. 990	- 1146. 941 1162. 144
	_cons	- 37. 86459	3494. 045	- 0. 01	0. 991	- 6886. 068 6810. 338
1						
	saj u	. 935456	. 5972553	1. 57	0. 117	- . 2351429 2. 106055
	ri sc	- . 1076139	. 2980984	- 0. 36	0. 718	- . 691876 . 4766481
	ju ca	. 1069533	. 1785155	0. 60	0. 549	- . 2429306 . 4568373
	_cons	- 2. 784571	1. 29844	- 2. 14	0. 032	- 5. 329467 - . 2396756
2						
	saj u	. 0929697	. 4414954	0. 21	0. 833	- . 7723454 . 9582848
	ri sc	- . 1058684	. 2103698	- 0. 50	0. 615	- . 5181855 . 3064488
	ju ca	- . 0622679	. 127443	- 0. 49	0. 625	- . 3120515 . 1875158
	_cons	- . 6517677	. 8906878	- 0. 73	0. 464	- 2. 397484 1. 093948
3		(base outcome)				
4						
	saj u	. 3334647	. 3587767	0. 93	0. 353	- . 3697247 1. 036654
	ri sc	. 2180375	. 181179	1. 20	0. 229	- . 1370668 . 5731418
	ju ca	. 1069243	. 1031494	1. 04	0. 300	- . 0952449 . 3090934
	_cons	- 1. 287127	. 7672401	- 1. 68	0. 093	- 2. 79089 . 2166355
5						
	saj u	- . 2677669	. 5249349	- 0. 51	0. 610	- 1. 29662 . 7610866
	ri sc	. 353153	. 2612278	1. 35	0. 176	- . 1588441 . 8651501
	ju ca	. 0809893	. 1411749	0. 57	0. 566	- . 1957085 . 3576871
	_cons	- 1. 881419	1. 094781	- 1. 72	0. 086	- . 4. 02715 . 2643127

Source : auteur à partir du logiciel stata

b. Relation entre la fréquence d'achat et la composante Risque perçu

Si laprob(probabilité) > /z/ > 5% le coefficient de la variable n'est pas significatif ; si Prob (probabilité) > chi2 > 5% le modèle n'est pas globalement significatif.

Dans le tableau ci-dessous, le coefficient d'un seul paramètre est significatif au seuil de 5%, celui de Risd (pour la troisième modalité). Cependant nous ne pouvons pas nous étendre sur l'explication de ces risques car d'une part l'équation n'est pas globalement significative et d'autre part le risc qui a le plus long vecteur propre n'a pas un coefficient significatif. Nous notons que le risque n'est pas suffisamment perçu parce que dans l'ensemble les variables qui déterminent le risque n'influencent pas significativement la fréquence d'achat des mauvais médicaments. Donnons quelques conséquences de cette absence de perception du risque par les consommateurs.

Le SAMOAPI⁶ (2012) qui se veut une plateforme de réflexion pour la lutte contre la contrefaçon des médicaments et produits de santé apparentés, aborde tous questionnements permettant de circonscrire les nouvelles dimensions de l'accès à des médicaments de qualité et leurs corollaires, la lutte contre le taux de médicaments et les circuits illicites qui alimentent et afin d'infléchir la tendance qui augmente d'années en années.

Le phénomène de la contrefaçon est un défi dans l'environnement commercial actuel. Il met en danger les économies locales, brouille les règles usuelles de la compétition et de l'innovation, et enfin présente des risques pour l'utilisateur final. La part occupée par les produits contrefaits dans le commerce mondial augmente de façon préoccupante d'année en année : selon l'OCDE⁷, la contrefaçon représenterait 5 à 7 % du commerce mondial (200-300 milliards d'euros) et conduirait à la perte de 200 000 emplois par an dans le monde.

Comme souligné par José Manuel Barroso, Président de la Commission Européenne, « il s'agit d'une Bataille qu'il faut mener sur deux fronts : le front de l'offre et celui de la demande » Ainsi, la compréhension des consommateurs à l'égard de la contrefaçon est nécessaire afin de définir une stratégie de lutte anti-contrefaçon efficace. Ce phénomène est important, original et complexe du point de vue du comportement du consommateur. La fréquence d'achat n'est pas déterminée par la composante risque perçu.

Table 5 : Frac = f (saju, risa, risb, risc, risd, nige, juca).

. mlogit frac saju risa risb risc risd nige juca

Iteration 0: log likelihood = -325.88215
Iteration 1: log likelihood = -316.19186
Iteration 2: log likelihood = -309.73735
Iteration 3: log likelihood = -308.75285
Iteration 4: log likelihood = -308.06786
Iteration 5: log likelihood = -307.99906
Iteration 6: log likelihood = -307.98955
Iteration 7: log likelihood = -307.98874
Iteration 8: log likelihood = -307.98858
Iteration 9: log likelihood = -307.98856

Multinomial logistic regression

Number of obs = 227
LR chi2(28) = 35.79
Prob > chi2 = 0.1481
Pseudo R2 = 0.0549

Log likelihood = -307.98856

	frac	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
1						
	saju	-.2435055	.4021168	-0.61	0.545	-1.03164 .544629
	risa	-.2064078	.212812	-0.97	0.332	-.6235117 .2106962
	risb	.120554	.2127249	0.57	0.571	-.2963791 .5374871
	risc	-.279644	.2164615	-1.29	0.196	-.7039006 .1446127
	risd	.1501648	.2194319	0.68	0.494	-.2799138 .5802434
	nige	.0484878	.1802619	0.27	0.788	-.304819 .4017947
	juca	.025322	.1150955	0.22	0.826	-.2002611 .2509051
	_cons	.6919182	1.490811	0.46	0.643	-2.230018 3.613854
2		(base outcome)				
3						
	saju	-.5636578	.3968199	-1.42	0.155	-1.34141 .2140949
	risa	-.38912	.2139051	-1.82	0.069	-.8083662 .0301263
	risb	-.0014073	.2262966	-0.01	0.995	-.4449404 .4421259
	risc	-.1587491	.2168451	-0.73	0.464	-.5837578 .2662595
	risd	.499992	.2173903	2.30	0.021	.0739148 .9260692
	nige	.1248689	.1720544	0.73	0.468	-.2123515 .4620893
	juca	.0722443	.1117611	0.65	0.518	-.1468033 .291292
	_cons	.6583535	1.591189	0.41	0.679	-2.460319 3.777026
4						
	saju	-.4479829	.4533193	-0.99	0.323	-1.336472 .4405066
	risa	12.93958	372.9713	0.03	0.972	-718.0708 743.95
	risb	13.15918	372.9714	0.04	0.972	-717.8514 744.1697
	risc	12.76033	372.9715	0.03	0.973	-718.2503 743.771
	risd	13.4713	372.9713	0.04	0.971	-717.539 744.4816
	nige	.2456966	.1998729	1.23	0.219	-.1460471 .6374402
	juca	-.139194	.1301051	-1.07	0.285	-.3941953 .1158072
	_cons	-131.2637	3729.714	-0.04	0.972	-7441.369 7178.841
5						
	saju	-.6368201	1.163249	-0.55	0.584	-2.916745 1.643105
	risa	-.8308261	.4648366	-1.79	0.074	-1.741889 .080237
	risb	-.1969305	.4687262	-0.42	0.674	-1.115617 .721756
	risc	-.3138026	.4920512	-0.64	0.524	-1.278205 .6506
	risd	-.3438825	.5211685	-0.66	0.509	-1.365354 .677589
	nige	.6851975	.5159213	1.33	0.184	-.3259896 1.696385
	juca	.0233178	.2908662	0.08	0.936	-.5467695 .5934052
	_cons	.1078334	2.192068	0.05	0.961	-4.188541 4.404207

Source : auteur à partir du logiciel stata

V. CONCLUSION

Au terme de cet article, il était question pour nous d'appréhender et de capter la perception du risque lié aux médicaments contrefaits au Cameroun et particulièrement dans la ville de Dschang. Le niveau de consommation d'un individu, la satisfaction et le risque étant très liés, nous avons pris comme objectif d'apprécier le niveau de perception du risque

des médicaments contrefaits chez les consommateurs. Sur le plan théorique le comportement d'achat en faveur d'un produit peut dépendre du risque perçu pour ce qui est d'un produit douteux. Ce facteur a été détaillé par des variables qui peuvent le déterminer sous forme de questionnaire administré afin que par un dépouillement ce facteur et les variables qui le déterminent puissent être codés et prêter à une analyse empirique.

Sur le plan empirique, l'analyse descriptive nous révèle que le facteur risque perçu lié à l'utilisation des médicaments contrefaits est expliquée par l'item Risc qui explique le mieux par l'axe1 a le plus long

⁶ L'AMOAPI : Association des Mandataires agréés auprès de l'OAPI (Organisation Africaine de la propriété intellectuelle) pour la Santé.

⁷ Organisation de Coopération et de Développement Economique.

vecteur que les variables Frac, Saju, Nige, et Juca. De l'analyse explicative il ressort que concernant la perception du risque, les usagers des médicaments contrefaits ne perçoivent pas significativement les dangers pendant l'achat et après consommation de ces médicaments dangereux. Donc il serait judicieux de vulgariser les sanctions et clichés néfastes qui ont trait à la consommation de ces produits dangereux. Pour réduire la contrefaçon des médicaments contrefaits, il serait possible pour les organismes qui protègent les droits des consommateurs d'insister sur les risques encourus pour sensibiliser les consommateurs ; de bien informer les usagers en ce qui concerne les vrais prix pour qu'ils arbitrent bien entre le prix et les conséquences qu'ils courent en allant sur le marché illicite.

En perspective, il pourrait être question de mener une réflexion sur la capacité des populations à se satisfaire d'un environnement de qualité, ce qui limiterait les tentations à la dégradation de la qualité de vie par l'utilisation des produits de mauvaise qualité. Cette peut être refaite sur plusieurs zones ou régions.

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ANNEXE

REPUBLIQUE DU CAMEROUN

Paix – Travail – Patrie

MINISTRE DE L'ENSEIGNEMENT
SUPERIEUR

UNIVERSITE DE DSCHANG

FACULTE DES SCIENCES ECONOMIQUES
ET DE GESTION



REPUBLIC OF CAMEROON

Peace – Work – Fatherland

MINISTRY OF HIGHER
EDUCATION

UNIVERSITY OF DSCHANG

FACULTY OF ECONOMICS
AND MANAGEMENT

FORMULAIRE DU QUESTIONNAIRE ADRESSE AUX MENAGES

QUESTIONNAIRE DE RECHERCHE

Ce questionnaire élaboré dans le cadre d'un travail de recherche portant sur le thème «**les déterminants du comportement d'achat des consommateurs des produits contrefaits : cas des médicaments dans la ville de Dschang - Cameroun**» vise à collecter des données dont nous vous garantissons la confidentialité et qui ne seront utilisées qu'à des fins scientifiques. Entant qu'échantillon, votre participation à cette recherche sera grandement appréciée. . Merci pour votre collaboration.

1-Sexe : ☐ Féminin ☐ Masculin

2-Age : ☐ 20 – 30 ans ☐ 31 – 40 ans ☐ 41 – 50 ans ☐ 51 – 60 ans ☐ plus de 60 ans

3-situation professionnelle : ☐ sans emploi ☐ employé ☐ autonome ☐ autres (à préciser).....

4-☐ Niveaux d'étude; ☐ n'a pas été à l'école ☐ primaire ☐ secondaire ☐ supérieur

5- comment jugez-vous la part de votre dépense de santé sur votre revenu moyen ?
☐ Très faible ☐ Faible ☐ moyenne élevée ☐ très élevée

6- A quel lieu achetez-vous le plus souvent les médicaments ?

☐ Pharmacies (des hôpitaux ou de la ville) ☐ marchés illicites (poteaux, kiosques, boutiques ou ambulant)

Pourquoi :

7- Fréquentez-vous aussi les autres lieux de ventes des médicaments (ceux non sélectionnés à la question précédente) ?

☐ Oui ☐ Non
Si oui dans quelle
circonstance :

8- À quelle fréquence achetez-vous les médicaments sur les marchés illicites (par rapport à vos achats globaux des médicaments) ?

☐ Nulle (jamais) ☐ faible ☐ moyenne ☐ assez élevée ☐ très élevée

9- selon vous, qu'est ce qui permettrait d'empêcher à un consommateur d'acheter les médicaments sur les marchés illicites ?

10-comment jugez-vous les campagnes anti-contrefaçons des médicaments ?

☐ Inefficace ☐ peu efficace ☐ moyennement efficace ☐ assez efficace ☐ très efficace

11-savez-vous qu'il existe des médicaments contrefaits? (C'est-à-dire des médicaments qui sont les imitations ?).

☐ Oui ☐ Non

12 - D'après vous, où a-t-on plus de possibilité de retrouver les médicaments contrefaits :

☐ Pharmacies (des hôpitaux ou de la ville) ☐ marchés illicites (poteaux, kiosques, boutiques ou ambulant)

13-Comment jugez-vous en général l'efficacité des médicaments vendus sur les marchés illicites (poteaux, kiosques, boutiques, ambulant ou tout point non agréé)

☐ Non efficace ☐ peu efficace ☐ passablement efficace ☐ assez efficace ☐ très efficace

14- Comment jugez-vous en général l'efficacité des médicaments vendus dans les pharmacies (des hôpitaux, de la ville où tout point agréé) ?

☐ Non efficace ☐ peu efficace ☐ passablement efficace ☐ assez efficace ☐ très efficace

15- Existe-t-il des sanctions juridiques pour les consommateurs relatives à l'achat des médicaments sur les marchés illicites ?

☐ Oui ☐ Non

16-D'après vous, faut-il lutter contre la vente des médicaments sur les marchés illicites ? Oui Non

Pourquoi :

17- Classer par ordre d'influence décroissante (du plus grave au moins grave), les risques suscités qui freinent votre volonté d'achat des médicaments sur les marchés illicites.

- se faire mal jugé par son entourage
- à cause des sanctions encourues
- ces médicaments peuvent être nocifs ou inefficaces
- absence d'un suivi crédible par le vendeur

1^{er}, 2^{ème}, 3^{ème}, 4^{ème} (Relevez les lettres correspondantes)

18- Quel est votre point de vue général sur le niveau des risques liés aux utilisations de ces médicaments ?

☐ Nul ☐ faible ☐ moyen ☐ assez élevé ☐ très élevé

19- selon vous, quel est le niveau d'importance de chacun de ces facteurs motivateurs à l'achat des médicaments sur les marchés illicite

		Pas du tout important	Peu important	Moyenne ment Important	important	Très important
No	FACTEURS					
1	Prix relativement plus faible					
2	Faible estime de soi					
3	Disponibilité des médicaments					
4	Qualité de service					

5	Possibilité d'achat en détail et sans obligation de présenter une ordonnance					
6	Satisfaction antérieure					
7	Consultation non payante					

20 - Classer par ordre d'influence décroissante (du plus important au moins important), les facteurs cités à la question 19 qui motivent votre volonté d'achat des médicaments sur les marchés illicites.

1^{er}, 2^{ièm}, 3^{ièm}, 4^{ièm}, 5^{ièm}, 6^{ièm}, 7^{ièm} (Encercler les numéros correspondants)





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The Relationship between Trading Volume and Stock Returns Index of Amman Stocks Exchange Analytical Study (2000-2014)

By Dr. Ahmad Salem Alkhazali

Al Albyat University, Jordan

Introduction- Jordan know trading in shares since the beginning of the thirties of the twentieth century, where trading was done through the market irregularly by some brokerage firms, until issued Law No. (31) of 1976, under which was established Amman financial market as a market regulator and as a supervisor and an executive at the one (Khatib, 2006).

Both the trading volume and stock prices basic rule by which describe the state of the financial market, and investors are keep it out to trace these two variables constantly and alarmingly somewhat due to the adoption of their investment decisions on them, along with the use of these two variables in assessing the performance of the financial market through the volume of information available (Karpio, et-al, 2012).

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I. INTRODUCTION

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Where the Sun Illustrates (2003) to understand the relationship between trading volume and stock returns in the futures markets and speculative markets is essential for traders in these markets, because the fluctuation in prices affect the volume of trading in futures contracts, as well as the rate of return to take distribution is normal.

This study has received the relationship between trading volume and stock returns attention of many researchers, economists, and there are many studies that have been made in different markets in order to test the relationship between trading volume and stock returns, but these studies have been mostly applied in the development financial markets, while it did not have markets emerging among which Arabic enough research into the relationship (Al-Zubaidi and others, 2008).

Therefore, this study was to look at the nature of the correlation between trading volume and stock prices in the Amman Stock Exchange.

II. PROBLEM OF THE STUDY

The problem with the this study is related to the lack of clarity in the quality of information that reflects the volume of trading in the financial market and the variability from one investor to another, which leads to

poor efficiency of the financial market. As is known, the stock prices are determined on the basis of the quality of information available and its size, through which the investor will build expectations about future price, which reflects on the role of trading volume. And the absence of information concerning the size of the trading and stock prices lead to the inability of investors to identify companies that are turning to investing in shares.

III. IMPORTANCE OF THE STUDY

The importance of this study depends on giving ways to investors (individual, company) in order to maximize their returns by getting optimal investments decisions which depends on understanding the correlation between stock prices and trading volume basis through which to provide the appropriate information to make investment decisions, it is through this relationship facilitates the construction of a short-term outlook on the future price volatility, which helps companies to contribute to the strengthening of profitability.

It also helps to examine the relationship between stock prices and trading volume to increase understanding and management restructuring of the financial market in terms of the rate of flow of information, and the degree of reflection of the information in the price of normal Securities Exchange, as well as increase the ability to distinguish between the various theories concerning the structure of the financial market (Karpoff, 1987).

Besides the above, this study contributes to help the investors to put their investment decisions and selected by choosing the correct timing and appropriate for clients buying and selling of shares they own.

IV. OBJECTIVES OF THE STUDY

This study aims to achieve the following goals

1. To identify the nature of the relationship between trading volume and volatility in stock prices.
2. Determine the direction of the causal relationship between trading volume and volatility in stock prices.

V. HYPOTHESES OF THE STUDY

Ha0: There is no a positive relationship statistically significant differences between trading volume and volatility in stock prices.

Ha1: There is a positive relationship statistically significant differences between trading volume and volatility in stock prices.

Ha0: The volume is not causing volatility in stock prices

Ha2: The volume is causing volatility in stock prices

VI. PREVIOUS STUDIES

The purpose of the study (Ananzeh, et-al, 2013) to identify the nature of the relationship between the volatility of market returns and trading volume during the period (2002-2012) the application on the Amman Stock Exchange. The study sample consisted of 27 companies listed on the Amman Stock Exchange have been selected at random, taking into account the difference in the size of the company and the volume traded. Data were analyzed using a model GARCH-M, and the use of a set of descriptive statistics. The results indicated that the volume of trade contributes significantly to the volatility of stock returns process in the Amman Stock Exchange.

While aim of the study of (Assan & Thomas, 2013) was find out the nature of the relationship between trading volume and stock returns during the period (1997-2012) in the local stock exchange in India. The study was based on a series of data consisting of (3778) View the Stock Exchange of India. Where was the use of vector auto-regression analysis (VAR), and tests of the stability data, and causality tests, to analyze the data collected. The results indicated that the equity returns that are causing the volume, and that there is a causal relationship between the size of a bi-directional trading and equity returns.

On the other hand came study (Choi & Kang, 2013) to clarify the relationship between trading volume and stock returns during the period (2004-2012) in Asian stock exchange financial market . The study sample consisted of four Asian stock exchanges, namely: Japan Stock Exchange, and the Stock Exchange of Hong Kong, and Korea Exchange, and the Stock Exchange of China. The data were collected and analyzed daily necessary through the use of descriptive statistics, and the stability test data, test the causal relationship between variables. The results indicated that the volume of trading at the Stock Exchange in Japan affects both: Stock Exchange of Hong Kong, and Korea Exchange, and the Stock Exchange of China, the Japanese stock returns has been shown that they do not lead to a causal relationship with the trading volume. Also the results show that stock returns in the Chinese stock market have no effect causal direction of the rest of the financial markets.

The study (Choi, et-al, 2012) was aimed to know the nature of the relationship between trading volume

and returns will fluctuate in the Korea Stock Exchange during the period (2000-2010). The data were collected and analyzed necessary depending on the test Exponential GARCH (EGARCH).

The results indicated the existence of a positive relationship between trading volume and returns will fluctuate, and trading volume is causing volatility in equity returns.

As for the studies that have been conducted in Jordan and the Arab states in the limits of science researcher has not been given enough attention to this issue by the researchers, which is considered studies that looked at the relationship between trading volume and stock prices is somewhat limited.

It has the (Al-Jafari & Tliti, 2013) studied English looked at the nature of the relationship between trading volume and stock returns during the period (2006-2011) in the Amman Stock Exchange. The study sample consisted of all banks within the banking sector in the Amman Stock Exchange, so you are relying on the sector index in the collection of data on the volume of daily trading and returns.

As was to build a model of linear regression analysis linking the variables of the study, relying on test linear regression analysis, and testing of the stability data, descriptive statistics, to analyze the data for the study. The results of the study to the lack of a statistically significant relationship between trading volume and stock returns at the level of the banking sector index. While showing a statistically significant relationship between trading volume and volatility of returns in the Jordanian commercial banks. In addition, the results showed a relationship long-term integration between trading volume and stock returns, and that stock returns are caused by volume.

And held (Al-Zubaidi and others, 2008) study aimed to test the relationship between trading volume and stock returns for Arab financial markets during the period (1994-2003). This study has relied on the monthly data was used so that a set of statistical methods for the analysis of assets to the results, and it was the most important of these methods the stability test data and test Granger to get to know the direction of causality.

The results indicated the presence of a positive correlation between trading volume and stock returns in each of the Amman Financial Market and the Bahrain Stock Exchange, and the Public Authority for the capital of Egypt. And the existence of a causal relationship is moving from volume to stock returns.

VII. THE THEORETICAL FRAMEWORK FOR THE STUDY

The trading volume of the stock one of the main factors that are relied upon in making investment declining share price down demand for the stock, while in the event of increased demand on the stock rising price. In the sense that trading volume reflects the

decisions in the stock market, and is determined by the price of any shares through the number of shares offered and the number of shares required, where declining share price down demand for the stock, while in the event of increased demand on the stock rising price. In the sense that trading volume reflects the liquidity of the stock, as an increase in trading volume indicates that the stock has high liquidity, which in turn leads to a rise in its price.

And measures the level of trading volume of shares traded during a certain period of time, whether the period daily, or monthly, or yearly.

And it is influenced by the quality of the volume of information, where the quality of the resulting mismatch of information and differing expectations about the stock price to increase trading volume (Ravikant, 2011).

The relationship between trading volume and stock prices:

There are many studies that have looked at the nature of the relationship between trading volume and stock prices, has agreed to most of the studies on the existence of a positive relationship between these two variables, but the results have been mixed in terms of the direction of causality, and the most prominent of those studies study Karpoff (1987), which showed that the nature of this relationship depends on the size of the flow of information to the financial market, as this study has identified four important reasons to study the relationship between trading volume and stock prices, and represented these reasons, including the following:

- This relationship provides an insight into the structure of the financial markets, through it helps to distinguish between competing theories on how the dissemination of information in the financial markets.
- This relationship is useful for the study of the event (Event Study), which is relied upon to use a combination of price data and trading volume to draw conclusions related to the event under study.
- This relationship represents a level of importance to the members of the dealers in the speculative markets.
- This relationship represents a level of importance to the members of the dealers in the futures markets.
- Previous studies have become a group of theoretical explanations that explain the relationship between trading volume and stock prices through a set of hypotheses. These assumptions are (Darwish, 2012):

First, the premise distribution mixed (The Mixture of Distribution Hypothesis)

Explains Clark (1973) through the premise distribution mixed that stock prices associated with positive relationship and with strong trading volume, but the nature of this relationship is causal, where prices are

linked to the stock with trading volume as a result of its dependence on the volume of information and to variable represents the joint between them, the more the volume of information whenever led to a strong tendency for the change in prices.

Second, hypothesis. sequential access information (Sequential Arrival Information Hypothesis).

Illustrates Copeland (1976) through his hypothesis sequential access information that there is a causal relationship between positive bi-directional trading volume and stock prices. And assume this hypothesis and access information to the market in a sequential, nor distribute information to all traders in the financial market at one time, which results in the presence of several points of balance in the information, and spoke balance point recent Upon arrival information for all investors and traders in the financial market.

Third: Form a trader spam (The Noise-Trader Model).

According to this model assumes De Long et.al (1990) that the activities of traders and their trading noise, meaning they are not based on economic fundamentals, but rather based on mispricing temporary stock prices in the short term, and long-term moves the price to the average value so down the value of returns and unchanged volumes.

In this model assumes a positive causal relationship between stock returns and trading volume, so that the revenues that are causing the circulation, and this is in line with the trading strategy for the positive feedback from dealers and irksome who based their decisions on price movements in the past period of time. This also assumes the form of a causal relationship between positive stock returns and trading volume so that trade is causing yields, which depending on the price changes resulting from reactions dealers irksome.

Fourth: the motives of tax and non-tax (Tax and Non-Tax- Related Trading Motives).

Explains Lakonishok and Smidth (1989) that the size of the current trading could be related to the change in stock prices the past because of the motives of trading tax and non-tax. Where the nature of the relationship between stock prices and trading volume in the event of a negative tax motivated trading, while this relationship is positive in the event of non-tax motivated trading.

Coincides motives tax with the occurrence of capital gains or losses, where some fund managers to sell financial assets in order to avoid the distribution of earnings to shareholders, including the motives is tax the investors to trade in order to obtain liquidity for personal purposes such as buying a house or a car through the sale of some financial assets (Al-Zubaidi and others, 2008).

VIII. METHODOLOGY OF THE STUDY

This study followed with method descriptive analytical method to identify the nature of the correlation between stock prices and trading volume, and is a test GARCH (1,1) of more tests are common and that are used to measure the fluctuation of stock prices, but in

this study has been to rely on test EGARCH (The Exponential GARCH), which was developed by Nelson (1991), and is characterized by this test that assumes a normal error structure conditional errors.

The test is expressed EGARCH (The Exponential GARCH) by the following equation (Taskin & Kapucugil, 2013).

$$\log \left[\frac{\sigma_t^2}{\sigma_{t-1}^2} \right] = \omega + \alpha \left(\frac{\epsilon_{t-1}}{\sigma_{t-1}} \right) + \beta \log \left[\frac{\sigma_{t-1}^2}{\sigma_{t-2}^2} \right] + \gamma \left(\frac{\epsilon_{t-1}}{\sigma_{t-1}} \right)^2$$

Where:

$\omega, \alpha, \gamma, \beta$: independent transactions.

ϵ_t : coefficient of error

To ensure the stability of the data it is supposed to be less than the value of β (1), and the coefficient of error ϵ_t distributed normally distributed

Within the model, it is assumed EGARCH asymmetry of information, in the sense that if the negative relationship between price volatility and negative returns, the value of γ will be negative.

IX. DATA OF THE STUDY

This study has been relying in the data daily trading volume and stock prices, which extended its data from January 2000 to March 2014. Has been taking

the logarithm of both variables for the purposes of statistical analysis. Where was the use of statistical tests in the following program E-Views:

- Descriptive statistics (mean, standard deviation, the highest value, and less valuable).
- Unit root test for the stability of time-series (Dickey Fuller test (ADF))
- Testing EGARCH (The Exponential GARCH).
- Test Angel - Granger (Engle-Granger) to test the causal relationship. Descriptive statistics:

Table (1) The following presents a summary of the results of descriptive statistics for the variables of the study.

Table 1 : Summary results of descriptive statistics

lowest value	highest value	standard deviation	mean stood	Variable
12.6438	20.09118	1.394226	16.35132	(Ln V.T) Volume trding
6.675483	8.525899	0.495303	7.621663	(Ln Index) Stock prices

According to the result of table (1)

By the results in Table (1) shows us the following:

- Logarithm Volume: The highest value of the logarithm of the trading volume around (20.09), while the lowest value around (12.64), while the mean stood around (16.35), and a standard deviation of approximately (1.39), it which reflects the disparity in the size of the trading on the ASE.
- The logarithm of stock price index: The highest value of the logarithm of the stock price index of about

(8,525), while the lowest value of about (6.675), while the mean totaled approximately (7,621), and a standard deviation of approximately (0495), and thus we can see that there is a stable the movement of the stock price index in the Amman Stock Exchange.

Test the stability of the data:

This study used time-series data, and to ensure the stability study data related to stock prices has been relying on Dickey Fuller test (ADF). The table (2) below shows the result of this test:

Table 2 : Unit root test results for the stability of time-series using the Dickey Fuller test (ADF)

the value of probabilistic	value (t)	(Variable)
0.000	-3.432029	The fluctuation of stock price

Through Table (2) Previous shows us that stock prices in a stable level, this means rejecting the null hypothesis which states that no stillness variables, that is, static variables in level.

Table 3 : Test results EGARCH (1,1)

Variable	Coefficient	Std. Error
Mean Equation	-14.188	387.2724
C	-0.98265 ***	0.085616
Variance Equation	0.284148***	0.015666
ω	-0.021904 ***	0.008159
α	0.952408 ***	0.004452
γ	0.018289 ***	0.002635
β		
Ln Vol.		
statistically significant at the 1% *	Statistically significant at 5% **	***statistically significant at the 10%

Through the table (3) Previous notice the presence of a statistically significant relationship between trading volume and stock price index in the Amman Stock Exchange, and this relationship is statistically significant at the significance level (1%), as

the value of coefficient of oscillation (0.018289). And it is the first to accept the hypothesis of the study. This result has been agreed with the study (Choi, et-al, 2012), and the study of (Al-Zubaidi and others, 2008).

The following figure shows

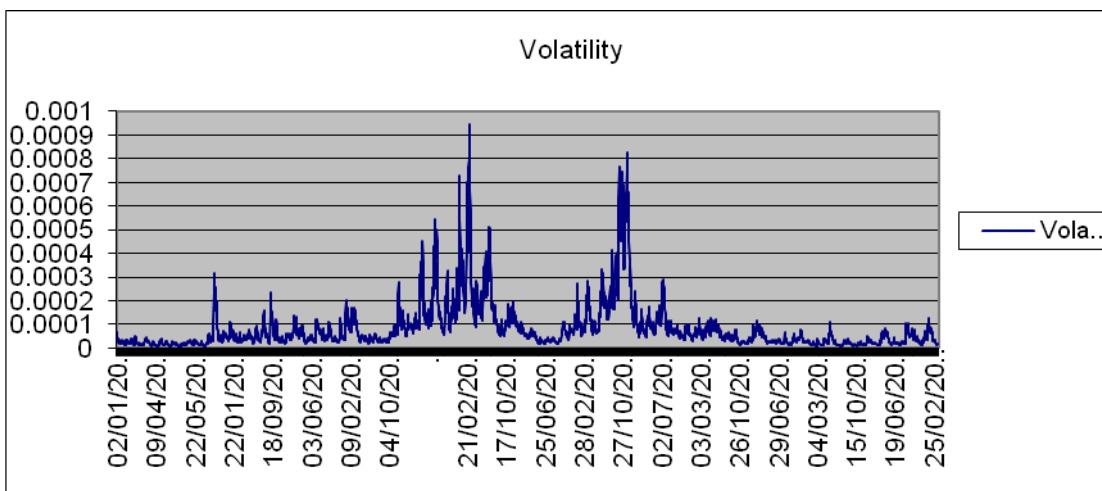


Table 4 : Test Angel - Granger (Engle-Granger)

Prob.	F-Statistic	Null Hypothesis
0.0015***	3.94038	LNVT does not Granger Cause GARCH02
0.9386	0.2527	GARCH02 does not Granger Cause LNVT
statistically significant at the 01% *	Statistically significant at 5% **	*** statistically significant at the 1%

Through the table (4) Previous shows us that there is a causal relationship one-way between each of the trading volume, and stock price index, it was found that the volume of trading is causing the stock price index. It is clear that the value of the probability of the test (F), which was significant and statistically significant at the level (1%). Accordingly, we accept the second hypothesis of the study. Have agreed as a result of this study with the study (Ananzeh, et-al, 2013), and study (Choi, et-al, 2012), and the study of (Al-Zubaidi and

others, 2008), while disagreed with the study (Al-Jafari & Tliti, 2013), which she explained that the returns that are causing the volume.

X. Results and Recommendations

a) Results

This study aimed to identify the nature of the relationship between trading volume and stock price index in Amman Stock Exchange during the period (2000-2014), has been reached following results.

1. No statistically significant relationship between trading volume and stock price index at the Amman Stock Exchange, has been has totally this result with model trader spam (The Noise-Trader Model) which assumes that investors and traders in the financial market rely on rumors and inaccurate information without relying on foundations economic, scientific in the trading process, which leads to increased trading volume and price changes. As a result this has totally with the motives of tax and non-tax (Tax and Non-Tax-Related Trading Motives), which shows that the nature of the relationship between trading volume and stock price index is positive in the event of non-tax motivated trading.
2. There is a causal relationship one-way between each of the trading volume, and stock price index, it was found that the volume of trading is causing the stock price index

b) Recommendations

This study recommends the need for future studies illustrate the nature of the relationship between trading volume, and revenue shares of joint stock companies listed on the Amman Stock Exchange, so identify the nature of the relationship between trading volume and revenue shares of joint stock companies in each sector separately, as well as to identify the extent of the differences in between sectors in terms of the nature of this relationship

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The Role of Ethical Practice in Recruitment in Improving Performance of an Institution

By Henry Peter Gommans & Joseph. M. Musumbu

Mount Kenya University, Kenya

Abstract- The concept ethical practice is defined as the adherence and honour of morals, beliefs and values of a profession one is subscribed to. It also encompasses helping others who have been subjected to biased making of decisions. In the world, there is an overriding worry when it comes to the management of human resource in organizations. The International Civil Service Commission (ICSC) has linked poor performance of organizations in the world to unethical management of human resources, and more so during the recruitment processes. This project evaluates possibilities of poor performances in the police service in Kenya instemming insecurity over the last four years, to unethical practices in the service. Specifically, the paper evaluates the implications of unethical police recruitments in Kenya over the last four years to overall performance of the police force in Kenya. This paper employs qualitative research methodology as a way of collecting data to qualify the hypothesis; that the unethical practice in the recruitment of the police service in Kenya has resulted to high levels of insecurity. Specifically, this project utilized focus group discussions, key informant interviews, participant observations, and case studies. Interviews involved two human rights individuals, two willing police officers stationed in Nairobi, three government officers at EACC and two Kenyan politicians. Three stations used during the 2014 police recruitment exercise were chosen for getting field notes.

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The Role of Ethical Practice in Recruitment in Improving Performance of an Institution

A Case Study of Ethics in Recruitment of the Police Service in Kenya and Resultant Performance in Stemming Insecurity since 2010

Henry Peter Gommans ^α & Joseph. M. Musumbu ^ο

Abstract- The concept ethical practice is defined as the adherence and honour of morals, beliefs and values of a profession one is subscribed to. It also encompasses helping others who have been subjected to biased making of decisions. In the world, there is an overriding worry when it comes to the management of human resource in organizations. The International Civil Service Commission (ICSC) has linked poor performance of organizations in the world to unethical management of human resources, and more so during the recruitment processes. This project evaluates possibilities of poor performances in the police service in Kenya instemming insecurity over the last four years, to unethical practices in the service. Specifically, the paper evaluates the implications of unethical police recruitments in Kenya over the last four years to overall performance of the police force in Kenya. This paper employs qualitative research methodology as a way of collecting data to qualify the hypothesis; that the unethical practice in the recruitment of the police service in Kenya has resulted to high levels of insecurity. Specifically, this project utilized focus group discussions, key informant interviews, participant observations, and case studies. Interviews involved two human rights individuals, two willing police officers stationed in Nairobi, three government officers at EACC and two Kenyan politicians. Three stations used during the 2014 police recruitment exercise were chosen for getting field notes.

I. INTRODUCTION

a) Background of the study

Recruitment or placement is regarded as the foremost part of any organization. It is regarded as the most important policy in management of human resource in an organization, and this is because without it, an organization exists in void. According to ICSC Secretariat (August 2001), every other recruitment should not only be based on some shared principles, but also should conform to internationally accepted practices. Any recruitment exercise should be devoid of corruption, nepotism or favouritism. A report prepared by Transparency International in the year 2009, dubbed the Corruption Perceptions Index (CPI), ranked Kenya as one of the nations in the world which is most corrupt (Ndegwa, November 19, 2009).

Overall, Kenya was given a score of 2.2, meaning that the perception on corruption, and especially bribery was very. In regard to institutions, the police service in Kenya has over the years led as an institution most corrupt, not only in Kenya, but the whole of East Africa. According to Herbling (September 2, 2012), the police department in Kenya was the most corrupt institution in the whole of East Africa in the year 2012. Other than corruption, the police force in Kenya has been attributed shadowy deals such as protecting drug lords, illegal execution of prominent individuals and partaking in thefts in Kenya.

Arguably, the initiation part of corruption and indiscipline in the Kenyan police service starts at the recruitment or selection stage. As would be discussed in this paper, over the years, every other recruitment process is riddled with bribery, nepotism and favouritism. This paper has linked rampant bribery and other unethical practices during police recruitments in Kenya over the last four years to high level of insecurity in the country. Through use of case studies, focus group discussions, interviews and observations, unethical practices is the root cause of insecurity.

b) Statement of the problem

Over the years, Kenya police has been attributed to all manner of negative assertions. In the year 2007, the police service was heavily accused for illegal executions of persons and group of persons perceived to be disturbing normalcy in the country. Specifically, the police was accused with extra-judicial killings of the Mungiki sect members in Nairobi and its environs. Such acts and many others preceding and afterwards has given local and international observers conclude that there is a lot of rot in the police force. Recently, the terrorism menace has increased, and so are runaway insecurity, conspired thefts, undemocratic disruptions of lawful demonstrations and picketing, and highly acclaimed corruption in the police force. In this regard therefore, the paper answers the questions; *does the rot and incompetence of the police service in Kenya stem from unethical practice during national recruitment exercises?*

c) Research hypothesis

In any organization in the world, staffing remains the single most important step of improving

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performance of an organization. In essence therefore, if a recruitment exercise is bungled, wrong people would be put into the organization, and such would be a starting point of a downward trend in terms of performance. The rot in the police service in Kenya can be attributed to the recruitment exercises; whereby, majority of those who make it to the police force pay their way in. In this regard therefore; *Unethical practices during national recruitment exercises of police force in Kenya has led to low performance of the service.*

d) *Research objectives*

1. To investigate the link between high levels of conspired thefts and low morale of the police force in Kenya.
2. To find out whether increased insecurity trends in the country is attributable to incompetence and unwillingness to stem it out.
3. To evaluate the trends in the recruitment exercises in Kenya and whether they are riddled with nepotism, bribery, tribalism and favouritism.
4. To link incompetence and poor performance in the police service to presence of individuals who do not have the passion to be in the service other than monetary gains.

e) *Research questions*

1. What are the attributes of the police service in Kenya in terms of their capabilities to stem out runaway insecurity, increased presence of outlawed groups and terrorism?
2. How is the police service in Kenya rated in terms of bribery during recruitment services and general performance?
3. How rampant is corruption or lack of it in the police force, and more so during the selection and recruitment of security personnel in Kenya.
4. What are some of the unethical tendencies that are attributable to recruitment of the police service in Kenya?
5. What links exist in the police service in Kenya in regard to incompetence of security personnel in Kenya and claims of unethical practices during national recruitment exercises of police service in Kenya?

f) *Assumption of the study*

This research is based on assumption that the tendencies of unethical practices that were noted in the selected case studies and reference points were representative of a wider trend in Kenya. The study also makes assumption that the selected respondents were not biased in the answers they gave, and that their views were representative of the whole of the professions they represented.

g) *The scope of the study*

This study was limited to the police service in Kenya. The focus was on the recruitment of police into

the police service in Kenya in the year 2014. The outcome is linked to the rampant rise of insecurity in Kenya for the past four years. Reports from various local and international sources have been used in this study to qualify the relationships between ethical or unethical practice during recruitments of police officers in Kenya and the performance, or lack of it for police service for the past four years.

h) *Ethical consideration of the study*

There are a number of ethical considerations that were made in this study so as to come up with a most representative analysis of the police in Kenya, and the link of poor performance to unethical practices during recruitment drives.

1. The policing profession is a most sensitive profession, and thus a lot of information gathered in the course of this study could not be included in this study.
2. Enough authority from relevant policing institution had to be consulted during the whole of the study.
3. As a matter of necessity, the results of this study had to be shared with relevant heads of various policing institutions in Kenya, and their views of whether to publish were sought.

II. LITERATURE REVIEW

a) *Introduction to Theoretical framework*

The focus of this paper is the strong links that exists between poor strategies in recruitment of people into an organization and resultant poor performance. Organizations all over the world take enough time in strategizing on how to get the right people in their organizations. This is because haphazard recruitment can result to having incompetent staffs and having people whose interest is not embedded on improving the performance of an organization. In this regard therefore, it is paramount to put measures and principles that are to be used during any recruitment exercise.

Specifically, this paper looks at how, Kenyan police service has over the years lost its glory in terms of performance, simply because their recruitment exercises are riddled with unethical practices such as bribery, nepotism, favouritism and tribalism. The literature review analyzes both theoretical and conceptual frameworks as a way of finding the strong link between performance of an organization, and recruitment exercises.

b) *Theoretical framework*

i. *Introduction to theoretical framework*

As underlined in this project, the focus is on the underlying relationships between poor performance of police in Kenya and the unethical practices that are rampant during recruitment drives. In this regard, unethical practices such as embedded discriminations, bribery, tribalism, favouritism and nepotism has been

studied to cause rising trends of insecurity and general poor performance of the police service in Kenya. This section looks at some of the core theories that help create this link. The following theories have been evaluated to create this link, namely; the retention theory, the attribution theory, implicit personality theory, the objective factor theory, the critical contact theory, and the subjective factor theory.

ii. *Retention theory*

This theory is most applicable in an organization setting, and concerns itself with the ability to hold employees in an organization. This is a most critical part of any organization; because, the ability to retain qualified employees in the organization makes the organization attain stability. According to Larson, Lakin and Bruiniks (1998), a well strategized recruitment process helps in building a good foundation of a company in terms of performance. More so, this is because the recruitment process will yield a good work base, which is highly talented and passionate about the working of the organization. Logan (2007) has also studied on how good management of Human Resource can help in attaining good retention of workforce, with the starting point of management being at the recruitment stage.

As expounded and understanding of this theory, it is clear that failure to strategize during recruitment can yield a bad workforce. Retention is mostly through good absorption, and if this is not capitalized during recruitment, stability of the company would be compromised. Logan (2007) puts it that Human Resource management starts at the recruitment point. If such an exercise is bungled, a company would be full of non-talented persons and those not passionate about what they are assigned to do. It is highly important to set good standards during the recruitment drive so as to have a workforce committed to the ideals and values of the organization, and for good retention capacity.

iii. *Attribution theory*

This theory helps in attaching some meaning to the behavior of other people, or even how people think. In explaining how people behave, internal attributions have to be evaluated, especially in personality traits. An environment or a situation can give a person a particular trait, which overall can give someone a defined attribution. According to Anderson (2001), an interviewee during recruitment must be evaluated on the kind of behavior he or she has. In this regard, if a bad behavior is recruited into the workforce, it means that the stability of the company and general performance are compromised.

Attribution theory is highly applicable in explaining low performance of the police service in Kenya. Attributions of individuals recruited into the police service can be driven either by motivation or by emotions. Mostly, it is recommended that individuals

absorbed into the police force are driven by motivation as opposed to emotions. Emotional driven attributions can encompass a need to make quick money, or a need for revenge. Such individuals would only lower performance of the police service as opposed to adding value. Corruption and other unethical deals during recruitment helps have such kind of attributions into the police, and as such should be avoided.

iv. *Implicit Personality theory*

Implicit Personality theory helps in defining biases and specific patterns that individual acquires when making a decision or an impression about something with low information on it. This theory was developed by Renato Tagiuri and Jerome Bruner in the 1950s when they considered some external impressions or traits developed by individuals (Cash, 2013). It is all about stereotypes that individuals develop towards something, and therefore, if a person with negative stereotypes towards an institution is recruited into an organization, such an individual can only lower performance of the organization as opposed to adding value to it. It is critical that when an organization is carrying out a selection and recruitment drive, factors such as passion to perform should be considered. Those whose main aims are material gains instead of contributing to value addition should be discarded at the recruitment stage.

All selection and recruitment methods should have utility and validity (London, 2001). It is important to be choosy during recruitment, with the criteria being on those whose ability to add value is high. However, when ethics are not considered, possibilities that are that individuals put into the workforce are limited in terms of ability to add value. Such should be the case whenever there is a recruitment drive of the police service. In most cases, with an example of the Kenyan police recruitment drives, acts of terrorism become rampant, and it is hard to determine whether those who have been put into the police service are capable of delivering and securing people.

v. *Objective factor theory*

Objectivity is an important consideration in any decision making process. By definition, objectivity means considering all sides of prevailing situations before coming up with an informed decision. As well, before an individual decides to work for a particular organization, he or she must have evaluated all possibilities and need of working for the organization. According to Christians (2012), most of the factors that are chosen by individuals wishing to work in an organization include the location, the levels of salaries or wages, the nature of work and opportunities present for growth. The theory suggests that individuals apply for a job mostly based on the attributes of the organization and the tangibility of the job (Christians, 2012). However, the issue of money has always come in, and a number

of individuals would do anything to be in the organization. Such a situation is highly prevalent during police service recruitment drives, where, individual would consider bribery as a way of getting the job.

vi. *Subjective factor theory*

As opposed to the objective factor theory, the subjective factor theory looks at the personality and the compatibility of a person with the image an organization is known for. It is also a very critical factor to be considered when choosing the company to work for. Wilson (2008) is of the view that an individual should first of all evaluate whether the company or institution he or she is wishing to join has the attributes he or she possess. For example, in the police force, not everybody has a sense of responsibility in securing people, and such people should not be allowed to be in the organization. However, in most cases, the people who are recruited are those who have 'bought' their way in, through favouritism, tribalism or bribery. Such a sad situation only begets low performance of the police force. In Kenya, over the years, rampant insecurity

tendencies have been reported, and not that the police service does not have enough resources, but individuals in this force lack compatibility with the service.

vii. *Critical contact theory*

This theory is relevant where the objective and subjective factors theories are not applicable. A person may lack information about a particular company. This theory asserts that an individual may lack critical differentiates of a various job opportunities prevalent and does not have significant contact with a company. Employment of such a person is mostly based on his or her presentation during the interview. Basing on the argument of non-performance in an organization, an individual who fails to understand what is needed in a job may fail to have significant contribution to it. As per the discussion, an individual may lack requisite knowledge about what is needed for a person getting into the police service in Kenya. Such an individual, even after intense training will still not add value to the service. Such individuals should be filtered right at the recruitment stage.

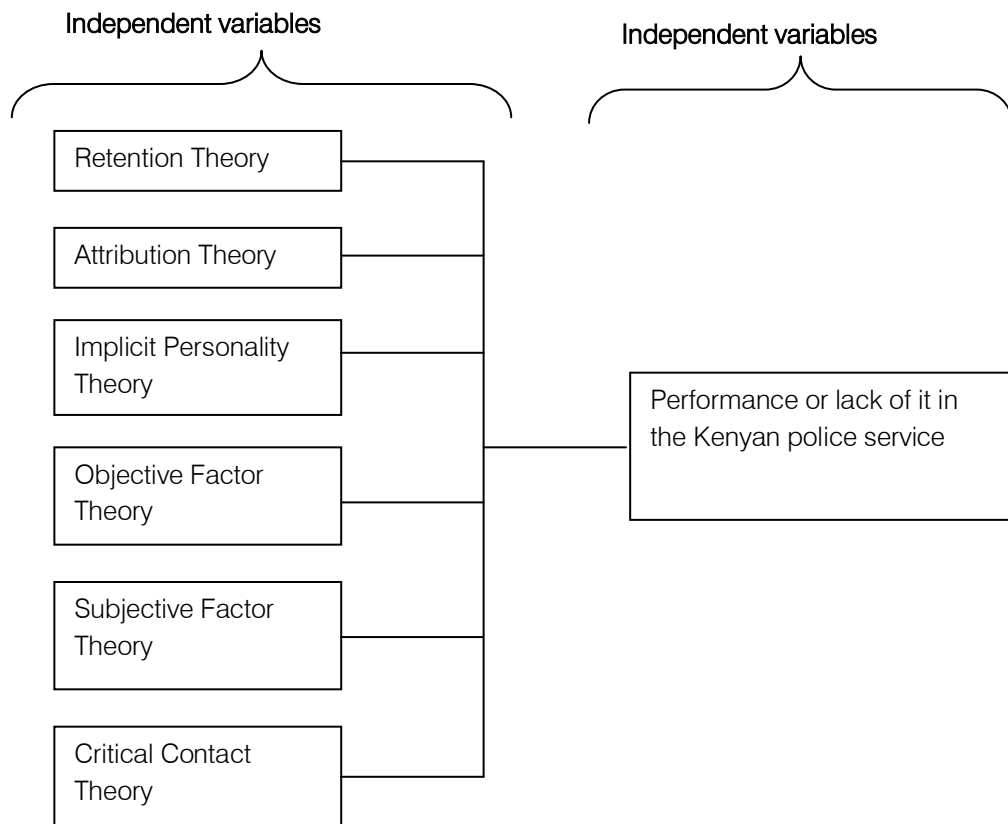


Figure 1 : Theoretical Framework

viii. *Ethical competency*

The concept of Ethical competency is the ability to identify an ethical problem and commit one to resolving it. Problem solving and reasoning are most critical in this concept. Ethical competency involves a lot of components, and which ought to be adhered to by recruiting individuals and those being recruited. First, he or she must have the competency of evaluation and fact gathering, where, there must be competency to collect as well as examine some relevant facts about a decision to be made (Watson, March 2013). Secondly, the individuals must have creative alternatives to solve underlying problems as well as make creative decisions. Thirdly, the individuals must be able to foresee some of the potential consequences that can result when some decisions are made, and as such, offer remedies before the consequences are realized.

Ndambuki (September 2001) in the report, *Public Service Competency Assessment Framework* in Kenya writes that all ministries and government institutions in Kenya must adhere to specified levels of competencies when recruiting individuals. Such is applicable in recruitment processes of the police service in Kenya, where, only competent individuals are absorbed into the police force. Failure to have such would result to a non-prepared police force that cannot tackle bedeviling problems of insecurity in Kenya. More often, these competencies are not applied; instead, a number of unethical practices such as corruption and favouritism are applied during police recruitment drives.

ix. *Commitment - self efficacy, education*

There is a strong link between good systems of high level performance practices at work places and the organizational performance. When the performance of practices is high, the resultant is a high performing organization (Huselid, 1995). High level performance of individuals takes commitment; and such is comprised with high level self efficacy and education. A well educated work force, and which has self efficacy means that the performance is high, and so is the performance of the organization. In essence, education and self efficacy are two components that have to be considered when recruiting individuals into the organization. Failure to do so means that the organization would be riddled with individuals who fail to comply with the values of the organization, hence low performance.

Commitment during recruitment drives has to be evaluated. The levels of self determination of individuals being recruited, and their education are utmost relevant for an organization. There are levels of education that are set for each and every other organization, whether private or public, and for a police force in Kenya, the standard is a specific KCSE grade. Other than the grade, it is utmost important to evaluate the preparedness of the individuals to undertake the hard tasks that characterize the police service, such as

securing the livelihoods of Kenyans as they go about their work. Any recruitment exercise should be devoid of other considerations other than the preparedness and education of the individuals.

x. *Year 2012*

The month of January 2012 saw the killing of a member of the Community Peace and Security Team, based in Hagadera camp. The attack also claimed a number of police officers. On March 10, 2012, six people were killed, while more than 60 got injured when a grenade was hurled at people in the Machakos bus station.

On 29th April 2012, God's House of Miracles Church, based at Ngara Estate was attacked, where one person died and more than 10 injured. On Tuesday 15th May 2012, three grenades were thrown at Bella Vista club in Mombasa, killing one person and injuring five. The militant also indiscriminately fired at people, killing one woman and injuring two night guards.

May 28, 2012 saw a blast go off within Assanand's House along Moi Avenue, injuring more than 25 people. Sunday 24th June 2012 had a grenade attack at a Jericho Beer Garden located in Mishomoroni Mombasa County, killing 3 people and more than 30 injured. July 1st 2012 had masked gunmen attacking two churches in Garissa killing 17 people and injuring more than 50; while one person was killed on 3rd August 2012 and six others injured in Eastleigh.

On 30th September 2012, a boy aged 9 years was killed by a grenade in a Sunday school along Juja road. Ten people were killed on November 18 2012 and 25 injured in Eastleigh, and on Wednesday 5th December, one person was killed in Joska area, Eastleigh.

xi. *Year 2013*

Amongst other security lapse incidences, the year saw the most tragic terrorism incidence when masked Al-Shabab gunmen stormed a popular shopping mall in Nairobi, the Westgate mall, killing more than 65 people, and injuring hundreds of people. This 21st September 2013 incidence is quoted as a major one, because it attacked a major area harbouring affluent people in the society, including foreigners. There were a number of other terrorist incidences therefore after; for example, on 13th December 2013, double blasts were reported in Wajir, a town on the North Eastern side of Kenya. The following day, a hand grenade was thrown towards a minibus in Eastleigh, where four people were killed and 36 others injured.

xii. *Year 2014*

A number of terrorists' attacks have happened so far. Notable areas which have been attacked are Gikomba, Likoni in Mombasa, Lamu/Mpeketoni, Pangani, Githurai and Eastleigh among others.

- c) *Case studies on ethical recruitment practices of police services, and performance*
- i. *Police Recruiting and Its Impact on Corruption: Report by E.M.U School of Police Staff and Command – Detroit Police Department Allen (May 2003)*

The report is a research project that was submitted by Lieutenant Daniel Allen of the Detroit Police Department in March 2007. The research report identified a number of flaws that are prevalent during hiring or recruitment practices in the cities put under research, namely; Detroit, Los Angeles, Cleveland, Chicago, New Orleans and Miami. The report qualifies a popular assertion that police are always vulnerable to corruption and mostly applicable during recruitment of the police personnel.

Mediocrity of the police force in the cities under study is seen to emanate from the recruitment process. When a police officer is recruited using dubious means, there will ever be temptations to engage in some corrupt deals in the course of working. Such practices mentor police personnel that it is okay to engage in corruption and other forms of unethical practice, and such can lower the performance of the police service. To end the trend, the chain has to be cut at the recruitment process. The recruiting individuals should not demand to be bribed by the new recruits as such a situation would corrupt the minds of the recruits.

- ii. *Baragoi: Failing Internal and External Accountability – Report*

The report dubbed, *Document – Kenya: Police Reform in Kenya: “A Drop in the Ocean*, published by Amnesty International evaluates a number of situations where the police service in Kenya has failed. More significant is the analysis of how failure to have internal and external accountability led to Baragoi killings of police trainees. The killings happened on November 10, 2012, and in that fateful day, Kenya woke up to news that more than forty (40) police officers lost their lives in Baragoi forest. This forest is surrounded by an arid area, mostly inhabited by Turkana and Samburu ethnic communities. The analysis of these killings pointed to a failure of lack of both external and internal accountabilities of the police force.

As put in the report, a number of reforms have been neglected in the police force, to an extent that there was no clear command system before the more than 40 newly recruited individuals were sent to face hardened bandits. The pointer is lack of accountability and a rot in the whole system of the police force. Up to the present day, those responsible of sending newly trained personnel to the forest, instead of experienced police have not been held accountability. It is a pointer of the depth corruption in the police service has gone.

- iii. *Corruption at The Kenya Police Airwing: A Mars Group Publication Mars Group Kenya (2007)*

The report by Mars Group Kenya alerted Kenyans of an attempt by the Government, and indeed the Kenya Police Airwing to overall some four Russian helicopters by a colossal amount of Ksh. 840 million. By any standard, such an amount is huge considering the helicopters were in operation for 9 years; from 1998 to 2007. Mars Group Kenya took upon itself to notify Kenyans of what the police service in Kenya is squandering money. The money is contributed by Kenyans, and so it should be used for the purposes it is intended. Such levels of corruption exist in the police service, and unless there are prudent measures to curb this, Kenya will continue losing millions and millions of taxpayers' money.

The report is critical of how corrupt the police service in Kenya is. Looking at the figures quoted to replace the four Russian helicopters, it is easy to understand why the police service in Kenya is said to be the most corrupt in the whole of East Africa. In essence, corruption starts at the recruitment stage, where, those being recruited are put through some unethical deals such as bribery, tribalism and nepotism among other negative vices. Possibly, all police departments in Kenya are corrupt. This begs the answer; *where does the vice start showing its head?* It can only be at the recruitment stage.

- iv. *EACC Report: Corruption and Unethical Practices in Countrywide Recruitment of Police Officers*

This report was prepared by the Ethics and Anti-Corruption Commission (EACC) and investigated various situations where corruption prevails during police recruitments in Kenya. The report looks a number of cases where individuals are exposed to corruption during recruitment of police officers. In virtually all situations, there are corruption tendencies, and the respondents give situations where they think that unethical tendencies are applied during recruitment. Overall, this report notes that unethical behaviours have social, economic, cultural and political effects. When corruption is practiced at the recruitment stage, the ripples effect is that the officers will carry on with the tendencies to their work places.

In one of the case studies, Chotara, a foreign student is conducting a research on corruption tendencies in the Kenyan military as well as the capacity of the military to carry out its duties effectively. He seeks information from Kerich Maarufu, one of the public officers stationed at the department, who attends to his requests. Chotara is not surprised that Kerich wants him to bribe him so that he can attended to. The astonishment is that the nature of information Chotara

was seeking did not require much commitment, but instead, he is required to 'give something' in exchange of information. Such is the sorry state of security departments in Kenya. Corruption tendencies are operated openly, and in any case, every other police officer or a military person feels compelled to engage in it because 'every other person is doing it.'

v. *Report: Corruption exposing Kenya to Terrorism – Experts*

Odula (May 29, 2014)

This case study looks at experts' evaluation of increased terrorism in Kenya and the link with the rot in the police force. According to Odula (May 29, 2014), there is a strong link between the deadly terrorist attacks that have happened over the years in Kenya and the deep rooted corruption in the police force systems. Odula (May 29, 2014) notes that the system graft is at the core of the inability of the state to respond to the terrorist attack and insecurity in general. John Githongo, one of the experts who gave their views in this report point to a well coordinated corruption network that is hard to break, unless there is commitment and will to cut the chain. As analyzed by Githongo, the country is paying heavily the price of corruption with the 'blood.' Terrorism acts in Kenya can be attributed to the rot prevalent in the police force, which starts at the recruitment stage. Indeed, if corruption is not started right at the initiation stage, police officers would not have guts to ask for bribes from terrorist and other criminals. Corruption in Kenyan police service is deeply embedded, and did not start a decade ago (Odula, May 29, 2014). The rot in national security started during pre-colonial era. Even then, police officers who were recruited by the colonial masters would ask for bribe or partner in crime for a fee. The ruling elite in the country are much aware of what happens in the police force, but are unwilling and not committed it. As put by Githongo in Odula (May 29, 2014), Kenya will continue to suffer from terrorism unless the mindsets of police officers are changed right at the start.

vi. *Kenya: Police Abuse Nairobi's Refugees – Human Rights Watch Report*

Human Rights Watch (May 29, 2013)

This report was prepared by the International Human Rights Watch Organization and highlights the depth of human rights abuse amongst police to the Nairobi's refugees. Refugees in Nairobi, who are under the watch of International organizations, have been subjected to torture and abuse by police officers, who are supposed to guard them. The Kenyan authority has failed to open investigations into the abuses. This is a pointer that the Kenyan authority collaborates in what happens in the refugees' stations. Unbelievably, the police officers engaging in such acts do not feel remorse, and unleash terror on the refugees. The refugees in Kenya have ever remained under uncertainties on whether they can be relocated to other

countries. More so, the torture they are subjected to is making them lose faith in Kenyan environment as a safe haven for their stay.

The abuse of refugees in Kenya, and especially Kenyan capital, Nairobi does not only involve beating up. Refugees, especially those who have come from the war torn Somalia are asked for money for their protection. Their wealth is stolen by the police manning them in areas such as Eastleigh area in Nairobi. At times, hundreds of police officers would descend on areas housing refugees and subject them to torture such as rape, beating, extortion and stealing.

vii. *Kenya immigration, Police take bribes, Vulnerable to terrorism: Guul Group report*

The Guul Group (May 29, 2014) produced a report that analyzes corruption at the Kenyan immigration points, the vulnerability of the country to terrorism and the tendency of police in Kenya to always taken bribes. A police officer in Kenya is willing to break ethics of the police service just to take a bribe. Such a bribe can result to huge damages such as building being brought down by terrorism. A terrorist is all aware of how corrupt the police officers in Kenya are corrupt, and thus can easily sneak a grenade into a building and blow it up. As put by Guul Group (May 29, 2014), Kenya may continue to see a string of terrorist attacks simply because there is unwillingness to end corruption in the system.

Al-Shabab continues to be blamed for terrorist attacks in Kenya. The terrorist group is dominant Somalia, but has found a good playing ground in Kenya. Despite having immigration points on the borders of Kenya, these terrorists still find their way into the capital city of the country. An immigration officer; probably because of how he or she was introduced during his or her hiring is willing to take a bribe from a suspected Al-Shabab individual so that the terrorist can sneak the bombs into the country. This level of corruption will continue to ruin Kenya if stringent measures are not undertaken. The rot in the police force can only be eliminated when individuals are being recruited.

viii. *Recruitment into Police Service – The State of New Jersey*

Journal by the Department of Law and Public Safety

The Police Service in the State of New Jersey has set stringent measures that have to be used during recruitment of police officers. The measures are outlined in the website, which serve as a guideline of what an individual wishing to be recruited into the police force must have, or should not have. Other than the common requirement an individual should have such as a right age; good level of education, American citizenship and the driver's license, those recruiting individuals must check the background information of the recruit. This is a unique set of recruitment, but which makes the police force in New Jersey worth emulating. Every other employment in the New Jersey police

service as a trooper must have compressive requirements, categorized under background information. Critical in these are; high levels of integrity, high levels of responsibilities, sound moral character, high level of dependability, reliability and be of sound judgment. These values are known when a person is taken through a number of interview steps. Recruiting individuals know too well that failure to look into these critical requirements would make the police service in New Jersey be riddled with corrupt individuals. The measures put in this police department are worth emulating. They can help stem out corruption and unethical practices.

ix. *Tackling Police Corruption in Kenya – IWPR Report*

This report was compiled by the Institute for War and Peace Reporting (IWPR). As written by Wanjala (August 6, 2013), the way to end corruption amongst police officers in Kenya is to have tighter discipline, better payment and instilling greater accountability. The report notes that corruption has double sides; those engaged and those engaged into. For example, a driver in Kenya roads knows too well that traffic police officers takes bribes, and thus such a mind has been inculcated into his or her mind, and is willing to give money to the police officer.

If corruption is to be terminated completely, Kenyan authorities must be willing and committed to fight it. If there can be greater accountability, police officers would fear to engage in corruption. If there could be stringent measures during recruitment, the recruited individuals would not get a mind that they can earn easy money when they start their work. It would take courage to ask for a bribe, hence improving commitment to work diligently. The resultant would be a high performing police force in Kenya. Various public and private organizations can combine efforts to fight the vice until it is completely stemmed out. It is the only way to put Kenya back to stability.

III. METHODOLOGY

a) *Introduction to Methodology*

This study was done to assess the relationship between corruption experienced during recruitment of police officers, and the overall neglect this institution has practiced in its core mandate of protecting people. In order to come up with a quality analysis, only qualitative approaches were done; as opposed to combining both quantitative and qualitative approaches. The respondents in this research were successful and unsuccessful recruits during the 2014 police recruitment drive, and selected experts. Case studies were used to qualify the relationship, while interviews, focus group discussions and observations were used to get quality information from concerned individuals.

b) *Research design*

This research project utilized descriptive research design, with a specific focus of qualitative approach. In this study, case studies, interviews, focus group discussions, and naturalistic observations were utilized. This approach was most favoured as it gave the researcher a clear direction to investigate the relationships of the variables. In this regard, the researcher was able to go to the field and take notes, as well as engage interested parties to discuss underlying issues of police recruitments and how unethical behaviours during the exercises are resulting to rampant insecurity in the country.

A number of case studies were selected, and which helped in qualifying the data collected on the field, through, interviews, quality focus group discussions, and observations among others. The case studies used concern high levels of corruption in Kenya, and how the trends in unethical behaviours stem from the starting stage of hiring/recruitment of police officers into police service.

c) *Research sampling*

Selective sampling method was chosen to get stations as places of studies during the recruitment exercise of 2014. These stations were; Kamukunji in Nairobi City County, Baricho in Kirinyaga County and Nakuru town in Nakuru County. It was important to use selective method of sampling in this study as it helped in getting maximum results. For example, in Nairobi and Nakuru Counties, the fact that the areas are cosmopolitans was critical in getting diverse views regarding the overall process. On the other hand, Kirinyaga County is in the rural areas of Kenya, hence, the expectations were that the researcher would get uniform data or information regarding corruption, or lack of it during the recruitment drive.

d) *Methods of data collection*

This research project utilized a number of methods of data collection. The chosen methods were found to be most suited, considering that the research design used is qualitative one. The methods of data collection in this research study included; focus group discussions, key informant interviews, participant observations, and case studies.

e) *Methods of data analysis*

In this research study, qualitative data analysis was used as a way of making significant meanings to the relationship of corruption during recruitment drives of police officers in Kenya, and resultant corruption and inefficiencies at work places. More specifically, this research employed the open and selective processes of qualitative data analysis. These methods were found to be important to this particular study as information gathered was categorized and then scrutinized to bring

about commonalities and the sense needed. Particularly, the analysis of data involved the researcher asking himself questions relating to collected

information, making critical comparisons and then looking for differences and similarities present in the information gathered.

IV. RESULTS AND ANALYSIS OF DATA

a) Data from Interviews

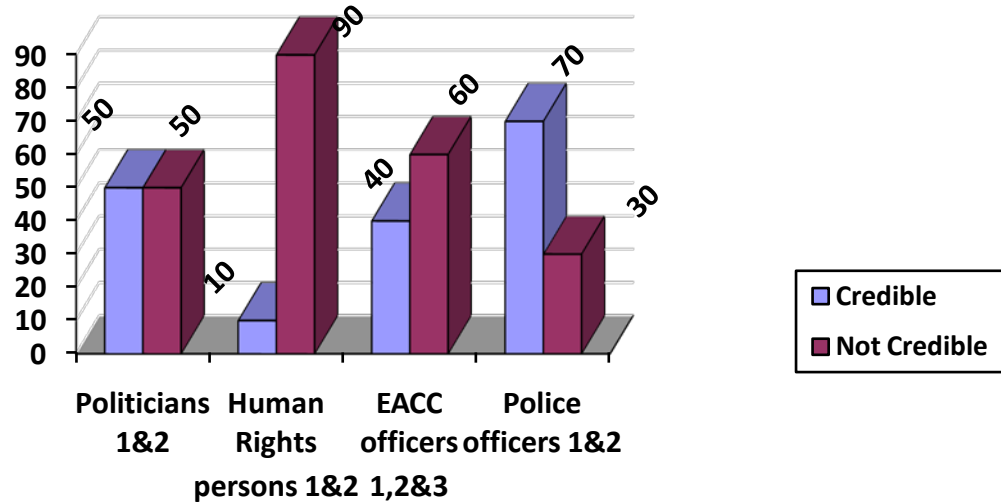


Figure 4 : Bar graph showing preferences of police recruitment exercises in Kenya

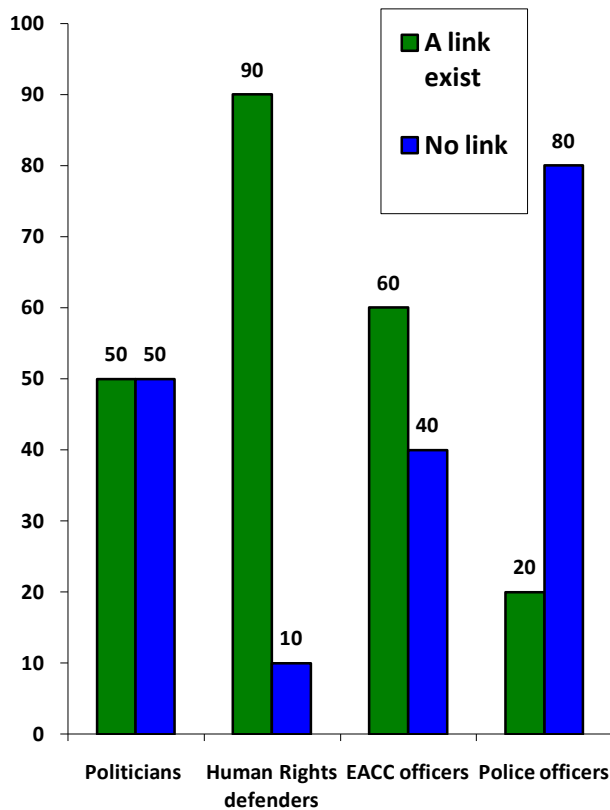
Table 1 : Table showing preferences of police recruitment exercises in Kenya

	Politicians	Human rights defenders	EACC officers	Police officers
Credible	50	10	40	70
Not Credible	50	90	60	30

i. Credibility of police recruitment exercises in Kenya

From the graph above, it is clear that preferences of the nature of police recruitments in Kenya vary. Specifically, it can be seen that politicians and the police officers do not see much of lack of credibility in the recruitment exercises that are done in Kenya. However, as can be seen from the responses of human rights persons and EACC officers, there is little credibility of police recruitment in Kenya. Going by the division in opinion from the interviews, it is clear that it is hard to deduce whether there is credibility or not. However, it is easy to separate the mind sets of those approving police recruitments in Kenya and those who do not. Essentially, the police officers and politicians are likely to favour the recruitments, but the human rights persons and EACC officers, whose opinions can be widely accepted, do not see much of credibility in any of the recruitment processes in Kenya.

ii. *Link between unethical behaviour during recruitment of police officers and the rot in the police force*



Just as analyzed above about the credibility of the recruitment exercises of hiring police officers in Kenya, the same opinions were replicated when they were asked on whether there is a link between the unethical behaviors witnessed during recruitment drives and low performance in the police force. While the human rights defenders and EACC officers noted of a link, the police officers and the politicians saw little link

Figure 4 : Bar graph showing link between lack of ethics in recruitment and performance of the police force in Kenya

Table 2 : Table showing preferences of police recruitment exercises in Kenya

	Politicians	Human rights defenders	EACC officers	Police officers
A link exists	50	90	60	20
No link exists	50	10	40	80

iii. *Unethical behaviors during recruitment exercises*

Table 3 : Table showing votes of unethical behaviours prevalent during recruitment of police officers in Kenya

	Unethical behaviours	Vote (out of 10) respondents
1	Bribery	10
2	Nepotism	7
3	Tribalism	7
4	Torture	4
5	Other forms of unethical behaviours	2

b) Data from Focus Group Discussions

i. Unethical behaviours during recruitment of police

A group of 5 individuals, 2 males and 3 females were picked by the researcher after the 2014 contested recruitment drive to discuss the outcomes of the exercise. From the discussion, it was clear that the exercise was marred by corruption tendencies, and the police officers were not shy to ask as high as Ksh. 150,000. The discussion also touched on the levels of tribalism that was prevalent, and mostly in Nairobi. It mattered who were in charge of the exercises, where, most of those picked were from the tribe of the police officer. It was clear that nepotism was practiced, and to some, the exercise was just for formality purposes. Instead, the names were picked even before the exercise started.

ii. The rot in the police force and the relationship with unethical behaviours during recruitments

The respondents in this method of collecting information were in agreement that what was exercised during the recruitment drive of the police was the reason behind low performance of the police officers in Kenya. Essentially, the participants noted that corruption at the immigration department as well as various police stations in Kenya was to blame for rampant terrorist attacks. The group wondered how a person can go ahead to commit a crime just few metres from a police station. The group noted that if the trend is not cut in earnest, it would be hard to fight crime in this country. Those who are being recruited into the police force are shown in those early stages what the police force is commonly known for; corruption. If an individual can agree to pay as much as Ksh. 150,000 to get recruited, little can deter him or her from asking for a bribe from a criminal. The trend has to be ended, and it has to be now.

c) Data from Observations

The researchers were stationed in three major areas of recruitment; Kamukunji in Nairobi County, Nakuru town in Nakuru County and Baricho in Kirinyaga County. The researchers were able to pick a number of observations, which qualified the assertions that the rot in the police force in Kenya stems right from the first stage of having individuals into the police force. In Nairobi for example, very many youths were turned away, despite appearing to qualify on all areas. It was not very clear what extra the recruiting police officers were checking other than external features, academic qualifications and medical requirements.

Some of the individuals who were turned away lamented favouritism. While investigating from a distance, the researchers were able to note disturbing incidences, where, an individual who fails the required height was qualified and those whose height are way above the required were dismissed. In Kirinyaga, there

who did not even participate in the race, and were qualified to the last stage before final picking. The favouritism was widespread and not limited to the three counties under study.

d) Data from case studies/reports

i. 2014 recruitment exercise

As reported by Citizen TV on July 19, 2014, the Kenyan investigative body, EACC came with a report that summarized the police recruitment drive as characterized by corruption and other unethical behaviours. The commission noted that it had credible evidence showing that the police recruitment was highly marred by corruption, and thus recommended that the National Police Service nullify the entire process. It also recommended that those responsible be held accountable.

ii. County bribery – the Standard

The Standard Newspaper of November 13th 2013 as written by Geoffrey Mosoku noted that Uasin Gishu County topped as the most corrupt regional government in the year 2013. This information was contained in a report on national Survey on Corruption and Ethics 2012. Other counties in the top list included Embu, Samburu, Nairobi, Meru, Nyamira, Tharaka-Nithi, Narok and Mombasa. Those counties least with corruption incidences were Baringo, Marsabit, Taita, Busia, Turkana, Vihiga, West Pokot, Isiolo, Siaya and Taita Taveta. In Baringo alone, the average bribe is Ksh. 20,075, Kirinyaga Ksh 15,914 while Nakuru is Ksh 8,466. This is a clear show of how corruption in the police departments across the country is prone to corruption. The creation of counties was meant to devolve development to regional areas; however, this has been seen to even devolve corruption especially amongst police departments.

iii. Westgate Mall Attack – Corruption and Ineptitude in the police service

September 2013 was a tough month for Kenyans as the country realized how terrorism can cripple the economy of a county. However, what did not come to into light for many Kenyans is how corruption and ineptitude led to the attack. According to the report produced by the National Assembly of Kenya, the investigating arm of the government had warned of an impending attack, but the information was not acted upon. The highest probability is that somebody at the top of command did not want to act on the information; with the results being the 21st September 2013 Westgate attack. Virtually every day, there is insecurity incidences reported. These ranges from road carnage on our roads, violent robberies, heist thefts among others. These are good pointers of how the country is unsafe despite having significant number of police officers in Kenya.

IV. RECOMMENDATIONS AND CONCLUSION

a) Introduction

This study has studied a possible link between the ethical or unethical practice during recruitment of police officers in Kenya and the performance, or lack of it in regard to security of people in Kenya. The choice of this area of study was significant as it roots out the underlying problem that has been witnessed over years in Kenya during recruitments. Those exercises in Kenya are always prone to unethical practices. This study analyzed this link and concluded that the unethical practices have resulted to high level of insecurity in Kenya.

b) Conclusion

Ethics require individuals to uphold values that are set by various professions. Those in the police force are required to adhere to certain terms of work, including not engaging in corruption. The vice is the evil of everything good going bad, including insecurity in Kenya. It has been noted that the rot in the police force starts at the recruitment stage, and therefore, to end it, it is upon all involved to uphold ethics and redirect energy to fighting insecurity

c) Recommendations

As has been studied, corruption is seen to stem right from the recruitment stage. Corruption as a form of unethical practices should not be allowed to be initiated at the recruitment stage. As a way of ending the vice, it is recommended that relevant authorities make stringent measures to hold accountable those who are seen to engage in corruption. Both the recruiting police officers and the individuals being recruited should be charged with abuse of office and corruption. Any form of corruption is bad and should not be tolerated.

Secondly, it is prudent that the government of Kenya should design a good programme that would educate aspiring police officers of how to uphold ethics during recruitment and after they are absorbed into the police force. Such a programme could include holding seminars for all interested before they undergo the recruitment exercise, and another one for the ones who have qualified to become police officers. Such a programme would ensure that ethics are upheld everywhere, and it would be a way of ending corruption once and for all.

d) Suggestion for further researches

This research study did not cover all sectors of insecurity in Kenya. In the course of the study, a number of other factors emerged as resulting to rise of insecurity in Kenya. The following are suggestions for further researches:

1. The role of motivation for police officers in Kenya in stemming out insecurity

2. The role of technological use in East African police services in fighting new faces of terrorism in East Africa.

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Economic Determinants of Domestic Investment: A Case of Pakistan

By Amer Sohail, Umer Rehman & Muhammad Azeem

University of Sargodha, Pakistan

Abstract- The study intends to investigate the determinants of gross domestic investments in Pakistan from the period of 1973 to 2010. All the annual time series of data have been extracted from the valid sources like; *Business Recorder and State Bank of Pakistan*. In order to assess their behavior over the time, and to evaluate how these variables have either hindered or encouraged the growth of investment in Pakistan's economy. Domestic investment in Pakistan is stimulated by real GDP growth as well as with the expansion of exports of goods and services. Moreover, the flow of FDI in Pakistan is "crowd in" domestic investment. The development of financial sector and human capital is vital for economic escalation in country. However, the stimulation in formal credit and formation of industrial capital may lead towards promulgation in domestic investments. The Pakistan's economic environment demands massive level of domestic investments which lead towards capital formation and economic progression.

Keywords: *domestic investment, foreign direct investment and economic growth.*

GJMBR-B Classification: *JEL Code: M50, P36*



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Economic Determinants of Domestic Investment: A Case of Pakistan

Amer Sohail ^α, Umer Rehman ^σ & Muhammad Azeem ^ρ

Abstract- The study intends to investigate the determinants of gross domestic investments in Pakistan from the period of 1973 to 2010. All the annual time series of data have been extracted from the valid sources like; *Business Recorder and State Bank of Pakistan*. In order to assess their behavior over the time, and to evaluate how these variables have either hindered or encouraged the growth of investment in Pakistan's economy. Domestic investment in Pakistan is stimulated by real GDP growth as well as with the expansion of exports of goods and services. Moreover, the flow of FDI in Pakistan is "crowd in" domestic investment. The development of financial sector and human capital is vital for economic escalation in country. However, the stimulation in formal credit and formation of industrial capital may lead towards promulgation in domestic investments. The Pakistan's economic environment demands massive level of domestic investments which lead towards capital formation and economic progression.

Keywords: domestic investment, foreign direct investment and economic growth.

I. INTRODUCTION

Domestic investment is a tool for measuring the level GDP. It is an important component of GDP which is used for future productivity of an economy. It includes both replacement purchases plus net additions to capital assets and investments in inventories. The gross domestic investment includes three types of investments like; non-residential investment, residential investments and change in inventories. In Pakistan, the trend of capital formation through these three means is negligible therefore there is harsh need to investigate what are the basic determinants of gross domestic investments in Pakistan. Recently, the empirical evidence suggests that the fastest growing countries are the biggest FDI-host countries and resultantly the domestic level of investment creep up (Fabry & Zeghni, 2002). The attention has been changed from FDI to domestic investment which is the real leader of economic growth after the financial crisis in Asian countries. Whereas, few researchers have questioned that how did domestic investment increase in some developing countries and did not in others, in particular, what causes domestic investment and what retards it. So, it is an important issue to address for a country like; Pakistan that is characterized by high unemployment, poverty rates, lack

of capital formation and demolishing financial markets. Policy makers and scholars are in rush to identify, what are the factors that are important in determining investment process. The study intends to investigate what are the determinants of domestic investment in Pakistan. Because, Pakistan's economy is suffering for lack of indigenous resources, which are relevant for surge in economic progress of a country. The study contributes to the existing literature in the following ways: first, in most of the existing studies FDI has been considered as major predictor of economic growth whereas less emphasis has been given to domestic investments. So, this study bridges this gap by exclusively considering the role of domestic investments in economic growth. Secondly, most of the empirical studies have been carried out on the direct relationship between domestic investment and its determinants in developing countries but remained inconclusive. Because, the scholars have focused on the impact of determinants like; short and long run respectively. However, in this study OLS regression has been used, the technique will not only identify the direction of the relationship but will also measure the magnitude of the relationship. Finally, this research has been conducted following the recent economic reform efforts in Pakistan like; involving the economic liberalization for both domestic and foreign investment, financial developments, leveraged industrial policies and most importantly after the massive social-economic changes in region.

II. LITERATURE REVIEW

In the last 40 years, we were checking the relationship between saving and foreign capital flow. In this research, our aim is to identify the role foreign capital as substitute or complementary. There is the massive debate on empirical and theoretical levels. The dependency ratio also affects the foreign capital inflows and saving rate. This is a very interesting topic and more attractive for study in developing countries (Khan,1992). Having focus on factors that affect savings in Pakistan. In this article, they conclude that bad effect of foreign capital on national saving in Pakistan. In 1970's, declining period was started for Pakistan but saving was increasing in South East Asian countries (Hussein, 1995). The trend of private saving compared with the private saving of south East Asian countries by using co integration techniques probed by different studies. Some other factors also influenced the long run

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evolution of saving like; wealth, public sector debt and so on (Khan, H, 1997). The attitude of developing countries toward foreign direct investment has emerged, but the sentiment is weaker for Pakistan. Policies are very weak in Pakistan for inflow of foreign direct investment. Private investment playing a crucial role in many developing countries especially in Pakistan. As, Khan & Khan, (2001) analyzed the determinants of private investment with the help of ARDL technique. They probed the relationship between long and short run investment that exist in Pakistan's environment. Foreign capital inflows are substitute or complementary the researchers have proved that. In Pakistan the impact of FDI have long run impact on investments (Ahmed & Ahmed, 2002). The contribution of domestic investment

to the economy has been debated extensively over the years. These debates help out of developed and under developed economies. So, the most relevant material is put in this research of domestic investment which are reducing the spread of poverty in our economy.

III. METHODOLOGY

The data has been derived from SBP and business recorder of Pakistan for the period of 1973-2010. The regression and correlation techniques have been applied to conclude the results. In this line of research, in most of the studies a subset of the following variables (among others) as the exogenous variables in the domestic investment equation: FDI, exports and money supply.

$$GDI = 0 + 1 Gr + 2 FDI + 3 FI + 4 H + 5 Cr + e \dots \dots \dots 1$$

Where: GDI, Denotes domestic investment (net of FDI)

Gr, Denotes the growth rate of real GDP,

FDI, Denotes foreign direct investment as a ratio of GDP,

X, Denotes the exports of goods and services as a ratio of GDP,

FI, Denotes financial intermediation as calculated by M2 as a ratio of GDP,

Table No : 01 Details of Variables

Variable	Description of the Data	Source
Gr	Growth rate of real GDP	SBP
FDI	Foreign Direct Investment as a ratio of GDP	SBP
GDI	Gross Domestic Investment as a ratio of GDP	SBP
FI	Financial intermediation proxied by M2 /GDP	SBP
X	Export of goods and services as a ratio of GDP	SBP

The details of the variables have given in table no 01 along with proxies and sources of data from where the data set has been extracted.

IV. RESULTS

In this section the results of the study have been presented in different tables. It is a co-relational study; in order to go for regression analysis the properties of data

should be examined. The descriptive statistics have been presented in table no 02 which show that most of the variables have normal standard deviations which indicate that there is less variation in time series of data. The coefficients of skewness and kurtosis also indicate that all the time series are normal and appropriate for regression analysis.

Table No : 02 Descriptive Statistics

	Export as a %age of GDP	FDI as a %age of GDP	GDI as a %age of GDP	GDS as a %age of GDP	Imports as a %age of GDP	M2 as a %age of GDP
Mean	0.539421	0.021439	18.19572	11.11167	0.896660	0.419954
Median	0.550478	0.019499	18.31845	10.54257	0.755789	0.406806
Maximum	1.191845	0.059260	22.52262	18.10428	2.024221	0.508111
Minimum	0.131507	-0.007151	12.81189	3.998153	0.234898	0.297474
Std. Dev	0.303847	0.013568	1.980600	4.374095	0.589840	0.053139
Skewness	0.454862	0.923387	-0.326181	0.029857	0.501691	-0.191701
Kurtosis	2.223062	4.361356	4.376912	1.675265	1.847894	2.262416

The properties of data further analyzed by using pair-wise correlation analysis, its results have been shown in table no 02. The coefficients of correlation between predictors clearly indicate that there is not any serious problem of multi-coliniarity and auto-correlation in response variables. However, few variables have shown the concerns for multi-coloniarity and auto

correlations like; exports to GDP, imports to GDP and M2. Moreover, this much of correlation between the above said variables can be justified because these are the macro economic variables which have collective movements in response to external shocks. Overall, the data is appropriate for regression analysis.

Table No : 03 Correlation Analyses

	FDI as %GDP	Exports as %GDP	GDS as %GDP	Imports as % GDP	M2 as %GDP
FDI as %GDP	1				
Exports as %GDP	0.4873	1			
GDS as % GDP	0.2704	0.4308	1		
Imports as %GDP	0.3713	0.4053	0.4661	1	
M2 as %GDP	0.4340	0.6621	0.3235	0.5285	1

In order to investigate the relationship between the variables, regression analysis has been applied, and its results are reported in table no 04. Balance of trade, money supply and gross domestic savings are the important determinants of domestic investments. The results of the study indicate that there are the positive and significant relationships between gross domestic investments with respect to foreign direct investment, gross domestic savings and money supply

in country. It has been probed that as the foreign funds will move in, the level of domestic investments will also creep up. There are the two approaches to address this phenomena, the formal one narrates that as the MNC'S (Multi-national Corporations) will flourish in country the auxiliary industries will also charge in with the local funding. However, the later one suggests that the confidence of local investor boot up as he finds the international investors in country.

Table No : 04 Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	99.00018	17.51985	5.650743	0.0000
EX	4.325702	1.561064	2.770996	0.0092
GDS	0.136654	0.089891	1.520229	0.0383
IMP	-3.436955	1.042692	-3.296233	0.0024
M2	6.859344	5.835457	1.175460	0.0485
C	10.92578	2.559829	4.268167	00.0002
<hr/>				
R-squared	0.735496	Mean dependent var	18.19572	
Adjusted R-squared	0.694167	S.D. dependent var	1.980600	

Moreover, exports have positive relationship with domestic investments, which implies that, the expansion in exports followed by increase in domestic production. The returns of exports are more than sale within country. So, the domestic producer become active as he finds international demands for product in order cope rich returns. Additionally, the negative relationship with imports reveals that massive inputs from off border may curtail domestic production and may losses the confidence of local producers.

V. CONCLUSION

The study intends to investigate the determinants of gross domestic savings in Pakistan from the period of 1973-2010. All the annual time series of data have been extracted from the valid sources of data like; *business recorder and state bank of Pakistan*. In order to assess their behavior over time, and to evaluate how these variables have either hindered or encouraged the growth of investment in Pakistan's

economy. Domestic investment in Pakistan is stimulated by real GDP growth as well as expansion of exports of goods and services, domestic savings and foreign direct investments. Moreover, the flow of FDI to Pakistan is "crowd in" domestic investment but with the more magnitudes than GDP growth and exports expansion. The development of financial sector and human capital is vital for economic escalation in country. However, the stimulation in formal credit and formation of industrial capital may lead towards promulgation in domestic investments. The Pakistan's economic environment demands massive level of domestic investments. As for as the concern of economic determinants, the study has tried to cover all most all aspects of economic determinants, but the local environment demands to probe some other cultural aspects. In Pakistan, our social values are quite different from the developed part of the world which drives the spending and saving balance of any individual and entity. Consequently, further studies should try to include some socio-graphic values as determinants of gross domestic savings along with economic determinants in studies.

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Independent Fiscal Institutions in the Countries of Eastern-Central Europe

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Abstract- Improving the efficiency of budgetary management and preventing overspending that secedes from performance, are fundamental budget stability conditions and issues of strategic importance. „Rule-based” budget means more than merely a stipulation that public finance managements shall observe the rules of budget planning and execution and that the real and budgetary sectors of the economy are characterised by the rule of law. Rule-based budget requires the employment of numerical and procedural regulations by institutionally ensuring their respective observance. Regarding the latter we can declare that in Eastern and Central Europe the interest has grown recently for fiscal councils that have been shooting up like mushrooms and are believed to be almost like “the ultimate weapon” in fighting budgetary overspending. The demands for creating such new institutions at the same time undeniably represent criticism concerning the former processes of the planning mechanisms and their respective institutionalised solutions. This paper aspirations to provide a picture as regards to what extent can fiscal councils be regarded as a new type of organisation within the family of independent fiscal institutions (IFIs), that reflect institutional development and, in the public law of the new democracies having accessed the EU following 2004, mean the best solution to be recommended, i.e. the „best practice”.

Keyexpressions: *fiscal policy, crisis management, debt management, budgetary stability.*

GJMBR-B Classification: *JEL Code: B15, E62, H15, H61, H63, L38*



INDEPENDENT FISCAL INSTITUTIONS IN THE COUNTRIES OF EASTERN CENTRAL EUROPE

Strictly as per the compliance and regulations of:



Independent Fiscal Institutions in the Countries of Eastern-Central Europe

The Hungarian Case

Prof. Dr. Árpád Kovács

Abstract– Improving the efficiency of budgetary management and preventing overspending that secedes from performance, are fundamental budget stability conditions and issues of strategic importance. „Rule-based” budget means more than merely a stipulation that public finance managements shall observe the rules of budget planning and execution and that the real and budgetary sectors of the economy are characterised by the rule of law. Rule-based budget requires the employment of numerical and procedural regulations by institutionally ensuring their respective observance. Regarding the latter we can declare that in Eastern and Central Europe the interest has grown recently for fiscal councils that have been shooting up like mushrooms and are believed to be almost like “the ultimate weapon” in fighting budgetary overspending. The demands for creating such new institutions at the same time undeniably represent criticism concerning the former processes of the planning mechanisms and their respective institutionalised solutions. This paper aspirations to provide a picture as regards to what extent can fiscal councils be regarded as a new type of organisation within the family of independent fiscal institutions (IFIs), that reflect institutional development and, in the public law of the new democracies having accessed the EU following 2004, mean the best solution to be recommended, i.e. the „best practice”. This non-exhaustive overview deals with the course of the independent budgetary institutions of those Eastern-Central European countries that accessed the European Union in 2004, respectively their mission and concept of an institution, while it also refers to the role of these organisations in crisis management.

Keyexpressions: *fiscal policy, crisis management, debt management, budgetary stability*

jel - code: *b15, e62, h15, h61, h63, l3*

I. THE FRAMEWORK OF RESPONSIBLE FISCAL POLICY: THE SO-CALLED RULE-BASED BUDGET AS THE PRECONDITION OF WELL GROUNDED PLANNING

When we scrutinise public discourse or even technical articles, the abundance with what the various political and professional opinion leaders tend to deal with the newly established *fiscal councils*' public law inclusion, their independence, the method of putting across their resolutions and

institutional-personal competence compared to their functions in Central-Eastern Europe, is striking. At the same time less attention is being paid to the fact that fiscal councils were created thanks to the introduction of the system of the so-called *rule-based budgetary framework*¹ as one of the *possible institutional guarantees*. Now, this institutional guarantee though cannot always and in every country be tied to a fiscal council type² organisation. As a matter of fact, far from it. Fiscal councils belong to the family of independent fiscal institutions (IFI). In the system of rule-based budgetary framework *institutionalised rule watching ability is important* and in the individual countries *this can be implemented by lining up different means of public law, relying on different values of trust and authenticity (power), with public law tools (or even without them)*. The token of *fulfilling this institutional guarantee role* does not require by all means and in every case a brand new organisation that, *is independent also from other institutions*” and that is relying mostly on its own professional background.

Namely, the *power* of the guarantees can be explained only together with the rules implemented with the purpose of ensuring the stability, the sustainability and the prevention of overspending of the budget, with the fiscal system and the characteristics of the governance of the country in question. Now, such service became or could become a useful part of a more well-founded fiscal policy and its annual implementation, as a logical consequence of a system or rules and by ensuring a better harmony of demands and possibilities, to thus establish a budget planning that serves stability.

All the above make up the concept that regards fiscal councils as a certain institutional development phase within the IFI family. At the same time it is also true that in case of given conditions – for example loose budgetary discipline, problems regarding the well-grounded character of governmental planning, suspicions regarding the existing, independent organisations, etc. – this institutional solution might be the best.

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II. INTERPRETATION OF RULE-BASED FISCAL POLICY AND GENERAL REASONS OF INTRODUCING SUCH POLICY

„Rule-based fiscal policy” is more than the mere regulated procedure of preparing and executing of the central budget. Namely, in this approach, it means that among the possibilities offered by the social-political heritage of a given country, the framework of the employed budgetary responsibility is realised via the so-called numerical rules, procedural and transparency stipulations, as well as the supervisory and sanctioning regulations related to the balance/stability of the budget³.

Prior to the outbreak of the 2008 financial crisis they expected that by resorting to this system, the tensions of the balance can be confined and conditions of sustainable financing, growth and sustainable development can be maintained. They hoped that the trend that was embodied in budgetary overspending, the unsustainable budget and the growth of public debt in the past two decades in a line of upcoming and developed countries, can be reversed. (*Oblath-Szapáry* [2006]).

The lessons of the crisis complemented this „classical function” with the conviction that rule-based fiscal policy can be one of the tools of crisis management (*Reinhart-Rogoff* [2010], *Kovács Á.* [2013]).

So, the introduction of rule-based budget had and has general – let’s say - *reasons that are directly related to professional budget management and harmonisation of social interests that – in case of their prevailing for a longer period – serve the purpose of mitigating the inclination for crises*⁴

When preparing the budget, depending on the legal structure of the given country, its traditions, the centralisation of its governance, etc., they have to handle several tens of thousands, or even a hundred thousand data, modelling their interrelations and relations, examine their financial „bridges”, project their effects, etc. Understanding the processes, digesting masses of information about short or longer-term external and internal social-economic obligations, conditions, choosing political value to be followed by *transforming them into numbers of the budget* is difficult, even by using the latest IT and model making tools. Then, drawing the right conclusions is even more difficult and demands even more time as the outlines of the immediate and more distant risks are not equally tangible and excluding the objectivity of those participating in the procedure is also difficult. All the above indicate that wider groups of the society (the voters) and the political governance chosen by the voters articulating their interests and values, might

overrate the importance (use) of direct expenditures (within one year or, at most, within the election cycle), while they might underestimate the burdens in the long run.⁵ It was because of the above that the cyclic character of budget procedures has strengthened while short-term interests have been playing an important role among its motivations. The aspiration to maximize votes are related to elections (promises) or – more precisely – they resort to „*asymmetrically employing the originally Keynesian concept of the so-called anti-cyclic economic policy* [serving the purpose of keeping the power – Á.K.] and thus intensify the aspiration⁶ and sooner or later it leads to the disruption of the public finance balance (*Antal* [2004], *Györffy* [2009], *Muraközy* [2011]). As to the double goal (budgetary and real economy) of introducing rule-based budget, we can say that, *in case it is functioning appropriately*, the system creates not only a clearer legal framework for the functioning of the budgetary (public finance) economy but,

- it changes, or – at least – mitigates – the inclination to budgetary overspending and strengthens visionary thinking and the harmonisation of interests;
- lays the foundation for a better medium and longer range budget planning, promotes the modernisation of the IT systems, contributes to the improvement of financial work and, additionally, it generally serves the transparent and accountable budgetary thinking by making the system of respective rules more transparent;
- it also makes it clearer and easier to follow the decisions and their respective consequences for the parliament that exercises the right of preparing the budget. It offers appropriate knowledge for the decision maker at all levels regarding the further, future consequences of today’s decisions and the existing determinations;
- contributes to improving the opinion about the country, even in the short term. Beyond the more favourable financing conditions it would strengthen competitiveness, as stable budget generally encourages foreign investors;
- inspires quality developments and, at the same time, compels economic management as it creates the possibility for reserves and surpluses of the operational appropriations that are necessary for incoming developments also appear in the yearly budget plans. It creates the possibility to make more secure development plans of a wider horizon, together with accounting with the expenditure consequences of the implementation.

The essential elements of rule-based budget policy are the following:

- *budget policy rules* that determine the targeted balance goals and the planning requirements

serving these purposes – for example, the balance of the revenues and expenditures without debt service (in other words, the primary budget balance) shall not be negative or, public debt in the percentage of the GDP shall not grow,⁷ or that investments shall represent defined proportions⁸ (Kopits [2010]);

- *procedural rules*, that ensure budgetary discipline and transparency (for example, impact assessments and advisory power obligations);
- *transparency norms* (for example, accrual based accounting, financial reporting system);
- *institutional guarantees* to ensure the observance of the budget policy and procedural rules that are embodied in the existence of institutional functions ensuring the control and transparency of the processes. Here belong the independent budgetary institutions that watch the observance of the rules while they might take different forms and names, be of different legal background and jurisdiction, have different professional backgrounds⁹ (office connected to the legislature, the SAI, or fiscal council, planning office that is independent from the government, independent fiscal council, etc.)¹⁰ (Kopits [2011], [2012], [2013], Török [2011a], [2011b]).

A budget made in such a framework and the financing that is built on it, involves the better harmony of the tasks and resources (Kopits [2013]). Now, this makes the issue of „smaller or bigger public finance” not only easier to interpret but also promotes the easing of the contemporary problems, the transparency and accountability of budget planning and management. Once they introduce the fiscal regulations on the basis of internal consensus and not because of external pressure, thinking ahead for several cycles will be possible.

III. SOLUTIONS OF „RULE-BASED” FISCAL POLICY IN THE PRACTICE OF EAST EUROPEAN EU COUNTRIES

As we have outlined it in the above, *the proactive introduction of rule-based fiscal policy* – serving also the longer term balance interests of the budget – tries to *prevent the expansion of the mechanism of short-term interests*. In the majority of the older members of the EU (E-15) and, from among the „newly” accessed countries, in Poland, Latvia and Bulgaria basically it can be attributed to such proactive motivation that this or that form of the rule based fiscal policy (the guarantee conditions thereof) appeared a decade earlier.

The financial crisis, followed by economic recession and the ensuing loss of resources created difficulties in all EU member states. *However, it was an especially big threat to the sustainability of fiscal policies*

in those countries where the lasting unsustainability of economic performance and consumption was weak, where the social entitlement system functioned in an outdated structure, being wasteful and lacking resources at the same time and, where competitiveness in its complex sense was also weak (Báger [2010], Kovács Á. [2013])¹¹. Up to the outbreak of the financial crisis in the EU countries budget deficit was more or less restrained – with the exception of Hungary. Following the outbreak of the crisis however, the budget overspending that marked the seceding of the budget and economic output and submitted it to short-term political goals, practically became a general phenomenon. In the less competitive countries of the European Union, in the Southern countries that had accessed the EU *earlier* and, in Hungary *that was suffering from fiscal alcoholism*^a, they justified this practice by the false argument of thus maintaining social peace.

Most of the Eastern-Central European countries having accessed the EU in 2004 or after however did not have such problems (Ódor-Kiss [2011]) mostly, because they spent far less for welfare purposes than the EU average and were not burdened by heavy debts. Estonia, Poland Latvia, Lithuania, Slovakia and Bulgaria¹² belonged to this group of countries. Although, as regards the functioning of the welfare systems in the Czech Republic and primarily, the situation of Slovenia were more similar to that of Hungary, thanks to their relative level of development and strong economic relations with the so-called core countries of the EU, as well as their low level of indebtedness prior to the 2008 crisis, they did not belong to the group where financing public finance was facing any dangers. Now, the situation of Rumania and Croatia was different. Although the latter countries could not be characterised by the high level of welfare expenditures, their significant indebtedness *resulted in a compulsion to act, as the tensions in financing and the consequences of their respective indebtedness* have emerged even more forcibly under the circumstances of the crisis.¹³

It was the result of the aforementioned differences that in the Eastern-Central European countries of similar fate that the demand to introduce a system of rule-based budgeting *appeared at different times* (Székely [2010], Jankovics [2012]). There were some where – let’s use the term - foresight¹⁴, in others the force of indebtedness¹⁵ led to the introduction of the rule-based budget system and there were others again where, thanks to the traditionally balanced budget, no such political and professional need emerged¹⁶, like in the Czech Republic.

^a The notorious and smart definition by György Kopits about the sudden changes, i.e. first committing budgetary laxities then employing rigour, and the inclination to act so.

After the accession, when the Maastricht criteria were applied also to the Eastern-Central European countries, we can regard those also as an obligatory and uniform application of „numerical and procedural rules”. Thanks to the intention to observe these rules and the various EU controls, beginning with 2004 the public finance management discipline has gradually improved in the new EU member states, even if not to the desirable extent, with the exception of Hungary.

Even in the years prior to the crisis, countries attempting – with more or less success – to reach the Maastricht reference lever of 3% or below (Poland, the Czech Republic, Slovakia and Slovenia) made less consolidating steps and were mostly following the philosophy that with the passing of the crisis, the fiscal position will automatically improve. The majority of their measures were targeted to the mitigation of the unfavourable consequences of the crisis on the real economy; this is very similar to the economic policy followed by most of the old member states (Palócz [2010]).

By 2008 the institution of rule-based budget has already existed in a number of new member states – even if not in a „mature” form. Such solution existed well before the crisis; in Latvia (1990), Estonia (1998), Bulgaria (1998) and Poland (1998). After the outbreak of the crisis they introduced rule-based budgeting in Hungary and Slovenia in 2009, in Rumania in 2010 and Slovakia in 2012 and this was the time when they created independent budgetary institutions – *fiscal councils*.

When grouping the solutions offering institutional guarantees, it represents a problem to decide what institutions can be classified here and anyway, how is it possible to determine the degree of „independence”. There are a number of independent fiscal institutions functioning also in the European Union that – as regards strictly using the principles of the framework of responsibility – are not classified by the EU or the OECD into this circle although, they have significant effect on the procedure of budget planning and execution. Here belong, first of all, those SAIs that within the constitutional regulatory framework of the given country *have no mandates* to examine the foundations of budget planning. In case of SAIs (and here, there are some uncertainties regarding the classification) that publish their opinion or a white paper for the planning of the budget, or just examine the foundations of the so-called macro course that served as the basis of governmental planning, the situation is different. We should note that due to theoretical considerations¹⁷ some of the experts are averse to classifying in this category organisations that have such abilities, respectively, to participating in the validation of a rule-based budget.

Several older EU member states have overstepped these worries. Namely, it could be also a right solution when the various tasks – indication, forecasting, monitoring, etc. – related to the observance of rule-based budgeting are entrusted to an already existing, independent fiscal controlling organisation respectively, they attach to the existing organisation a new, smaller or bigger body/council having internal autonomy.¹⁸ In other cases – like in Hungary since 2011 – the job of the fiscal council is supported by the staff of a supreme audit institution and the central bank, instead of the former professional background that had a significant size of staff and was independent. No matter which solution the given country opts for, there shall always be such professional tasks of supporting the work of the IFIs that can be done only by other institutions respectively, can be done cheaper by external capacities. So, involving research institutes, financial advisory firms and asking for their opinion, is getting more and more an accepted practice. In these cases the organising, summing-up and synthetizing decision-making preparatory work remains the task of the fiscal council's background organisation (secretariat) employing 5 – 15 people.¹⁹

It is a contentious issue how the macroeconomic, public finance forecasting (projection) role of IFIs should prevail. Naturally, these institutions everywhere make such forecasting analyses of different depth – using their own resources of commissioning technically and external organisation – as their respective evaluations can hardly be prepared without such a background. The real question however is whether – beyond internal professional considerations and the established procedural practice – such documents should be published either obligatorily or voluntarily. Additionally, it is also part of this real question whether these projections, forecasts have any legal or other, obligatory regulations concerning chronology of the contents, the prospective, the procedure or the utilisation or publishing such documents.

According to the experiences the picture is multi-coloured in this respect as well, even if there is an aspiration on behalf of the professional organisations of the EU to establish a more uniform practice. There are countries in the EU where even today, forecasting is a traditional or regulatory mandatory task and organic part of the tasks of the IFIs. (For example in the UK and the Netherlands), and there are some where the respective IFI publishes such documents occasionally, when it thinks it reasonable (Portugal, Poland).²⁰ (See Tables 1, 2, 3)

According to the professional organisations of the EU, the ideal task list of the FCs in the long run should contain not only the preparation of regular, independent forecasts but also the more important recommendations regarding the evaluation of

governmental impact studies concerning recommendations of policies (for example, tax laws), and/or preparing white papers respectively, the regular and standardised ex-post control of the observance of numerical rules (for the time being there is only ex ante control). Such a demand is indicating the dynamic expanding of the role of Fiscal Councils. It shows a difference in the approach that is related to the political guidance respectively, the professionalism of budget making.

IV. SOME REMARKS ABOUT THE COURSE OF RULE-BASED BUDGET IN HUNGARY

Following the increasing problems of the Hungarian public finance that destroyed the competitiveness of the real economy, in the second half of the last decade it became obvious for the political decision-makers and trade fora that the budgeting practice having existed since the political and economic changes (the planning built on bargaining mechanisms, political promises and dogmas) excludes the chance of following a path of sustainable development. The „inclination for deficit” has intensified, especially in the election periods. The ability for growth deteriorated, the potential rate of growth was close to zero. Amendments on the revenue side were determinant. (Kovács O. [2013]).

It only compounded the problems that in the course of fiscal consolidations the system-like approach could not prevail enough, the chosen macroeconomic function proved to be more and more counter-productive and there was no internal commitment and political consensus regarding even as to how to reach the numerical deficit and debt goals. Up to 2010 the consolidations were primarily focusing on the „revenue side” and when it came to steps focusing on the „expenditure side” the composition was not adequate. As a consequence, such experiences proved to be short living. Balancing on the edge of unsustainability prevailed.

Budget planning built on weak ground in itself became one of the barriers of disciplined execution. The political and professional realisation of this fact also contributed in 2006 – well before the crisis – to the ripening of the idea that by adopting the most important elements of the international practice regarding rule-based budgets, the preparatory work should begin. *Regarding both the essence of numerical rules and of the institutional guarantees they were following two courses of thinking.* The act on responsible budget management passed at the end of 2008 fundamentally handled debt increasing tied to the budgetary expenditures and not to the GDP as regards the regulations (Kopits-Romhányi [2010]). Thus the

regulation – thanks to its conception and intervention mechanism – was called „ceiling law”.^b Although there was an agreement that the new body, having the fundamental characteristics of a *fiscal council*, shall give the appropriate institutional guarantee, *the debate on those institutional guarantees was a sharp exchange.* According to the original ideas having taken shape in 2006, it should be not a new analysing staff that represented significant professional capacity and would be the guarantee of formulating independent corporate opinion rather, the persons who were leading independent organisations of great social prestige and what organisations, with their analysing capacities, might assist their leaders as members of the council.²¹ According to the other view represented by the government parties at the time and foreign (IMF) experts, the subjective, methodological and technical professionalism and emphatic „independence” could be ensured only by having a pool of experts of significant macroeconomic analysing power, responsible only to the Fiscal Council and run by independent budgetary resources.²² Finally, the latter concept won in the form of the so-called ‘law on ordinary votes’. No doubt, the professional recommendations were playing a part in this too.

After two years the concept underwent a change. *According to the regulations of 2010 the functioning model of the FC returned to the original idea outlined back in 2006. In 2011 the new Basic Law fixed the so-called debt rule. Additionally, the „two-third majority law” on Hungary’s economic stability was born.* Instead of resorting to the former solution of endorsing budgetary responsibility effective in 2009 – 2010 and preferring the concept of thinking about „ceilings”, the new regulation put in the focus the *decreasing of the proportion of public debt to the gross national product and yearly budget procedures*.²³ To make sure that this rule was observed, the law gave public law authorisation to the council as „an independent fiscal institution” – in other words, the right to veto²⁴. The law also built the analysing capacities necessary for the functioning of the Council basically on the professional background of the State Audit Office of Hungary and the Central Bank of Hungary (Domokos [2012]). Beginning with 2013 – the creation of the Council’s secretariat - these are assisted, to an ever growing extent, by external scientific and analysing capacities.

The EU Commission recommendations keep requiring the „strengthening of the analysing capacities” of the Hungarian FC respectively, the preparation of multi-annual forecasts. This approach is not being prompted primarily by what the EU organisations consider European best practice rather, they think that the obligatory provision of the recommended tasks

^b Act LXXV of 2008 on the Cost-Efficient State Management and Fiscal Responsibility.

would be important for the transparent and accountable exercising of the veto right that is very unique and formal in international practice. That's why, in the opinion of the organisations of the EU, in the case of the Hungarian FC it is less relevant how many independent institutions are publishing their own forecasts in the EU (as a matter of fact, more and more), as thanks to the outstandingly strong veto right, higher professional expectations are justified in case of a Hungarian institution. There are no regulatory barriers regarding institutional development in this respect.²⁵ It is the aspiration of the Council – also in harmony with the expectations of the EU Commission regarding the strengthening of the analysing capacities – that when necessary, in the long run, it should publish separate forecasting evaluations about the expected trend of the macroeconomic basic course of public finance respectively, of the medium-range budgetary positions.

V. RULE-BASED BUDGET AS AN INSTITUTIONAL TOOL OF CRISIS MANAGEMENT

Easter-Central European countries that prior to the crisis had rapidly growing economies, have suffered set-backs of different scale in the period of the crisis. The exception was Poland that had a significant domestic market. This set-back has considerably spoilt the fiscal positions of the concerned countries as well. However, growth has returned in their economy by 2010 – 2011 and after this, it surpassed the European average rate of growth – with the exception of Hungary and Slovenia. Since that time the crisis has deepened in the latter.

As to saying whether it was the identities or the differences that were more characteristic in the crisis management techniques, undoubtedly we can say that as regards the employed solutions, there were rather more identities than differences and this was true for those Easter-Central European countries that accessed the EU later.

The differences were and have been manifested rather as regards the measure of the interventions, the number of intervention fields, in their character of being more „activist” than normative and operating with more caution. Looking at any of the assessing countries, on the basis of the encountered literature and documents, we cannot state that they'd conducted the various crisis management steps on the basis of a model built on consistent theoretical foundation. They tried to adopt the well-known models of the economic literature, the proven elements used in earlier crises and that had been more or less successful in managing the problems of national balance and adjustment of the followed course. Also, the loans received from international organisations were linked occasionally to the adoption of the recommendations concerning rule-based

budgeting system and – as part of it – the type of the institution that would give the guarantees.

The European Union also saw the most effective tool of maintaining budgetary responsibility, economical management, of preventing unexpected situations caused by the crisis, in the so-called numerical and procedural rules respectively, in institutions that were watching over the observance of such rules. The question is, whether a certain correlation between fiscal application of the rules, the firmness of public finance stability and successful crisis management can be demonstrated. Although determining the exact measure would require further research, the various international qualifications, macroeconomic data, deficit indicators and number of indebtedness, it seems to be clear that such relation does exist.

On the basis of the various international evaluations and improving results concerning indebtedness and economic performance apparent from the statistics, it does not sound as an exaggeration to reach the conclusion that in those four countries where IFIs have been functioning for a longer period, the sustainability of budgetary balance was more prevalent and crisis management was more self-assured. The favourable effect of the budgetary framework system was also manifested in the recognition that there is relation between the introduction of fiscal rules, the efficient functioning of IFIs, and the solving of deficit related problems. (Ódor, 2014]). In the second half of the crisis this served as an example for other countries to introduce rule-based budget and *creating a fiscal council* as its institutional guarantee.

Fiscal rules – together with varying institutional „anchors” – are manifold and have been proliferating rapidly all over the world and also in Europe. The institutional palette is multi-coloured, although in the countries of Central-Eastern Europe we can speak about *fiscal council-type* institutions as a characteristic form. Among the institutions watching over the maintaining of balanced budget and the observation of fiscal rules while we can equally find those fulfilling the function of the watchdog or those giving early warnings, as well as those that have weaker or stronger public law tools and sanctioning power at their disposal. It will be the „strength” of the rules (and the formal and informal environment of employing these rules), the political readiness for consensus, the ability to recognise longer term interests and values, the discipline of finances and management and the gradually gaining strength of the IFIs professional respect that in the end will determine, how the institutional guarantees of rule-based budget shall prevail.

It has to be mentioned that it is not lucky to have an over-complicated building of fiscal tools. Reviewing the different regulations we can say that

today this is more characteristic. Just like stating that while the opinion of the EU Commission regarding the functioning of the individual fiscal councils relies on the contents of the EU Stability and Growth Pact, the operation of the FCs is based on national regulations. (Ódor, 2014)]

The operational cost of the professional background capacities of the new institutions has always been an issue. According to the experiences, establishing the framework of rule-based budgeting does not make the procedure of accepting the budget simpler or cheaper, even with a strong aspiration to be efficient. The operation of a newer system of rules and fora requires resources and those resources can come only from the budget. It takes a longer time to find out,

how the extra ties and expenditures compare to the advantages originating from the better founding of budget planning, respectively the control of its execution. These advantages though have to be looked for not only in the narrow sense of budget management but also in shaping the approach of the society, as rule-based budget can have its impact only when enjoying a wide-range social, political and professional support that will then gradually pervade real economy too. The above are complicated issues mostly in those countries where it is not the recognition but the pressure of the fiscal crisis or, even, the “pressure of fulfilling international expectations” or the pressure of “following example” have called for the introduction of this new system of rules.

Table 1 : Independent Fiscal Institutions Watching over the Observance of Rule-Based Budget in the EU Member-States prior to the 2008 Financial Crisis^o

		DK	BE	LV	SW	BG	EE	PL	UK	EZ
Country, date of introducing fiscal rule		1962	1989	1990	1997-98, 2007	1998	1998	1998	1998	1998
Fiscal policy rule	Deficit limit					X				X
	Structural surplus or deficit		X		X					
	Expenditure limit		X		X					
	Current balance								X	
	General balance	X	X	X			X			X
	Efficiency analyses									
	Medium-term planning	X							X	
	Debt limit							X	X	X
	Stabilisation Fund					X	X			
Jurisdiction	Public finance	X	X	X	X	X	X	X	X	X
	National (central, federal)		X							
	Sub-national governments		X					X		
Basis of creation	Constitution							X		
	Law	X	X	X	X					
	International agreement									X
	Political guideline, agreement				X	X	X		X	

^o For the sake of comparison I tried to prepare the table summary bridging the differences of the use of terminology, language and public law and show the characteristic similarities and differences. The abbreviations of the individual countries: DK – Denmark, BE – Belgium, LV – Latvia, SW – Swede, BG – Bulgaria, EE – Estonia, PL – Poland, UK – United Kingdom, EZ – countries of the Euro-zone

Public law classification	Independent, respectively parliamentary organisation	X	X	X	X	X		X	X	X
	Belongs to the executive branch of power						X			
Sanctions employed by IFI	Veto right									
	Loss of fame	X	X	X	X	X	X	X	X	
	Legal							X		
	Financial									X

Table 2 : Independent Fiscal Institutions Watching over the Observance of the budget on **1st January, 2014** in the Member States of the European Union **EU-15 Group of Countries^d**

	Country, date of introduction of fiscal rule	SE	UK	EZ	FR	DE	IE	PT	FI	DK	BE	AT	NL	IT
		1997-98, 2007	1998, 2010	1998	2013	2010	2011	2012	2010	2010	1989	2012	1945	2012
Fiscal policy rule	Deficit limit			X		X	X	X						
	Structural surplus	X												
	Primary expenditure limit	X												
	Current balance		X											
	General balance			X	X	X	X	X	X	X	X	X	X	X
	Efficiency analyses												X	
	Medium-range planning		X							X			X	
	Debt limit		X	X	X							X		
	Sustainability											X		X
Jurisdiction	Public Finance	X	X	X	X	X	X	X	X	X	X	X	X	X
	National (central, federal)					X							X	
	Sub-national governments					X		X			X	X	X	
Basis of creation	Constitution					X								
	Law	X			X		X	X	X	X	X	X	X	X
	International agreement			X										
	Political, professional agreement	X	X											

Public law classification	Independent, respectively parliamentary organisation	X	X	X	X	X	X	X	X	X	X	X	X	X
	Belongs to the executive branch of power													
Sanctions employed by IFI	Veto right													
	Loss of fame	X	X		X	X	X	X	X	X	X	X	X	X
	Legal					X								
	Financial			X										

Table 3 : Independent Fiscal Institutions Watching over the Observance of the Budget on **1st January, 2014** in the Member-States of the European Union^e

EU-13 Group of Countries (Countries having assessed the EU in the period of 2004-2013)

		BG	EE	PL	LV	HU	HR	RO	SK	SL
		1998	1998	1998	1990	2009	2011	2010	2012	2009
Country, date of introduction of fiscal rule										
Fiscal policy rule	Deficit limit	X								
	Stabilisation Fund	X	X							
	Total expenditure limit	X								
	Average balance		X	X	X		X	X	X	X
	Debt limit			X		X	X	X	X	X
	Sustainability									X
Jurisdiction	Public finance	X	X	X	X	X	X	X	X	X
	National (central, federal)					X				
	Sub-national governments			X						
Basis of creation	Constitution			X		X			X	
	Law				X	X		X		X
	Political, professional agreement	X	X				X			
Public law classification	Independent, respectively parliamentary organisation	X	X		X	X	X	X	X	X
	Belongs to the executive branch of power			X						
Sanctions employed by IFI	Veto right				X					
	Loss of fame	X	X	X	X	X	X	X	X	X
	Legal			X	X	X				

^e Abbreviations of the individual countries: BG – Bulgaria, EE – Estonia, PL – Poland, LV- Latvia, HU – Hungary, HR – Croatia, RO – Rumania, SK – Slovakia, SL - Slovenia

ANNOTATIONS

¹ There are subtle differences in the usage of the terminology; for example, institutions of the EU mostly use the term *numerical fiscal rules*. Following the adoption of Act LXXV in 2008 on Cost-Efficient State Management and Fiscal Responsibility, György Kopits and Balázs Romhányi wrote „...the National Assembly introduced a rule-based budgetary-political framework system... (Kopits– Romhányi [2008] p. 573.) or, Imre Székely wrote about the framework system of „national budgetary responsibility” in the context of Romania (Székely [2010]), Gábor Kutasi writes about „rule-based fiscal policy” (Kutasi [2012]), but we can find the definition „budgeting under expenditure rules” as well (Adema [2008]). To me the use of the terminology „rule-based system of budgetary framework” is the closest; this terminology possibly can be further concretised by the expressions of „responsible system of budgetary framework” or „rule-based system of budgetary framework”.

² On the basis of the opinions of global and EU institutions, as well as that of the respective technical literature, the term ‘fiscal council’ is more than a mere name. It stands for such new, smaller or bigger body (consisting of a minimum of three members but could incorporate as much as two dozen members) the members of what are people of high professional prestige and are independent from the government or the national assembly, with a background of such analysing capacities that against the macroeconomic calculations and forecasts of the government, are able to prepare alternative evaluations, forecasts or technical projections and thanks to their respect, are also able to prove their opinion.

³ „Rule based budgeting sets the framework of fiscal responsibility through the rules of procedures and transparency and the mechanisms of supervision and sanctioning. The applied frame of fiscal responsibility should be built from these rules and mechanism adjusted to the country characteristics.” (Kutasi [2012] p 1.)

⁴ The enforcement of budgetary discipline can be expected from the professional and responsible budget policy and, to a lesser degree, from the effects of the market, the investors and the pressure to adjust. Obviously it would be a mistake to build everything solely on the latter. In the beginning the market (foreign investors included) generally reacts in a passive way when facing loosing budgetary discipline then, unexpectedly, forces adjustment, even at the price of creating crisis-like conditions. The introduction of budgetary rules took place in several countries exactly with the purpose of avoiding such situations and thus narrow the possibilities in the sphere of public finance debt or changes, endangering the longer term sustainability of expenditures, debts and taxation. In the European Union it is the Stability and Growth Act that fulfils this role. Among the employed regulations we can equally find constitutional rules, acts or international agreements. The regulation usually is valid for more than one parliamentary cycle thus, it is mandatory for future governments as well (Bulgaria, Estonia, and United Kingdom). The regulation could appear also in the form of a combination of an act and a professional guideline (Sweden). The respective regulation can equally be very detailed and comprehensive, defining the frames.

⁵ This goes even more easily as the momentarily rational interests like, for example, the enforcement of the aging society’s generation-interests or shifting of the burdens to the growing up successors, meets with less resistance. As a consequence, the intervention by the experts – the harmonisation of interests (the risk of civilian „resistance”) - in itself gets narrower and the political decision-making might be related to an ever narrowing circle of persons, leaders on the one hand, while on the other hand, the order of preferences might suffer more distortion when it comes to the enforcement of longer term interests.

⁶ This means that while in recession governments are spending a lot to prevent recession but, in times of a boom this is not coupled with an endeavour to reach budget surplus (Györfy [2009]).

⁷ Poland develops the main trends of its fiscal policy according to the country’s constitution. The constitution declares that government debt shall not exceed 60 percent of the GDP respectively, that the parliament shall decide only on the composition of the revenues and expenditures, while establishing the targeted deficit is the right of the

government. The public finance act establishes several threshold values and intervention obligations: if the debt rate exceeds half of the gross national product but remains under 55 percent then the budget plan for the year following the subject year shall not contain a bigger increase of debt. In case of a debt rate higher than 55 to 60 percent additional debt increase shall be excluded. Above 60 percent a government shall not borrow, and is obliged to keep the balance of the budget, or shall have to accumulate surplus. In the practice Poland has kept its government debt rate continuously below 50 percent prior to the crisis and the rate has remained below 55 percent even in the next period: at the end of 2012 it was 52, 7 percent then, in 2013, they exceeded the 55 percent psychological threshold. According to the Polish public finance act they introduced spending cuts respectively changed the private pension system too.

⁸ Since 1967, the German constitution for example, has included the golden rule tied to the level of gross investments, according to what the government shall borrow only up to the limit of the gross public investments. The only exception is when circumstances „interfering with the macroeconomic balance” occur. The phasing of this latter stipulation however is very vague and presented a number of problems. Namely, it is difficult to decide when the balance is being threatened. Since the introduction of this regulation there were two cases when the constitutional court had to decide if the government had infringed with the law. First, in 1989 the court decided that it is the sole responsibility of the government to interpret the exception. The judgement in 2007 also acquitted the political actors but recommended already the amendment of the rule. In the summer of 2009 a new law was introduced, valid from 2010: according to this the deficit of the structural balance can be 0, 35 percent on federal level. In 2012 and 2013 the GDP-proportionate debt decreased in Germany.

⁹ Accordingly, the related professional tasks can be tied equally to *new* and *existing* institutions, bodies and offices respectively, professional background supporting the above and that could be independent organisations or those, employing external capacities. For example, this background organisation could be a new analysing apparatus, commissioning a scientific (academic) research institute, auditor, a researching-analysing firm, or the analysing section of the SAI or the central bank of the given country.

¹⁰ As to how either an „external” or even „internal” professional background establishes the fulfilling of the guarantee function of the given force and to what extent the chosen solution is economical, should be examined individually, in the course of the process. The repeated supervision of the professional organisations of the European Commission and of the OECD should be evaluated from the same aspect as well, keeping in mind that naturally, these organisations might also have their professional preconceptions as they are not working in a „vacuum” and such supervisions have their antecedents as well.

¹¹ The worries concerning the long-term financing of outdated and over-consuming welfare systems, burdened by newer and newer demands that had been financed mostly by external resources (like, for example, in Greece, Portugal, Latvia and – naturally – Hungary) were mitigated before 2008. On the basis of the October 2008 EDP report, based on 2007 data, the government deficit in the EU-27 was 0, 9 percent, in proportion of the GDP, while government debt was 58, 7 percent. Hungary had the highest rate of deficit (-5%), followed by Greece (-3, 5%). The deficit of the rest of the countries did not exceed the 3 percent limit moreover, 12 countries even produced surplus. The debt rate was highest in Italy (104, 1%) and Greece. Hungary ranked fourth (65, 8%). Eight countries exceeded the 60 percent limit. On the basis of the October 2013 EDP report based on 2012 data, the government deficit was already 3,9 percent in the EU-28 countries while the debt rate reached 85,1 percent. At the time Spain had the highest budget deficit (10, 6%) followed by Greece (9, 0%) and Ireland (8, 2%). Hungary (2, 0%) occupied a very favourable position, ranking 21 though this result had to be attributed to the utilisation of the significant part of the private pension funds. In 12 countries the deficit was below the 3% limit, in 15 the rate improved and in 12 countries it deteriorated when compared to the deficit rate of 2011. The highest government debt rate in 2012 was in Greece (156, 9%) but the data from Italy (124, 1%); Portugal (124, 1%) and Ireland (117, 4%) were not

encouraging either. At this time Hungary ranked 11 (79, 8%). 14 countries were above the 60 percent threshold. The situation of 22 countries deteriorated, and the indicators of only 6 countries improved. In 10 countries both indicators are above the threshold and 6 below. All in all, we can say that as regards the annual deficit indicators improvement can be detected since the 2010 EU peak, however, the debt level keeps increasing as regards the total of the member states. This was emphasised by the 2013 preliminary data. (The data source is the presentation of Gabriella Vukovics and István Bedekovics of 7th April, 2014 for the EDO report, prepared for the Fiscal Council.)

¹² Not to mention, in what proportion had these countries paid the price of this favourable situation earlier and to what extent can we attribute it to the „socialist heritage“ created decades prior to this date, together with having been cut off from the world politically and economically.

¹³ In the second decade of the 21st century there are four, ensuing from each other and interrelated, challenges seeking answers (*Muraközy* [2012]). Namely, the lack of optimum size, financeable public services might result in significant losses of growth that would make persistence in the global competition of social models and economies very difficult. This is paired with the changing demographic situation of the next decades and – in several European countries, among them also in Hungary – the borrowing that is the result of postponing the adjustment and is related to social consumption that, in the earlier periods, could not be financed from internal resources and that were not in proportion to the economic performance, together with the ensuing, differentiated debt crisis that results serious burdens and that would make recovery difficult also in the risk community of the EU and not only in the directly concerned countries.

¹⁴ In particular we can list here Poland, Estonia, Latvia, Bulgaria and, later, Slovakia.

¹⁵ This coercion is clear for example in case of Hungary, Romania, Croatia and Slovenia.

¹⁶ Prior to the crisis, in Lithuania it was the task of the so-called *Senior Cabinet Committee* to make recommendations for the target numbers of the budget and for the strategic plans. In the Czech Republic it was the minister of finance and the prime minister who determined the expenditure limits of the individual ministries but only being aware of the expenditure needs (*Kutasi* [2008a], [2008b]). Since then, there are no information about the Czech Republic and Lithuania that would indicate any significant considerations to introduce rule-based budget. From the documents published by the EU Commission, the OECD and the IMF, it is obvious that, as regards the 13 states of the EU, they are basically thinking about establishing new, fiscal council type guarantee institutions, to encourage the establishing of such organisations, respectively the transformation of the existing institutions into such organisations (for example in Poland), while in the practice of the old members states they acknowledge the most different solutions. This „double standard“ – explicitly or implicitly – depends on the judgement of the institutional stability of the concerned countries. This is quite clear from the context of the documents. (See the country reports and the repeated comparative evaluations.)

¹⁷ Generally the reference is that serving rule-based budget requires fundamentally different know-how and develops such knowledge in the course of controlling the execution of the central budget or, of the asset management of the public sector, than the macroeconomic analysis of the budget. In other cases the opposition can be traced back to such practical reasons that reflect justified or groundless professional or personal distrust, or the fear of its „pre-eminence“.

¹⁸ It was the practical simplicity of establishing professional background capacities and the endeavour to save on costs that justified the choice of France, Latvia and Finland, from among the EU members.

¹⁹ According to the information received at the off-the-record conversations of the conferences organised by ECFIN (Directorate-General for Economic and Financial Affairs of European Commission), it is a general endeavour of the institutions working with a large staff as their own background support (40 to 100 people), to cut back the internal staff and solving a growing proportion of their tasks by involving external experts and analysing organisations.

²⁰ There are a wide variety of solutions from the role of official forecaster (for example, the United Kingdom), to the outlooks used solely in own jurisdiction (for example, Poland) but the rule of procedure developed by the Hungarian FC also represents a direction that could lead towards moving forward. In Hungary such white papers, prepared in the sphere of authority of the SAO and the Central Bank, together with thematic analyses made upon the commission of the FC Secretariat which documents are all public, the experiences are built into the opinion of the FC in a way that ensures comparison but does not become an „official“ prognosis.

²¹ Its members are the respective president/governor of the SAO and the Central Bank who form their opinion relying on a secretariat operating on the basis of the State Audit Office together with an expert representing the head of the state.

²² The concept of the operational model being shaped from 2006 onward, originally preferred a model with modest costs, built on an existing organisational background. This concept has been changing gradually, however no decision was made. In 2008, following the negotiating for loans with international organisations this idea was hastily abandoned within two weeks, almost like part of meeting the „side conditions“ of the agreement. The National Assembly then accepted the latter model and made it the law. In this act representatives of this view wanted to save the independence of the FC by maintaining distance even to other, appropriate organisations participating in the control and analysis of the preparation of the budget – first of all the SAO (*Kopits* [2007b]). They did not want to see the heads of the aforementioned organisations personally rather, only experts recommended by them and chosen by the National Assembly, who emphatically were not representing these organisations and whose opinion prevailed – first of all – thanks to their reputation.

²³ According to the Basic Law, respectively the so-called stability act endorsed at the end of 2011 that expanded the related tasks and authorities, as long as government debt exceeds half of the gross domestic product (as the measure that the Basic Law stipulated), the National Assembly can accept only such central budget that contains the mitigation of the government debt compared to the gross domestic product. The preeminent task of the FC is to oversee the observance of this rule by giving its prior consent only to such budget law that – according to the body's conviction – *shall result the mitigation of the proportion of the government debt*.

²⁴ Any budget act or bill that contains an amendment that would increase the budget deficit shall be submitted for final vote only with the prior approval of the Council. If the Fiscal Council refuses granting its prior approval the procedure has to be repeated until the Fiscal Council gives its prior approval necessary for the acceptance of the bill. It is obvious that bearing such responsibility is possible only when the background of appropriate analysing abilities exists, by evaluating the short and long-term macroeconomic processes, identifying the factors influencing the sustainability of a balanced budget, by revealing their respective tendencies and relying on the so-called technical projections. This is why a number of ability-developing steps have been introduced in the course of the past two years to assist the work of the Council. Apart from the fundamental support of the analysing capacities of the SAO and the Central Bank these have opened up avenues for considering additional, alternative analyses organised by the FC Secretariat, for a wide range of background researches carried out by research institutes, academic and university researches respectively, the preparation of forecasts related also to the business sector. These are helping the long-term and more exact evaluation and forecasting of the budgetary positions.

²⁵ Even today the Council is empowered to prepare a medium-term outlook when it considers preparing such forecast important to develop medium-term planning and to establish a more solid base for the medium-term ideas. Point e), Indent (1) § 23 of the Stability Act authorises the Council to act on its own, without the need to amend the respective law. However, at the moment this is not a mandatory task of the Fiscal Council and at present such endeavours of the Council are realised indirectly and not in regularly published special projections. In harmony with this the Council's opinion always shall

reflect the studies prepared in its jurisdiction and containing medium-term outlooks, regularly published at the FC website, prepared by the SAO, the Central Bank or, upon the commission of the FC Secretariat, by external research institutes concerning macroeconomic relations. In 2013 three such papers were made and in 2014 six papers have been commissioned. According to the stipulations of the Stability Act, in its opinion concerning the annual budget as well as in setting the ground for its consent, the Council shall use a line of risk analyses and formulates its standpoint on this basis by also looking ahead to a longer term.

²⁶ Hungary differs from the majority of the EU-10 countries. The country stood out with its fiscal irresponsibility up to 2006, by financing welfare systems without cover. This period was followed then by the most severe adjustments only to stand out again by its maverick management of economic policy. (Kovács Á. [2013], Palócz [2010]).

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