The Impact of Business Environment on of Firm's Employment Growth

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Abstract

A good business environment makes it easier for firms from microenterprises to multinationals to enter and exit markets, which contributes to higher productivity, faster growth and creates jobs. A good business environment will benefit both domestic and foreign investors. Domestic and foreign investors invest where they find profitable opportunities, and try to avoid risks. In this paper, we use firm level survey data of the manufacturing firms in three different commercial strong Libyan cities to determine the influence of the business environment on the growth of the employment of the firms. The Structural Equation Model (SEM) method is used in this paper and the empirical variables are calculated for the purpose of the study. We find that corruption, crime and access to finance are the main obstacles that hamper the employment growth of manufacturing firms in Libya. However, the research does not reveal any significant effect of business regulations and the level of competition faced by the firm on the growth of the firm?s employment. These results have important policy implications for the priority of reform efforts. To improve the Libyan business environment, the government of Libya should enforce the Anti-Corruption Law and should make the financial system more dynamic, by establishing a clear regulatory system and by continuing to open up the banking sector to private investment. They should also provide access to high quality financial services and to capital. The government also must work hard and take urgent steps to improve security.

Index terms— employment growth, business environment, manufacturing firms, Structural Equation Model (SEM).

1 I. Introduction

good business environment makes a country an attractive destination for foreign investment and a place in which domestic entrepreneurs of all sizes and across industries are willing to invest. A good business environment will benefit both domestic and foreign investors. Domestic and foreign investors invest where they find profitable opportunities, and try to avoid risks. They may be attracted by natural resources, large domestic markets, and/or lower production costs in export industries. In contrast, investors do not go where they think it will be unusually costly to do business, or where they fear they might lose their money because of political or economic upheaval or other risks. Therefore, providing a good business environment for firms and entrepreneurs represents a major challenge to all the governments around the world.

The private sector in Libya faced various problems that affected their operations due to certain aspects of the basic Libyan politico-economic system. Currently, Libya is in transition and seeks a gradual state withdrawal from the productive sector and the development of the private sector. Therefore, the challenge for Libya is diversifying its economic structure, developing the non-oil sector, and adopting an economic model that exploits the huge economic potential for renewable energy and uses products and services that incorporate a higher share

42 of local added value. To achieve this, Libya should establish the conditions in which domestic entrepreneurs and
43 foreign investors can create valuable products and services through investment and innovation.
44   A lot of research is being done to find how the business environment affects the functioning of the firms. This
45 research paper concentrates on the business environment's relationship with the employment growth of the Libyan
46 manufacturing firms. Specifically, this study has looked into the impact of corruption, crime, infrastructure,
47 finance, competition, business regulations and human capital. The necessary data was collected with the help of
48 a survey and questionnaires were given to the manufacturing firms in Tripoli, Benghazi and Misurata. The SEM
49 or Standard Equation Modelling techniques were used to examine the data and AMOS version 20 was used to
50 execute the calculations. The outcome of the research identified the presence of a relationship between crime,
51 corruption, access to finance, infrastructure and human capital on the growth of the firm's employment, but it
52 does not find any influence on the employment caused by business regulations and the competition between the
53 firms.
54   The paper is organized as follows. Section 2 presents empirical studies. In section 3 describes the methodology.
55 The results of the research and also a discussion of the results are presented in section 4. Final section concludes.

2   II. Empirical Studies

57 Firm performance is highly affected by the business environment and this fact has been vastly discussed in
58 empirical literature. Through the World Bank Enterprise Surveys or Investment Climate Surveys conducted
59 by the efforts of the World Bank, the business environment has been thoroughly assessed along with its effects
60 on firm performance at firm level data. With this information, the business environments are able to perform
61 consistent efforts.
62   Researchers and policy makers have developed their information and are investigating the activities of
63 organizations beyond firm growth within a business environment. To analyze and measure the firm growth,
64 several different measures have been used by researchers. Attributes such as employment, sales, profits, market
65 share and turnover are commonly used to measure firm growth.
66   Growth indicators which are broadly used include sales and employment. Sales and employment have been
67 used as a measure of firm growth by Gaviria (2002) These two attributes are easy to extract from within an
68 organization and are able to present short and long term changes. However, for firm growth measurement, real
69 revenue was used by ??and and Trap (2010), value added per employee was used by Klapper et al. (2006) and
70 change in the book value of firm's total assets was used by Nguyen and Dijk (2012).
71   The productive performance of the firm is highly affected by corruption. This activity is considered a major
72 issue faced by firms in the developing nations (World Bank 2005). The sales growth of a firm is highly affected
73 when there is presence of corruption (Gaviria 2002). Fisman and Svensson (2007) which has been specifically
74 observed In Uganda. A negative effect was found where a percentage point increase in bribery rate cause a decline
75 of 3 percentage points in firm growth. In Latin America, 29 countries were analyzed where it was also found that
76 bribery hampers firm growth. Firms who do not carry out solicitations like paying for bribes when applying for
77 water connections, electricity or permits are doing 23.6 per cent better than those who conduct such activities
78 (Seker & Yang 2012). 81 other nations were also analyzed where it was found that bribery and corruption has
79 a significant negative effect upon sales and firm growth, a firm engaged in corruption activities would have a
80 3.95 per cent lower sales growth rate than the one who carries out its activities honestly (Batra et al. 2003).
81 Bureaucratic corruption also has a negative effect upon the growth of firms in Central and Eastern European
82 countries, on average a 3.0 per cent decline in sales growth is observed when such negative activity is observed
83 (Kochanovay 2012). Nguyen and Dijk (2012) and Rand and Tarp (2010) also state that firm growth is negatively
84 impacted by corruption in Vietnam. Hallward-Driemeier et al. (??006) also states for China that corruption
85 effects its firm growth negatively. Greece was analyzed by Athanasouli, et al. (2012) where he also observed that
86 administrative corruption causes a negative impact upon firm growth. Hence, a significant negative relationship
87 is present between firm growth and corruption. Engagement practices are observed to be high and strong in
88 small and medium enterprises as compared to large firms (Beck et al. 2005).
89   Vial and Hanoteau (2010), however, believe that a statistically significant and positive impact is created upon
90 firm output with corruption. In Indonesia, firms having higher bribe-to-value added ratio displayed significant
91 outputs. The presence of corruption has positively impacted firms in China according to the research conducted
92 by Wang and You (2012).
93   Empirical literature shows the relationship between firm growth and finance access and it is clearly observed
94 that access to finance is highly essential. Sales growth is significantly and negatively associated by financing
95 according to Batra et al. (2003). Negative access to finance has reduced firm growth in Bangladesh, China,
96 India and Pakistan (Dollar et al. 2005). Firms who were financially constrained have a sales growth rate of 4.63
97 percentage points lower than compared to the ones who are not financially constrained. The growth of large and
98 medium firms is hampered with less access to formal finance is present (Aterido et al. 2009). The growth rate of
99 firms is highly affected by financial constraints (Ayyagari et al. 2006). In small and medium sized firms, financial
100 constraints have a vital effect upon growth (Beck et al. 2005). Firm growth is negatively impacted by the access
101 to credit (Aggrey et al. 2012). Greater employment is observed where there is a high share of investment which
102 is externally financed (Aterido & Hallward-Driemeier 2010). Internal funds are used to finance the growth of
103 a firm when external financing constraints are present (Rahaman 2011). When the firm is able to gain access

to the external bank credit facility, there is a decrease in the effect of the internal financing of the firm upon firm growth. Access to finance and firm growth in China showed no relationship in the studies conducted by Hallward-Driemeier et al. **??**2006).

Limited studies have been found upon the relationship between firm growth and business environment indicators like human capital, crime, competition, technology, business regulations and infrastructure. In Sri Lanka, the effect of entrepreneur's human capital upon sales growth rate has been analyzed (Nishantha 2011). A positive effect on sales growth was found with the presence of human capital variables like training with work experience, professional and technical education along with government experience and education. The Ugandan manufacturing firms were analyzed and average education was stated as a main driver for firm growth (Aggrey et al. 2012).

The sales growth of firms is significantly reduced by the presence and effect of crime (Gaviria 2002). The affect of crime on sales growth has been confirmed by Ayyagari et al. (2006). When research was conducted upon Bangladesh, China, India and Pakistan, it was found that infrastructure is one of the most essential factors affecting firm growth, power outages and custom delays are negatively affecting the firms of these nations (Dollar et al. 2005). Medium and large firms both suffer from poor infrastructure (Aterido et al. 2009). However, Hallward-Driemeier et al. **??**2006) states that firm growth has no relation with physical infrastructure of the firm.

When analyzing the effect of business regulations on firm growth, it was observed that regulations only affect the small firms that are limited and remain below the regulation radar (Aterido et al. 2009). A statistical and negative influence of government regulations is formed upon the firm growth (Hallward-Driemeier et al. 2006). Sales growth is expected to increase by 42.6 per cent and employment growth by 46.7 per cent when regulatory burdens are reduced by 1 SD. 21 nations in Western and Eastern Europe were analyzed and it was found that entry for firms are affected by entry regulations. Small firms, unless they are able to afford the cost of incorporation, cannot enter the market when regulations are high. Labour intensive firms are also faced with several issues when entering the market when labour regulations are strong (Klapper et al. 2006).

3   III. Methodology

The sample selection process and the techniques used for the collection of data are described in this section.

4   a) Sampling and Data Collection

The data used in the research was provided by the administrators of the Libyan manufacturing firms in three major cities of the country. The cities of Tripoli, Benghazi and Misurata were selected for the study.

Tripoli was selected because it has a central place in the economy of Libya and so does Benghazi. Business and financial activities are concentrated in the city of Tripoli and it is the largest commercial and industrial city in Libya. Benghazi is also an important commercial city in Libya and it has a large industrial and commercial base. It manufactures goods such as food, textiles, tanning, processed salt and construction materials. Misurata is Libya's third largest city and it was the first city in the country to have its own free trade zone. Questionnaires were used for the data collection process. 337 manufacturing firms were surveyed and the sample size was selected by random sampling processes. The questionnaires were distributed personally and by mail from March to May 2013. 297 questionnaires were returned out of the 377 which were distributed and only 207 were possible to be used for this research. b) Operational Measures of the Variables i. Access to Finance

The questionnaires contained question about the access to finance and the firms had to rate it on a scale of 1 (no obstacles) to 7(extreme obstacles). This rating would show how serious the financing issues are for the growth and functioning of the firms. The related issues are: (1) collateral requirements of banks/financial institutions, (2) bank paperwork/ bureaucracy, (3) high interest rate, (4) need special connections with banks/ financial institutions, (5) banks lack money to lend and (6) access to foreign banks.

5   ii. Corruption

The survey also asked about the level of corruption existing in the system and the firms were supposed to provide a rating scale from 1 (never) to 7 (always). The firms were asked if: (1) they had ever made extra payment to secure public services such as electricity and telephone connections, (2) they had to pay extra to obtain licenses and permits, (3) they had to pay more to take care of taxation related issues, (4) they had to pay bribes to get government contracts, (**??**) they had to pay extra to deal with customs and imports.

iii. Infrastructure

The questionnaires also asked the firms to provide a rating for the standard of infrastructure that was available to them. The ranking scale was from 1 (very inefficient) to 7 (very efficient). The questions asked about the (1) quality of roads department / public works, (2) quality of postal service / agency, (3) quality of the telephone service / agency, (4) quality of the electric power company / agency, and (5) quality of the water / sewerage service / agency.

6   iv. Business Regulations

The firms were also asked to rank the prevailing business regulations. Once again, the ranking was from 1 (no obstacles) to 7 (extreme obstacles). This question was asked so that the difficulties that the businesses faced due to the business regulations and their effects on the functioning and development of their businesses could be ascertained. The regulations that were asked about include: (1) business licensing, (2) customs/ foreign trade regulations in your country, (3) labour regulations, (4) foreign currency/ exchange regulations, (5) environmental regulations, (5) fire, safety regulations, and (6) tax regulations/ administration.

7   v. Crime

The study was also concerned with the impact that the rate of crime had on the operations of the firms and how it damaged their business activities. The rating was on a scale of 1 (never) to 7 (always). The questions asked were: (1) criminal attempts suffered by the firm;

(2) products losses due to theft, robbery, vandalism; (3) products losses due to employees' theft (4) the percentage of the firm's total annual sales was allocated to security (equipment, personal); and (5) the percentage of the firm's total annual sales was allocated to protection payment, the firms were asked to rate, on a scale of 1-7. On scale 1 equals 0%, 2 equals less than 5%, 3 equals 6-10%, 4 equals 11-15%, 5 equals 16-20%, 6 equals 21-25% and 7 equals more than 25.

8   vi. Competition

The questionnaires also asked the firms to rate how difficult it was for them to follow the activities of their competitors for the purposes of business development and growth. The ranking scale was from 1 (no obstacles) to 7 (extreme obstacles). The questions asked were: (1) avoidance of sales tax or other taxes;

(2) non -payment of duties or (3) lack of observation of trade regulations (4) foreign producers sell below international prices; (5) domestic producers unfairly sell below my prices; (6) avoidance of labour taxes/ regulations; and (7) violation of the firm's copyrights patents or trademarks.

9   vii. Human Capital

In the end, the firms were asked the role played by the human capital. They were asked the following questions: (1) the proportion of professional workers in the staff of the firm, (2) the proportion of skilled workers employed the firms, (3) the fraction of the unskilled working for the firm, (4) the fraction of female employees working for the firm, (5) the percentage of the firm's staff that had come from abroad to work in the firm. The ranking scale was from 1 to seven with the following percentages for the different ranks given: On scale 1 equals 0%, 2 equals less than 5%, 3 equals 6-10%, 4 equals 11-15%, 5 equals 16-20%, 6 equals 21-25% and 7 equals more than 25.

10   viii. Firm Growth

There is no universal way for assessing the growth of a business. Researchers have used different techniques for the determination of the growth rates according to the type and subject of the data which is available. Delmar et al. ??2003) states that the different indicators used for measuring the growth rates are: assets, employment, market share, physical output, profits and sales. , but the measures which are mostly used for the estimation of the growth of the business are the sales and employment figures. In this research paper, the employment figures are taken as a measure of the business growth and the data used is for the period 2010 to 2012. ix. Control Variable: Firm Age Many authors of Industrial economics are of the opinion that the age of the firm plays a vital role in determining the economic performance of the firm. Small firms are usually younger than the larger firms. They do not have much experience in the industry as compared to the larger firms. This causes their growth to be uneven, and it also raises the possibility of the firm's failure (Rahaman, 2011) In this research work also, the age of the firm has been used as a control variable. The firm's age, in this case, refers to the years of the firm spent in active participation in the business sector since the time of its formation.

x. Control Variable: Firm Size The size of the firm is taken by many authors as the reason why different firms experience different growth rates (Rahaman, 2011). Reinikka and Svensonn (2002) and Hallward (2006) have employed the logarithm of the number of workers that were originally part of the firm so that the size factor could be included in the regression analysis. Rahaman (2011) had used the logarithm of the total assets of the firms as mentioned in the firm's balance sheets and also from the sales revenues of the firm so that the size factor could be adjusted in the regression analysis. Reinikka and Svensonn (2002) and Hallward (2006) have all used the logarithm of the sales income of the firm to account for the size of it. In this research paper, the number of employees in 2010 is used to control for the size of the firm.

11   c) Data Analysis Methods

The data analysis has been done using the statistical software packages of SPSS and AMOS. The maximum likelihood estimates (MLE) approach was selected for the determination of the Standard Equation Modelling (SEM), which was carried out in AMOS version 20. Anderson and Gerbing's two-step analysis technique was used in this research work. The first step consisted of obtaining the value for the measurement with the help of

the Confirmatory Factor Analysis (CFA) and then carrying out the SEM according to the measurement model so that the theoretically derived model could be fit to the available data.

12 IV. Empirical Results and Discussion

a) CFA Employment Growth Model Confirmatory factor analysis (CFA) is a type of structural equation modelling (SEM) that deals specifically with measurement models, that is, the relationships between observed measures or indicators (e.g. test items, test scores, behavioural observation ratings) and latent variables or factors (Brown 2006). The CFA approach in SEM begins with a measurement model specification that has to be identified. CFA only makes use of the measurement model component of the general structural equation model (Hoyle 1995). CFA was carried out to determine the degree of model fit, the explained variances and standardized residual for the measurement variables, and the adequacy of the factor loadings. To assess the model fit, a satisfactory fit of the measurement model must be obtained before proceeding to test the general model as a whole (Mulaik & James 1995). Table 1 shows the characteristics of the measurement model. The overall model fit reported in Table 2 showed the overall fit indices for the CFA model were acceptable, with $?2/df$ Although the chi-square is not significant (p value less than 0.05), the model still fits because the chisquare statistic nearly always rejects the model when large samples are used (Bentler & Bonnet 1980;Jöreskog & Sörbom 1993). One example of a statistic that minimises the impact of sample size on the model is the chi-square value divided by the degree of freedom (Marsh & Hau 1996; Kline 2011). If this statistic is less than the value of 5, the model fits reasonably well, and if the ratio does not exceed 3.0; $?2/df?3$, a model demonstrates reasonable fit (Kline, 2011). In this study, the model shows that the value of chi-square divided Figure **??** : CFA measurement measurement model by the degree of freedom is $?2/df = 1.846$, so the model fits well. In addition, following the suggestion of **??**ueller and Hancocks (2008), the model fits well since RMSEA, CFI and $?2/df$ are very good fit. Figure (1) shows the complete CFA measurement for the model. The measurement model is then tested for its reliability, convergent validity, and discriminant validity.

i. Reliability Table 3 presents Cronbach's alpha value and the construct reliability (CR). All the reliability values of the variables were above the suggested value of 0.60 (Hair et al. 2010). Therefore, all 30 items from the employment growth model were tested using CFA, as presented in Figure **??**. The Cronbach's alpha reliability for all the variables indicated good internal consistency with readings ranging from 0.775 to 0.930, and the construct reliability (CR) for the seven latent variables greater than 0.70 as shown in Table 3. This shows that there is a satisfactory level of internal consistency of the measures (Hair et al., 2010).

13 ii. Convergent Validity

The factor loading, Composite Reliability (CR) and Average Variance Extracted (AVE) were used to test the measurement model's convergent validity. The item had a loading factor of greater than 0.50 as shown in Table 3. This shows that there exist some common points of convergence (Hair et al., 2010). The results for the Composite Reliability (CR) show values greater than 0.70 as shown in Table 3, suggesting that the variables have convergent validity (Hair et al. 2010). The Average Variable Extracted (AVE) values for the variables are above 0.50. This shows that the latent variables also had a high convergent validity **??**Fornell & Larchker, 1981;Hair et al., 2010).

iii. Discriminant Validity For discriminant validity, both The Maximum Shared Squared Variance (MSV) and the Average Squared Variance (ASV) were used to test the discriminant validity of the measurement model. The MSV and the ASV results need to be lesser than the AVE for the discriminant validity (Hair et al., 2010). Table 3 shows that both the MSV and the ASV results are less than the AVE values which means that the discriminant values hold and the measurement model is according to the assumptions which were initially made. This study concluded that all the measurements have met the assumption of validity.

14 b) Structural Model

Since the reliability tests as well as the convergent and discriminant validities support the overall measurement quality, the measurement model is considered adequate for testing the hypothesized relationships of the model to study (Gerbing & Anderson 1992). The model for this study is shown in Figure 2.

The model fit indices reported that the overall fit indices were accepted for the SEM model, as shown in Table 4, with $?2/df = 1.796$, which is less than 3; RMSEA = 0.062 (less than 0.08); IFI = 0.909 and CFI = 0.907 is greater than 0.90; PGFI = 0.678, which is more than 0.50. This indicates that the SEM for the employment growth model is acceptable and fits the data **??**Hair et Table **??** shows the coefficients of the impact of the business environment on the growth of the employment for the firms selected in the sample.

Empirical research is of the conclusion that corrupt nations reflect decreasing growth rates. Multiple factors justify this conclusion, including the fact that increased corruption turns off both, local and foreign investors; makes investors wary of introducing new technologies and has an overall increase in the cost of business for the investor. The current research documents an inverse relationship between corruption and employment growth, reflected by $? = -0.220$, p<0.001. This translates to a 0.22 per cent decrease in employment growth for every 1 per cent increase in corruption which is in alignment to Gaviria (2002) and Aterido et al. (2009) who are of the perspective that corruption drags down employment growth figures.

On a corresponding note to corruption, crime also similarly contributes to increasing the cost of doing business in any environment. Hence, the conclusions derived from this study reflects the above mathematically as $? = -0.201$, p<0.001, which implies that for every 1 per cent increase in crime in a society, the employment growth decreases by 0.20 per cent which is again consistent to observations earlier made by Gaviria (2002).

The relationship regarding the quality of human capital associated with a firm growth has been receiving limited attention at firm level data. Therefore, as per existing theories in this regard, employers being able to tap into higher quality human capital which includes aspects of skills, knowledge and expertise of its workforce have a competitive advantage over their peers (Barney, 1991). Therefore, studies have established a positive relationship between the level of human capital available with a firm, and an increase in the employment growth, mathematically depicted as $? = 0.232$, p<0.001. This in turn translates to a 0.23 per cent increase in employment growth for every 1 per cent increase in the quantum of human capital. It is also a fact that there have not been many studies evaluating how human capital influences the general performance of the firm, especially with regard to employment growth.

However, there are a few other studies which evaluate the impact this aspect has on the firm, besides the employment growth factor which includes the conclusions drawn upon by Nishantha (2011) Multiple empirical studies reflect the importance of finance and its availability on the economic growth observed. To this end, Aterido and Hallward-Driemeier (2010) justify higher employment growth rates with the ease of accessing external financing for the firm. Aterido (2009) concludes that greater the ease of accessing external financing in a business, more would there be a corresponding increase in the employment growth rates.

Unfortunately, the availability of finances is a major issue in most of the developing and poor countries (Kinda 2009), which is also confirmed by the World Bank (2004). This research documents a negative relationship between the ease of availability of finance verses a firm's employment growth which is mathematically reflected as $? = -0.276$, p<0.001. This indicates that for every 1 per cent increase in challenges to obtaining external financing, the employment growth decreases by 0.28 per cent. On a similar note, research on how the availability of financing for a firm affects the firm's employment at firm level is rare. However, there are alternative studies which quantify the effect finance opportunities have on the firm's performance besides the employment growth perspective. The observed conclusions are in sync with results obtained by Ayyagari et al. (2006) and Beck et al. (2005) who both postulated that challenges in obtaining finances had a direct effect on the growth prospects of the firm.

Our research demonstrates that the presence of a good infrastructure network has a positive influence on employment growth and vice versa, mathematically represented as $? = .357$, p<0.001. This translates to a 1 per cent increase in infrastructure facilities providing for a 0.36 per cent increase in employment growth. This relationship seems to be particularly true for nations with run-down infrastructure facilities which is perhaps attributed to the effects of decreasing marginal return to infrastructure The research makes it clear that the factor of competition does not play a major part in determining the growth of the employment of the firms. This does not differ with the research work conducted by Ayyagari et al. (2006). He discovered that an attitude which is against competition does not have any major influence on the sales growth of the firm.

The current research is of the conclusion that in the Libyan scenario, the presence or absence of business regulations is not significantly affecting employment growth in the firm's which is incidentally in contrast to earlier studies in this regard **??** V.

15 Conclusion

This research paper studies the effects of the business environment on the growth of the employment of the firms in Libya. The Structural Equation Model (SEM) is used to examine the data covering 207 manufacturing firms. The empirical results show that corruption, crime and access to finance are the main obstacles that hamper the employment growth of manufacturing firms in Libya. The results of this study, however, did not reveal any significant effect of competition and business regulations on the employment growth of firms. These results revealed that corruption is widespread in Libya and remains the most problematic factor for doing business. Furthermore, the legal and administrative framework to combat corruption is absent in the country. Thus, the government of Libya should enforce the Anti-Corruption Law to improve the business environment in Libya. The current government must work to address this issue, and enforce this law in the near future. Moreover, the financial system in Libya is underdeveloped, the overall quality of financial markets has been dismal, and the equity markets are barely emerging. To build an efficient and modern financial system that can support the private sector in Libya, the government should make the financial system more dynamic, by establishing a clear regulatory system and by continuing to open up the banking sector to private investment. They should also provide access to high quality financial services and to capital. In addition, The Libyan government faces significant challenges in exerting full control over security in the country, and remains one of the largest obstacles to stability in Libya. To improve the business environment in Libya, the government must work hard and take urgent steps to improve security. [1]
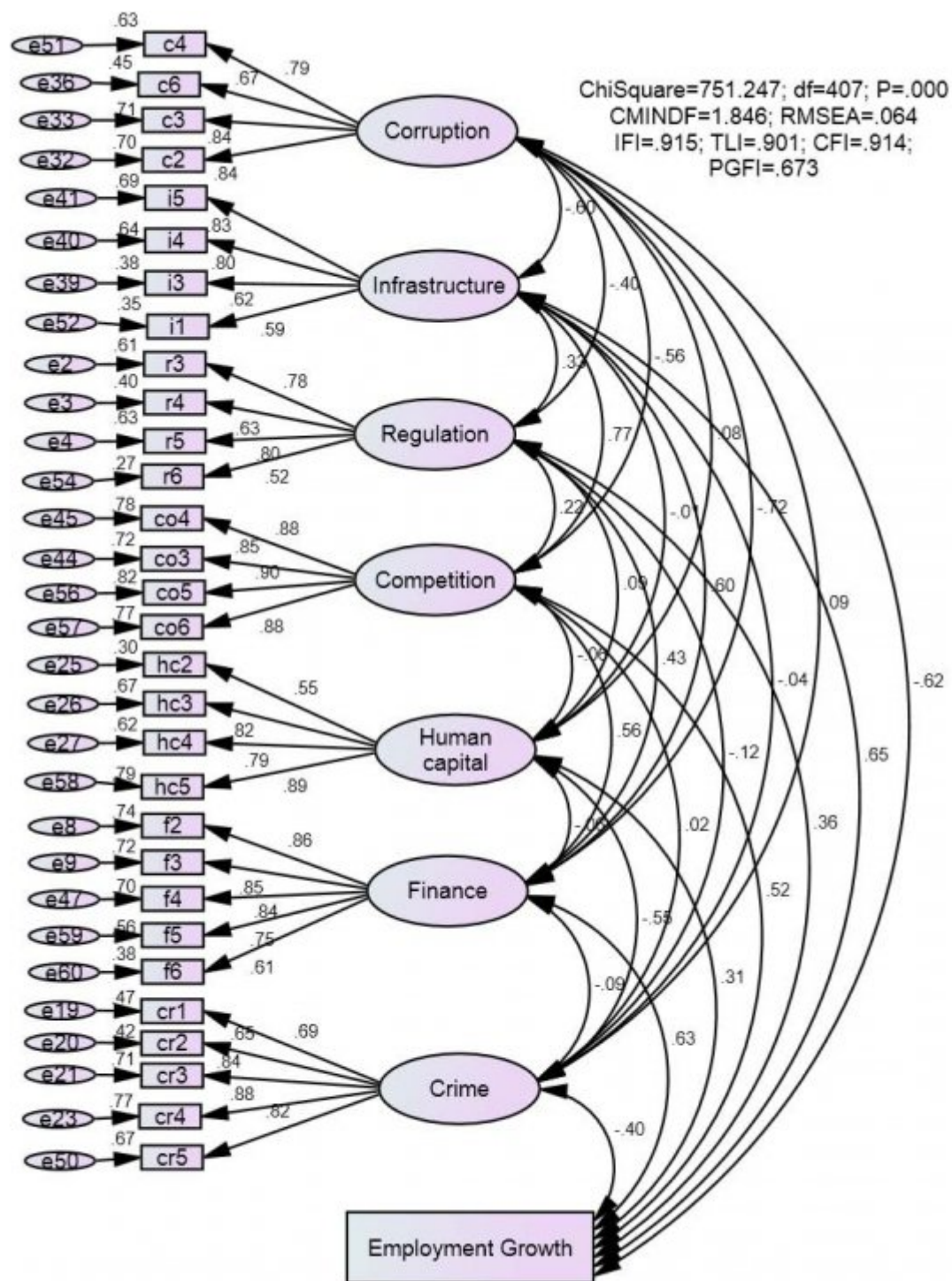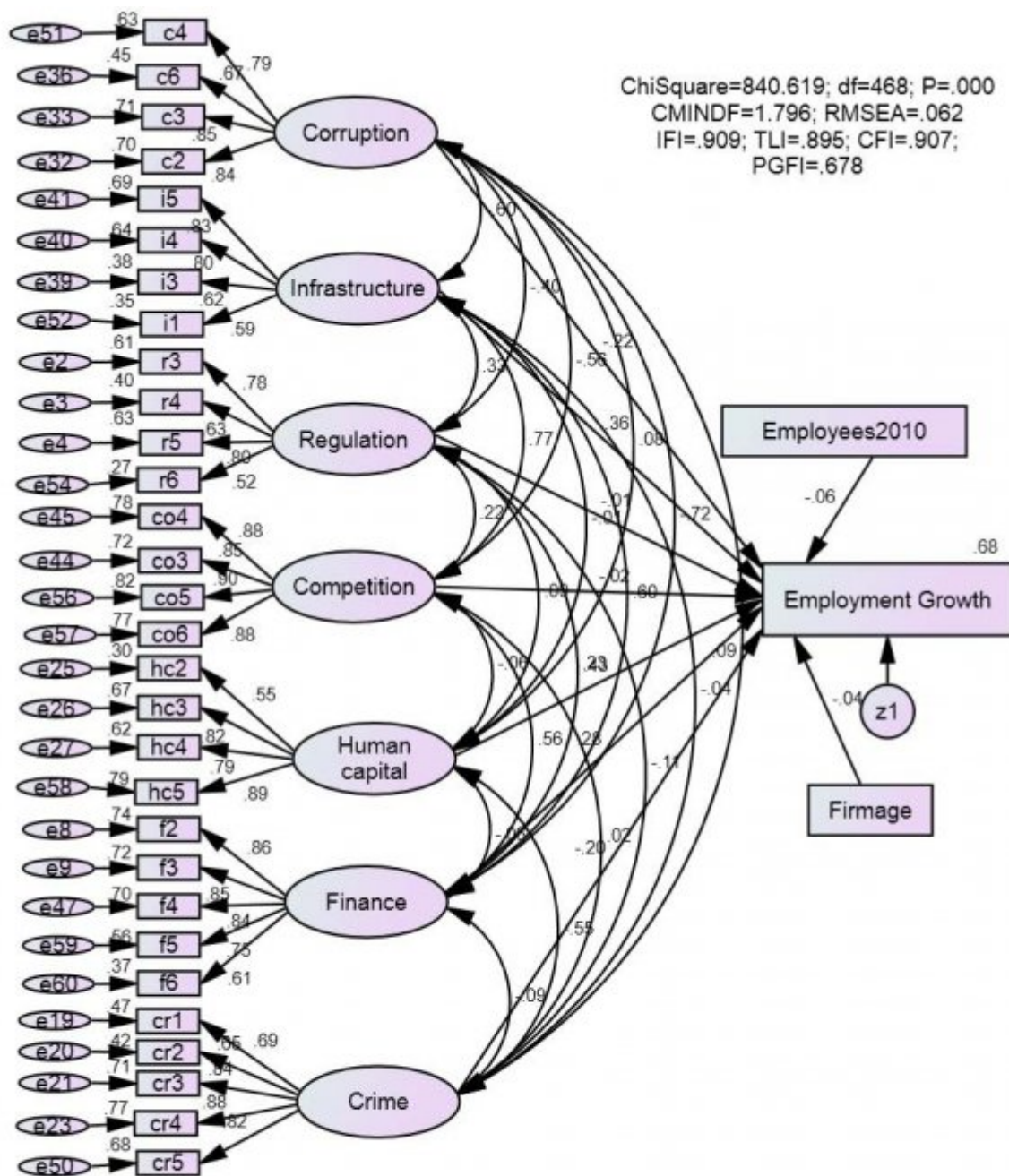

Figure 1:

Figure 2:

Figure 3:

1

Construct name	Initial number of items	Number of items carried forward to the analysis
Corruption	6	4
Infrastructure	5	4
Business regulations	7	4

Figure 4: Table 1 :

2

Fit Index	Recommended Value	Observed Value
?2		751.241
df		407
?2/df	1.00-5.00 (Kline 2011)	1.846
RMSEA	? 0.08 (Steiger 1990)	0.064
IFI	> 0.90 (Bollen 1990)	0.915
TLI	> 0.90 (Tucker & Lewis 1973)	0.901
CFI	> 0.90 (Joreskog & Sorbom 1993)	0.914
PGFI	> 0.50 (James, Mulaik & Brett 1982)	0.673

Note. X2= Chi-Square, Df= Degree of freedom,
RMSEA= Root mean square error of approximation fit
index, IFI= Incremental fit index, TLI= Tucker-Lewis
index, CFI= Comparative fit index, PGFI= Parsimony
goodness of fit index.

Figure 5: Table 2 :

3

Constructs	Items	Factor Loadings	Cronbach Alpha values	CR	AVE	MSV	ASV
Corruption	Corruption2	0.839	0.863	0.869	0.626	0.511	0.225
corruption	Corruption2	0.839	0.863	0.869	0.626	0.511	0.225
	Corruption3	0.845					
	Corruption4	0.791					
	Corruption6	0.673					
Infrastructure	Infrastructure1	0.594	0.799	0.805	0.515	0.485	0.236
	Infrastructure3	0.619					
	Infrastructure4	0.801					
	Infrastructure5	0.830					
Regulation	Regulation3	0.779	0.775	0.780	0.577	0.187	0.087
	Regulation4	0.631					
	Regulation5	0.795					
	Regulation6	0.520					
Competition	Competition3	0.847	0.930	0.931	0.771	0.585	0.210
	Competition4	0.882					
	Competition5	0.904					
	Competition6	0.879					
Human capital	Humancapital2	0.550	0.844	0.852	0.596	0.301	0.054
	Humancapital3	0.821					
	Humancapital4	0.789					
	Humancapital5	0.886					
Finance	Finance2	0.860	0.884	0.889	0.619	0.511	0.231
	Finance3	0.849					
	Finance4	0.835					
	Finance5	0.749					
	Finance6	0.612					
Crime	Crime1	0.689	0.883	0.884	0.607	0.301	0.055
	Crime3	0.840					
	Crime2	0.651					
	Crime4	0.878					
	Crime5	0.821					

Note: Composite reliability (CR), Average variance extracted (AVE), Maximum shared squared variance (M
Average shared squared variance (ASV).

Figure 6: Table 3 :

4

Fit Index	Observed Value
?2	840.619
df	468
?2/df	1.796
RMSEA	0.062
IFI	0.909
TLI	0.895
CFI	0.907
PGFI	0.678

Note. X2= Chi-Square, Df= Degree of freedom, RMSEA= Root mean square error of approximation fit index, IFI= Incremental fit index, TLI= Tucker-Lewis index, CFI= Comparative fit index, PGFI= Parsimony goodness of fit index.

Figure 7: Table 4 :

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15 CONCLUSION

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