DYNAMICS OF CAMEROON'S DEVELOPMENT STRATEGIES: PERSPECTIVE OF THE EMERGENCE POLICY

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Abstract

This study makes a dynamic analysis of the development strategies of Cameroon adopted since the time of the five-year plans until the strategy for growth and employment in abbreviated GESP, and offers a perspective on the policy of emergence materialized by the new strategy. development plan for Cameroon over the period 2020-2030 abbreviated as NDS 30 replacing the completed GESP. As a reminder, Cameroon within the framework of "vision 2035" aims to become emerging by 2035 through the promotion of industrialization. This three-phase vision began in 2010 with the implementation of the GESP, which was to put in place incentive prerequisites for the private sector in order to promote industrialization, in particular through major structuring projects. Having reached the end of the implementation of this strategy (2019), it is clear that the economic and social results are struggling to be felt despite all the battery of investments deployed. Then using a hybrid methodology (econometrics, data analysis,

probabilities) based on socio-economic and governance data, our study shows that from the ascent to independence on January 1, 1960 until 1993, development strategies have made it possible to situate Cameroon on the trajectory of emergence, however after 1993, there is an increasingly significant distancing of Cameroon from the trajectory of emergence; despite all the public policies deployed, in particular the GESP, which is supposed to accelerate the country's growth. Subsequently, these results show us that if the authorities continue in this dynamic, there is very little chance that Cameroon will become emerging in 2035.

INTRODUCTION

During the past six decades, Cameroon has experienced major political and socioeconomic transformations. In the political field, the most remarkable transformation is undoubtedly the process of transition from "authoritarianism" to democracy in the 1990s. In the socio-economic field, the country has distinguished itself by the implementation of various economic development strategies aimed at promoting the well-being of its populations and combating underdevelopment.

After experiencing the euphoria of the development strategies of the 1960s, punctuated by the five-year planning, Cameroon fell into the tragedy of the economic restructuring of the 1980s symbolized by the structural adjustment programs following the economic crisis of 1987 Guiding public development policies in Cameroon for a little over 20 years, structural adjustment programs (SAPs) have run out of steam for the State and its populations, even being dressed in their "social aspect", in view of the scarcely convincing results on the socioeconomic plan.

To compensate for the social disappointment of structural adjustment programs, the international financial institutions of Bretton Woods (IMF and World Bank) are implementing a new contractual framework of cooperation which enshrines the apotheosis of poverty reduction policies within the framework of the HIPC initiative. It is during this initiative that Cameroon will produce the poverty reduction strategy document (PRSP) in 2003. Unfortunately, the third Cameroonian household survey (ECAM 3) of 2007, reveals results deemed unsatisfactory for the struggle policies against poverty; which will lead to the revision of the PRSP facilitated by the 2006 external debt relief.

From that moment on, Cameroon will seriously consider transcending its status as a least developed country to become an emerging country by 2035, that is to say a "performing" country backed by expansionary growth driven by transformation structures in the label is integrated into the international market.

In order to achieve this objective, the Cameroonian government adopted in 2009, a long-term "three-phase" development vision (vision 2035), which aims to make Cameroon an emerging country by 2035, whose Growth and Employement Strategy Paper (GESP) appears as the first tangible step on the way which should lead Cameroonian society to the green meadows of emergence. As a result, the GESP is presented as the economic and political instrument capable of boosting a societal dynamic for the modernization of Cameroon. It seems to announce an era of positive changes that should bring Cameroon to the path of progress and nourishes, by a kind of exaltation, the hopes of the Cameroonian people who are dying to see their living conditions improve.

Thus, at the time of the operationalization of the National Development Strategy (NDS 30), which embodies the second phase of "the 2035 vision" over the period 2020-2030, it is necessary to mark a pause on the trajectory that the Cameroonian economy has taken these past six decades to ensure that the country is indeed on the viable paths of emergence. This is the reason that leads us to question the various development strategies implemented in Cameroon since its accession to independence in order to see if they have been effective in the race for emergence.

It is in this perspective that this work falls, which analyzes the trajectory of the Cameroonian economy on the basis of a diachronic reading of the different development strategies adopted starting from the five-year plans up to the GESP, and offers a perspective on the policy of emergence. In the rest of this analysis, a review of the literature is presented (I), then the methodological framework of the study (II), after the results (III) and finally a last part concludes.

LITERATURE REVIEW
Conceptual framework of emergence

Emergence is a concept for which there is no one-sided definition. Its meaning differs depending on the institution, and evolves over time.

Originally, emergence is a financial concept, used for the first time in 1981, by the Dutch economist of the International Finance Corporation (a subsidiary of the World Bank) Antoine Van Agtmael, who wanted, by this term, to make the distinction within the category of developing countries (DCs) between those which presented significant risks for international investors and those which, on the contrary, could be "lands of opportunity"[1]. As a result, the designation "emerging countries" in the 1980s made it possible to distinguish the good grain, that is to say, high growth countries, low in debt, whose capital account was sufficiently open to

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[1]Dalila Nicet-Chenaf et Piveteau Rougier, *Émergences capitalistes au Sud*, Karthala, 2013, p. 12.

accommodate capital. , the chaff that sent back to low-growth countries, crumbling under the weight of debt, relatively closed to capital inflows).

In fact, the deregulation of financial markets in developed countries, the global debt crisis and trade liberalization have accelerated the internationalization and diversification of private capital investments into so-called emerging markets.

In the wake of emerging financial markets, economists have identified emerging countries which, by their financial attractiveness, stand out from the traditional lot of poor countries but no consensual list of markets and emerging countries has emerged, leaving room to rankings according to the interpretation of rating agencies, investment banks and index providers, therefore criteria specific to authors or institutions are created to take into account the differentiation of emerging countries from other groups of countries.

Thus in the jargon of the world of finance, the expression "emerging markets" was born as a separate category of countries presenting significant opportunities in terms of asset investment; hence a largely Anglo-Saxon definition of "emergence".

This means that the concept of "emergence" is considered as an intermediate phenomenon between underdevelopment and development rather than as an epiphenomenon. The economic literature (Piveteau and Rougier, 2010; Hugon, 2008; Sagard, 2008) defines emerging countries as "*Developing countries which are poles of attraction for foreign direct investment, which diversify and accelerate, sustainably and harmoniously, their economic growth and which successfully integrate into the world economy thanks to their export capacities* "[2].

The expression "emerging economies", for Pierre Salama (2014), refers to a name which designates countries whose total GDP is considerable due to the size of the population (India, China), or whose per capita income is is at least equivalent to a third of that of advanced countries. These economies are relatively industrialized but are not alike either in terms of the structure of their GDP, or in terms of their international integration, or finally of their growth rate.[3]

For Samir Amin (2013), the emergence " *involves much more: sustained growth of industrial production in the country concerned and an increase in the capacity of its industries to be competitive on a global scale* "[4]. The author excludes from the analysis the extractive

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[2] Piveteau A., Rougier É. (2010) Émergence, l'économie du développement interpellée, Revue de la régulation, n°7, premier semestre, p 15

Hugon, Les liens entre les pays émergents et les pays les moins avancés, Conférence « L'émergence : des trajectoires au concept ? » GREThA-Université Bordeaux IV, 27-28 novembre 2008.

Sagard, Qu'est-ce qu'un pays émergent ? in C. Jaffrelot (éd.), L'enjeu mondial, les pays émergents, Paris, Presses de Sciences Po-L'Express, 2008, p 41-54

[3] Pierre Salama, « Des pays toujours émergents ?», Documentation française, 2014, p 142-160

[4] Samir Amin, « Qu'est-ce que « l'émergence » ? », Informations et commentaires, n° 163, avril-juin 2013, p 19-22

industries (mines and fuels) which can generate strong growth without spillover effects on other productive activities.

As understandings about emergence are plural, there is therefore no universal list of so-called emerging countries. The countries considered in this category not only differ from one institution to another, but also vary over time. The status of emerging country is only a transitional phase between that of developing country and that of developed country. The emerging country would therefore be a country emerging from underdevelopment, a middle-income economy with high growth potential, which opens up to the world economy and is undergoing major structural transformations through certain reforms. institutional, economic and social.

It thus represents a step which, when taken, makes the process of catching up in rich countries more sustainable (Moubarack LO, 2008). To emerge and give growth a sustainable character, the poor country must indeed comply with international standards of competitiveness and align itself with best practices.

In addition, a poor country must therefore put in place proactive policies to convince investors to come and stay in its country, and seek to successfully integrate into the global economy. The reforms attached to this requirement constitute the prerequisites for emergence.

It is therefore often a set of reforms leading to the opening of markets, but also to attracting and reassuring foreign investors, which is at the origin of the label "emerging countries". The latter is therefore based on socio-economic and institutional reforms desired by the States and which have set in motion a process of growth based on investment opportunities which have been created following changes in the terms of trade and/or increased stability in a region (Dalilla, Piveteau, Rougier, 2013).

Ideally, the country should seek to achieve the highest possible level of competitiveness and attractiveness, by establishing a world-class environment. As a result, it is as if it were setting the record straight and giving itself, with a certain time lag, the same initial conditions as the rich countries.

However, some authors such as Jean-Louis Thiébault (2011) refute the thesis that emergence models would constitute transitional stages allowing convergence towards development, indeed these policies are very vulnerable to external shocks such was the case during the period of 1973 with the second oil shock. Indeed, this shock ultimately led to the debt crisis which had negative repercussions on most of these emerging countries because these countries, in order to deal with the debt crisis, have no choice but to introduce neoliberal (structural adjustment plans) that resulted from the Washington consensus.

Dalilla (2014) also calls this thesis into question, as she observes that most of these emerging countries still suffer from the serious ills of underdevelopment. Indeed, according to

her, growth by extroversion is currently based on low wages guaranteeing export competitiveness and in return maintaining domestic demand at a low level. However, inclusive growth presupposes, on the contrary, an increase in wages and the standard of living, which does not fail to degrade cost-competitiveness and export performance.

The solution it advocates is the effective development of an internal market which would supplement external demand, thanks to a sufficiently strong middle class through a better distribution of income and stronger social protection, while the conquest of third markets is favored by a better educated population allowing the move upmarket.

Thus, in 2014, in Brazil, 5% of the population lived on less than 1.90 dollars a day, while this figure was at the same time 13% in China (173 million people); 25% of the population of East Asia lives in extreme poverty (excluding China). Brazil, China, South Africa and Mexico have Gini coefficients above 50.

Between 10% and 20% of working children are found in Brazil, India, Thailand, Malaysia, etc. 21% of the population is undernourished in India, 10% in China, 17% in Thailand, 14% in Vietnam, etc. The rural population is 38% of the total in South Africa and 49% in China, while the share of the added value of agriculture in the GDP of these countries is only 3% and 10% respectively. Rural population figures even reach 60% in India, 49% in Indonesia, while the participation of agriculture in the formation of added value is only around 15% of GDP in both cases.

These countries, to varying degrees, still suffer from all the ills of underdevelopment and there is no guarantee that the structural changes needed to overcome poverty will take place. We can cite, for example, Vietnam whose performance is often hailed but for which the World Bank does not fail to warn about a competitiveness which is hampered by the lack of infrastructure or the sharp increase in inequalities which jeopardizes social peace (in 2010, ethnic minorities represented 65% of the poorest decile of the population, compared to 53% in 2006). Many Asian countries regularly experience climatic disasters and unstable political and social situations, such as Thailand, for example. We can also recall the strong instabilities from which countries like Egypt or Tunisia suffer. Today, even the largest emerging countries are in turmoil.

In summary, concerning the concept of emergence, it is probably too early to make it a key element in the analysis of the development trajectories of these countries. If it is possible to highlight certain regularities in the conditions which lead to obtaining the label of emerging country, such as the international integration authorized by the maintenance of low social standards and the signing of free trade agreements , "pro-market" and "pro-business" industrial policies orchestrated by the States, industrial specializations relating to low-end or low added value segments, or even relative political stability, to date there is no guarantee that the

necessary reforms will be adopted to move these still highly unequal societies towards developed societies.

From convergence to emergence

The analysis of economic convergence, in particular that of per capita incomes, between rich and poor countries is a major issue and remains at the center of most studies of economic growth, both theoretically and 'empirical.

On the theoretical level, three theories explain the convergence or divergence of economies as a result of the process of economic integration, namely: the neoclassical theory of growth, the theory of growth poles (or theory of polarization), as well as the new theories of geographical economy and those of endogenous growth.

Indeed, based on the model of Solow (1956), the neoclassical theory of growth predicts a convergence of countries towards the same level of GDP per capita, under the assumption of diminishing returns and of a space where the economies are similar. in terms of preferences and technologies. Thus, trade integration and the liberalization of capital movements constitute in this context a factor of acceleration of convergence.

On the other hand, the theory of growth poles initiated by François Perroux (1995), then deepened by Hirschman (1998), underlines the difficulties that the effects of growth have in spreading to all sectors of the economy and to leave the driving sectors from which they originate. This theory states that convergence depends on the confrontation between two opposite effects of an integration. The first effect is that which is unfavorable to the poor countries (constituting the periphery), tending to reinforce the competitive advantage of the rich countries (constituting the center) and to attract the factors of production to the latter. Unlike the first, the second effect is favorable to the poor, because it consists in encouraging the factors of production and economic activity to leave the center for the periphery, following the congestion effects from which the first suffers.

A little later, the new theories of growth as well as the new theories of geographical economics both insisting on the importance of economies of scale, imperfect competition and the phenomena of localized spillovers – shed new light. about the evolution of disparities between regions (countries). Initially, contrary to the neoclassical vision, endogenous growth theories, initiated by the models of Romer (1986) and Lucas (1988), do not predict convergence between rich and poor countries, even when the movements of goods and capital are free. Indeed, by rejecting the hypothesis of diminishing returns on capital, these models exclude the economic mechanism that generates the process of convergence.

In some places, these works therefore envisage at best only a persistence of disparities; because, mechanisms related to the presence of increasing returns, come to reinforce the initial advantages characterizing the countries. Moreover, Lucas (1988) even thinks that openness and economic integration can delay regional convergence because trade between countries can lead them to specialize in sectors where they have a comparative advantage, but where weak learning effects are present.

Secondly, the new theories of geographic economy reinforce the new theories of growth with a number of studies including that of Krugman (1981, 1991a, 1995) and that of Baumont (1998). Indeed, these authors underline respectively that the evolution of interregional disparities depends on the confrontation between centrifugal forces (pushing to the dispersion of activities in space) and centripetal forces (leading to their agglomeration), and that the policies of Regional integration by favoring the spatial concentration of productive systems can increase the growth rate of a geographical area, but cannot improve convergence between regions/countries.

We then assume convergence towards emergence by a convergence of developing countries towards so-called emerging countries in terms of per capita income, and on the basis of these theories related to economic convergence, derive from two main approaches developed in the empirical literature to capture the catch-up towards emerging countries, the first linked to the synthetic indicator of emergence correlated with per capita income and the second linked to econometric developments.

RESEARCH METHODOLOGY

Regarding the methodological framework, we will use several quantitative analysis tools to meet our objective, which is to analyze the country's trajectory in this march to emergence. Initially, the methodology will consist in analyzing the speed of convergence towards emerging countries from the implementation of five-year plans to the GESP in order to assess the historical gap between Cameroon and these countries, thus to assess this gap. We will use an appropriate econometric modeling, namely a space-state model. Secondly, we will use probabilistic modeling to assess the country's chances of reaching this emerging status by 2035. For this, we will build an emergence indicator that will allow us to gauge efforts. country and note its level, for this we will use data analysis techniques namely Multiple Factor Analysis (MFA) for the indicator and Ascending Hierarchical Classification (AHC) for the level of emergence.

On this basis, the probabilistic approach will consist in evaluating the chances of reaching the last level being that of emergence, this approach is based on the construction of Markov chains.

Econometric modeling : space-state model

First, we will use econometric modeling, namely a space-state model, taking real GDP per capita as a variable, this modeling will allow us to assess the speed of catching up or convergence of Cameroon on emerging countries. , in addition we will be brought to know if the reforms undertaken under since 1960 (political, economic and social) put on the country on the trajectory of the emergence, in particular those registered in the GESP because being the first decade of the policy of 'emergence.

If we consider that convergence is not effective at the start of the period but that it is in progress over the period concerned, we need a dynamic measure of convergence. Thus, we study convergence using a variable parameter model proposed by Haldane and Hall (1991) and amended by Hall et al. (1992), using the recursive Kalman filter algorithm.

Indeed, only a model with variable coefficients over time allows a dynamic analysis of the structural changes affecting the coefficients. These TVCM (time-varying coefficient model) belong to the class of space-state models (Harvey, 1989), which are very general and cover a wide field of application, including in particular all ARIMA models (VAR in the multivariate case) . Space-state models are based on modeling the observed structure of data. In addition, they allow us to abstract from the problems of stationarity and unit root that arise prior to the estimation of an ARIMA type model.

Indeed, the results of the TVCM estimated by the Kalman filter algorithm remain valid in the presence of non-stationary series (Durbin and Koopman, 2001; Hall et al., 2009). In addition, this analytical framework also makes it possible to relax the Gaussian distribution hypothesis for noises. Although the results of the Kalman filter are obtained under the assumption of normality, they have a wider validity in the sense of the minimum mean squared error when the variables concerned are not normally distributed (Durbin and Koopman, 2001).

Consider three countries i, j and k. To measure the convergence of variable X in country i with variable X in country j, we estimate the following measurement equation:

$(X_t^j - X_t^i) = \alpha_t + \beta_t(X_t^j - X_t^k) + \varepsilon_t : Measurement\ equation$ (1)

Where α_t and β_t are the parameters to be estimated, they are variable over time and defined in the equations of state :

$\alpha_t = \alpha_{t-1} + \eta_{1t} : Equation\ of\ state$ (2a)

$\beta_t = \beta_{t-1} + \eta_{2t} : Equation\ of\ state$ (2b)

With $\varepsilon_t \sim N(0, \sigma_\varepsilon^2),\ \eta_{1t} \sim N(0, \sigma_{\eta_1}^2),\ \eta_{2t} \sim N(0, \sigma_{\eta_2}^2)$

Equations of state describe the dynamics of parameters varying over time, and assumed to follow a random walk. The vectors $\varepsilon_t,\ \eta_{1t}$ and η_{2t} are assumed to be serial and mutually

independent. The system of equations (1), (2a) and (2b) is called the space-state model and can be estimated using the Kalman filter. This is a recursive procedure that combined with the maximum likelihood method provides an optimal estimate of unobservable components, that is, parameters that vary over time.

The notion of convergence is quite simple and intuitive, it supposes that the difference between two or more series must become arbitrarily small or converge towards a constant over time. For random series, like most economic variables, we consider the notion of stochastic convergence. The probability that two or more series differ by a specific value must then become arbitrarily small. Hall et al. (1992) then speak of weak convergence. Applied to the model, described by equations (1) and (2), this notion of convergence implies $E\{\lim_{t \to \infty} \alpha_t\} = 0$ and $E\{\lim_{t \to \infty} \beta_t\} = 0$, α representing a constant. A formal measure of convergence is given directly by the trend of the parameters α_t and β_t.

When β tends towards zero, the movements of the variable X in country i are explained by those of X in country j independently of country k: we then speak of relative convergence of j on i. When β tends to 1, the difference between the variables X of countries i and j is explained by the difference between the variables X of countries j and k, then there is no convergence between X_i and X_j, α_t is a stochastic constant independent of all systematic influences coming from the differential between X_i and X_j, except those resulting from movements of the gap between X_j and X_k. The α_t coefficients are potentially important insofar as they offer the possibility that the specific explanation proposed by the model may be either insufficient or irrelevant. A double condition is therefore necessary to ensure the relative convergence of j on i: α_t must tend towards a constant and β_t must tend towards zero.

We distinguish between convergence towards the same level and convergence up to a constant (Fuss, 1999). A strict convergence criterion leads to favoring convergence towards the same level which in our work is emergence. In this case, the coefficient β is not significantly different from zero for a risk of error of 5%, which indicates that the emergence process is carried out.

On the other hand, convergence up to a constant is a more flexible criterion which reflects a rapprochement of the countries; in this case, the coefficient β is significantly different from zero at the end of the period.

The maximum likelihood estimators of the state parameters obtained by applying the Kalman filter algorithm make it possible to trace the temporal evolution of the coefficients and II decide on a possible convergence of the parameter. As mentioned by Hall et al. (1992), this method has at least two advantages: it is independent of any unit of measurement and

intrinsically constitutes a model of structural change. The major drawback stems from the sensitivity of the results to the choice of the reference country. Convergence then appears relative and depends on the reference country.

In this work, we study the convergence towards emerging countries by using as reference country a fictitious country "rest of the developing countries" (RDC) which wants to be a country representative of the developing countries of our base including Cameroon. is not part and those that are emerging:

$$(X_t^{EMERGING\ COUNTRIES} - X_t^{CAMEROON}) = \alpha_t + \beta_t(X_t^{EMERGING\ COUNTRIES} - X_t^{RDC}) + \varepsilon_t \ (3)$$

Where X_t represents real GDP per capita.

This equation then allows us to explore the impact of the GESP reforms on the process of convergence towards emerging countries. The data will come from the World Bank data base from 1960 to 2017, then will be quarterly based on the methodology of Goldstein and Khan (1976). Thus we will analyze the speed of emergence of Cameroon through the coefficient β_t with an emphasis on the period of the GESP.

The implementation of this model was done using Stata software through the *State-space models* module.

Construction of the emergence indicator

Subsequently, the methodology used will consist in calculating a multidimensional indicator of emergence to take into account the level of emergence on a panel of countries including Cameroon. In view of the empirical work of Mubarak LO (2008) and OBEMA (2017), we propose to approach the notion of emergence by 03 subsystems including:
• The political and institutional subsystem
• The economic and financial subsystem
• The social and cultural subsystem

Each subsystem is characterized by a certain number of indicators or variables the source of which comes from certain international organizations. On the basis of these variables, the multidimensional indicator of emergence should be constructed using data analysis techniques using mainly Multiple Factor Analysis (MFA) unlike the work of Mubarak LO (2008) and OBEMA (2017) which use Principal Component Analysis (PCA), however it turns out to be very limited due to the weight of the variables in the construction of the indicator. This indicator will be determined year by year, and on the panel of countries, it will be between 0 and 1.

The base thus constructed includes 70 developing countries on the basis of the work of Mubarak (2008), the data will go from 2009 to 2017 due to the implementation period of GESP. This database is made up of 21 quantitative variables including:

1- The political and institutional subsystem: **6 variables**

Table 1 : political and institutional subsystem variables

Dimension	Variables	Source
The political and institutional subsystem **(6)**	Voice and Responsibility (democracy)	WGI
	Political stability	WGI
	Quality of public administration	WDI
	Quality of budgetary and financial management	WDI
	Corruption Control	WGI
	Property rights and rules-based governance	WDI

2- The economic and financial subsystem : **9 variables**

Table 2: economic and financial subsystem variables

Dimension	Variables	Source
The economic and financial subsystem **(9)**	Debt management policy	UNIDO
	Political budget	WDI
	Monetary and exchange rate policy	WDI
	Commercial policy	WDI
	Financial policy	WDI
	Quality of infrastructure	WDI
	Regulatory framework for companies	WDI
	Economic diversification	WDI
	Degree of openness	UNCTAD

3- The social and cultural subsystem: **6 variables**

Table 3: social and cultural subsystem variables

Dimension	Variables	Source
The social and cultural subsystem **(6)**	Labor and social protection	WDI
	Life expectancy	WDI
	Education	WDI
	Gender equality	WDI
	Equity in the use of public resources	WDI
	Environmental Protection	UNDP

The definition of these indicators will be presented in the appendix as well as their calculation method and their source. In addition to this, it should be remembered that in the MFA, certain variables will be added (or illustrative), namely:

- National income per capita (GNI);
- The Human Development Index (HDI);
- Foreign Direct Investments (FDI)

The main advantage of using MFA is that it integrates the different subsystems while taking into account the different disparities between countries. In addition, the 03 subsystems do not have the informational structure, it could happen that some of these subsystems have a relatively greater inertia compared to the others, and the immediate consequence is that if we resort to the classical Principal Components Analysis (PCA) on all of these subsystems for the construction of the indicator, certain subsystems will not provide much in terms of information on emergence, but the MFA would resolve this problem of inertia brought by each subsystem because presents factorial axes which are common to all the identified subsystems.

Specifically, the FMA will consist first of doing a PCA on each of these 03 subsystems and then collecting the factorial coordinates of the countries along each factorial axis. Thus for a given subsystem, the factorial coordinate of a country on a factorial axis is given:

$$F_i^\alpha = \sum_{k=1}^{K} W^k Y_i^k$$

Where K is the number of total variables, Y_i^k the variable k, W^k the coordinate of the variable k on the factorial axis in relation to the square root of the eigenvalue (Asselin, 2002). Subsequently, the MFA will consist in carrying out a Principal Component Analysis (PCA) weighted on all the factorial coordinates F_i^α of the countries from the different PCAs.

However, the particularity of this exercise is that for each PCA resulting from these subsystems, it will be necessary to retain only the variables which will contribute the most to the formation of the first factorial axis.

The advantage of not retaining the variables that most contribute to the formation of the first factorial axis in each PCA, is to ensure that the first factorial axis of the MFA releases a large amount of information on the emergence and this In fact, this axis can be interpreted as an axis of multidimensional emergence, the first factorial axis is the one essentially targeted, the other axes can also be interpreted as other dimensions of emergence.

For this, for each subsystem, a PCA question will first be made to see which variables are the most contributory to the formation of the first factorial axis, this first PCA constitutes in a way a filter to retain certain variables, however. it will be used the correction of Benzécri (1979)

which advises to consider the principal axes whose eigenvalues are higher than the inverse of the number of active variables in the model.

After that, an MFA will be done, to retain the number of axes retained, using the Cattell screen test criterion (Cattell, 1966) and the inertia criterion, as well as a measure of consistency, i.e. the ratio inter inertia on total inertia. These measurements not only make it possible to test the internal consistency of the index and the relevance of the dimensions and individual indicators selected, but also to judge the statistical quality of the aggregation that will be done through the index. In his document, Cattell recommends retaining the axes which, visually, are located before the change in slope of the graphical representation relative to the percentage of inertia explained by each axis.

Concerning the inter inertia ratio on total inertia, it shows to what extent the factor Fs of the MFA can be considered as "common" to all the subsystems considered, it is recommended to retain the axes whose minimum value is of 0.7.

To reinforce these various criteria on the choice of the various axes of the MFA, it will also be studied the canonical correlation of the various factors with the various subsystems in order to see the degree of connection of the various subsystems with the factors of the. MFA.

Once this work of the MFA is done, we will have the normalized scores of the different modalities of the variables considered. It is on the basis of the standardized scores that the Multidimensional Emergence Index (MEI) will have to be constructed, which will mainly focus on the first factorial axis of the MFA.

Specifically, the analytical expression of the MEI (Multidimensional Index of Emergence) for a given country first involves the calculation of composite ICE indices according to each subsystem:

$$ICE_i^j = \frac{1}{\lambda_s}\frac{1}{\lambda_1^j}\sum_{k=1}^{K_j} W^k Y_i^k$$

Where K_j is the number of variables retained in the subsystem j, W^k the coordinate of the variable k on the first factorial axis of the MFA, Y_i^k the variable k of the the subsystem j (Escofier B. and Pages J., 1983), λ_1^1 the first eigenvalue resulting from the PCA of the variables of the political and institutional subsystem and λ_s the first eigenvalue of the MFA.

Therefore the ICE summarizing the 3 subsystems is written just as the arithmetic mean of the 3 present ICEs described on each subsystem:

$ICE_i = (ICE_i^1 + ICE_i^2 + ICE_i^3)/3$

In addition, ICE by its method of determination, that is to say the MFA, can take values that are not between 0 and 1, so a transformation will have to be applied to have values between 0 and 1. We define and we calculate $A = min_i(ICE_i); \ B = max_i(ICE_i)$

We therefore calculate the Multidimensional Emergence Index for a country given by:

$$MEI_i = \frac{ICE_i - A}{B - A}$$

For a given set of countries, the MEI is equal to the simple arithmetic mean of the MEI of the constituent countries.

Probabilistic modeling : markov chains

This preliminary work done, we proceeded to the ascending hierarchical classification to have 4 convergence classes each reflecting the level reached in terms of emergence by developing countries, these classes are:

a) Non-emerging countries;
b) Potentially emerging countries;
c) Pre-emerging countries ;
d) Emerging countries

Figure 1 : March towards emergence
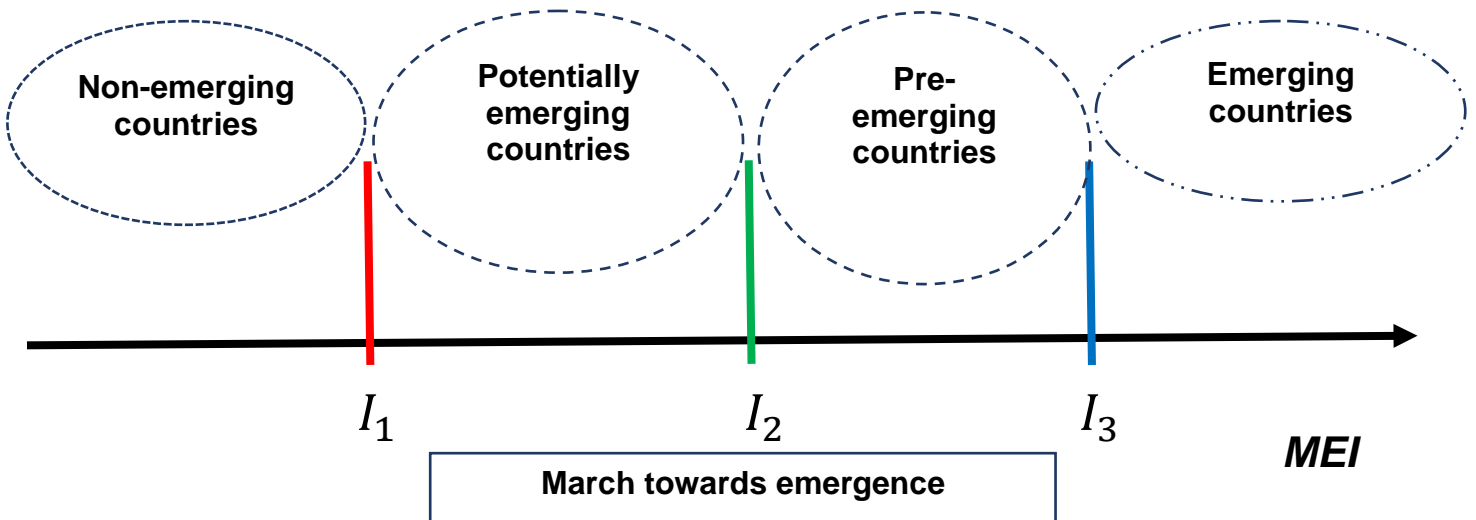
However, although Figure 1 reflects an increasing rectilinear evolution, the fact remains that the different levels of emergence are interrelated given that this relates to the performance of developing countries, which would mean that evolve than regress as shown in Figure 2.

Figure 2: Presentation and relation between the 04 reversible states
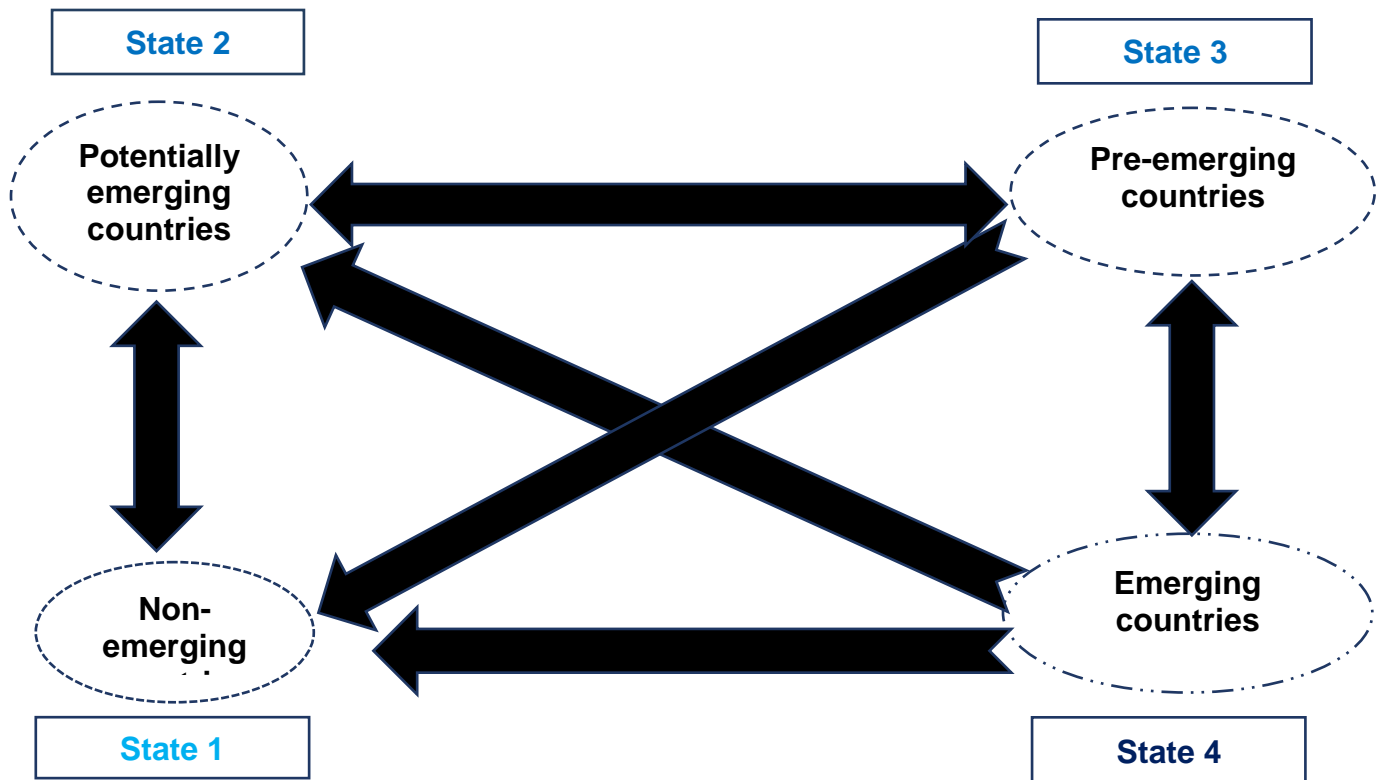
a) Définition of the process

Let F be the space of time and (S, S) the space of states (a measurable space). A stochastic process (Ω, A, P, {ξ (t), t ∈ F}) is the data of a random function dependent on time (t ∈ F) and chance (ω ∈ Ω)

$$\xi: F \times \Omega \to S$$
$$: (t, \omega) \to \xi (t, \omega)$$

such that, for t ∈ F, the function ω → ξ (t, ω) is a random variable on (Ω, A, P) with values in (S, S). For a given ω, the function t → ξ (t, ω) is the trajectory of the process.

The notion of process broadens the notion of random variable. A process will be denoted {ξ (t), t ∈ F}.If S is finite or countable then the process {ξ (t), t ∈ F} has a discrete state space. Otherwise, {ξ (t), t ∈ F} is a continuous state space process.

If F = $\{t_n\}$ then the process is said to be discrete time. If F is a time interval of the R axis or if the set of values of F is continuous, then {ξ (t), t ∈ F} is a continuous time process. We will speak of process when the set of values of F is continuous and of chain otherwise.

In the context of this work, we have to deal with a stochastic chain with discrete state space, indeed in our work S = {Non-emerging countries, Potentially emerging countries, Pre-

emerging countries, Emerging countries}, so S is finished and F = {1, 2, 3, 4, 5, 6, 7, 8, 9}, therefore F is finite.

It is a Markov chain, that is, a process whose future evolution {X (t); t> s} only depends on its past through its state at time s, for all t> s.

Pr {X (t) = j | X (r) = x_r, r <s} = Pr {X (t) = j | X (s) = x_s}.

This definition means that the entire past of the process is summarized in the previous state or, the present being known, the future is independent of the past. Therefore, this chain is completely defined by:

1. Its vector of initial probabilities, noted P_0 is such that:

P_0 [j] = Pr {X (0) = j}, j = 1, ..., 4 with

$$\sum_{j=1}^{4} P\{X\,(0) = j\} = 1$$

2. Its transition probability matrix: P (s, t) = $p_{ij}(s, t))_{ij}$ that

p_{ij}(s,t) = Pr{X (t) = j | X (s) = i} ∀ s, t ∈ F and i, j ∈ S, With P (s, s) = Id, and

$$\sum_{j=1}^{4} p_{ij}(s, t)) = 1$$

Transition intensities are other parameters that define a Markov process. Let Q (.) = $q_{ij}(s, t))_{ij}$ be the 4 × 4 matrix of transition intensities,

$$q_{ij}(t) = \lim_{\Delta t \to 0} \frac{p_{ij}(t, t + \Delta t)}{\Delta t}$$

$$q_{ii}(t) = -\sum_{i \neq j} q_{ij}(t)$$

b) Homogeneous markov chain

We make the strong assumption that it is a homogeneous Markov chain, i.e
. p_{ij} (s,t) = Pr{X (t) = j | X (s) = i},

$\qquad$ = p_{ij} (0, t − s),

$\qquad$ = p_{ij} (t − s)

The transition probabilities depend only on the time between two transitions and not on when these transitions occur. Using the Chapman-Kolmogorov equation, we find that

$$P(0, t) = \exp(Q \times t)$$

It will be a question of when determining the matrix P (9,26), that is to say the matrix P (0,18)

$$P(0,18) = (P(0,1))^{18} \text{ where } P(0,1) = \exp(Q)$$

The matrix Q will be determined by the maximum likelihood method (to estimate the intensities q_{ij}) and the method of diagonalization or an integer series expansion (to calculate the exponential of the matrix).

Moreover, with regard to figure 2, the shape of the matrix Q will be as follows:

$$Q = \begin{bmatrix} -a & a & 0 & 0 \\ c & -b-c & b & 0 \\ e & d & -e-d-f & f \\ g & h & i & -g-h-i \end{bmatrix}$$

The model used finally takes into account the effect linked to a vector of covariates z (here which are the variables entering the construction of the MEI) on the transients thanks to a proportional risks model applied to each entry of the matrix (Marshall & Jones, 1995). The effect of z on the transition intensity for country i at observation time t was $q_{jk}(z_{it}) = q_{jk}^0 \exp(\beta_{jk} z_{it})$ (Jackson, 2011). It is useful to clarify that in a model using covariates, the transition intensities are calculated by default by taking the covariates at their mean value over the sample.

Thus in the rest of our work, in order to capture the control variables allowing to accelerate the march towards emergence, the same modeling will be done twice however with different covariates, the first modeling will use as covariates the 03 indices of each subsystem and the last modeling will use as covariates, all the variables entering into the construction of the IME. The implementation was done using R software through the *msm* package.

RESULTS

Convergence in emerging countries: from five-year plans to the GESP

   a) **Analysis of model variables**

Graph 1 analyzes the evolution of the growth rates of real GDP per capita in emerging countries and that of Cameroon between 1960 and 2017. At the end of independence in 1960, we can see the growth profile of Cameroon and of those currently emerging countries did not differ so much, we notice a similar evolution until the 90s although the emerging countries record a better performance than Cameroon but not so far away.

During the 1990s, marking the debt crisis, especially in 1994 with the devaluation of the CFA Franc, the gap began to be felt and only grew over the years, moreover in 2003 after the end. of SAPs, the gap widens further, this gap is justified by a more or less stationary evolution

of the growth rate of real GDP per capita in Cameroon, unlike in emerging countries which are recording an exponential evolution.

In general, we note that Cameroon did not differ much from emerging countries at a long time (1960/1993) but the dropout will be felt from the 90s, a difficult period for the country due to the crisis that was raging but This crisis did not prevent the emerging countries from growing their real GDP per capita, this gap will be even more felt after 2003, this analysis foreshadows a very slow convergence of the country towards the emerging countries, not to say a divergence.

Graphic 1: Real GDP per capita of Cameroon and emerging countries between 1960 and 2017.
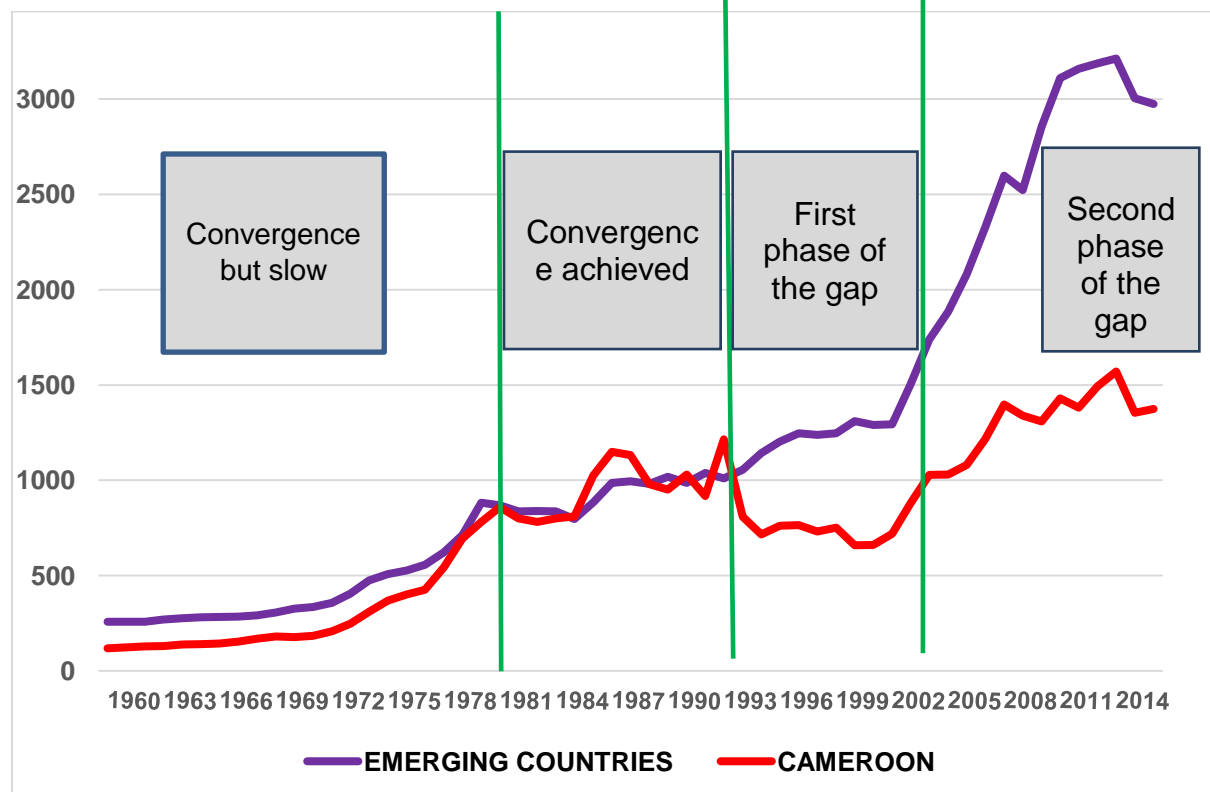

Source: IMF dataz

b) Analysis of the speed of emergence of Cameroon

During the implementation of the model, the assumptions of the model were verified, the results are in the appendix. With regard to graph 2, the results support the upstream analyzes (graph 1). Indeed between 1960 and 1985, we notice that the coefficient β slowly decreases towards zero, this would reflect the fact that the country would have slowly approached emerging countries during this period with the establishment of the first five five-year plans, to the point that between 1986 and 1993, convergence was reached with the coefficient β which will drop below zero.

Note, however, that during this period, there was the onset of the debt crisis in which shook most of the developing countries including Cameroon in 1987, so from 1988 we notice the coefficient β although below from zero starts up again,

Subsequently, the sixth five-year plan was interrupted and the country returned to structural adjustment programs carried out by the Bretton Woods institutions (IMF and World Bank) because the macroeconomic effects of the crisis are increasingly felt. with increasingly high twin deficits reflecting the country's internal and external economic instability. Until 1992, SAPs, i.e. the first two (that of 1988-1990 and 1991-1992) will attenuate the trajectory of the coefficient β because, although increasing, it still remains below zero, reflecting the fact that, although being in difficulty, the country is not moving significantly away from emerging countries.

Graphic 2 : Evolution of the coefficient β between 1960 and 2017.
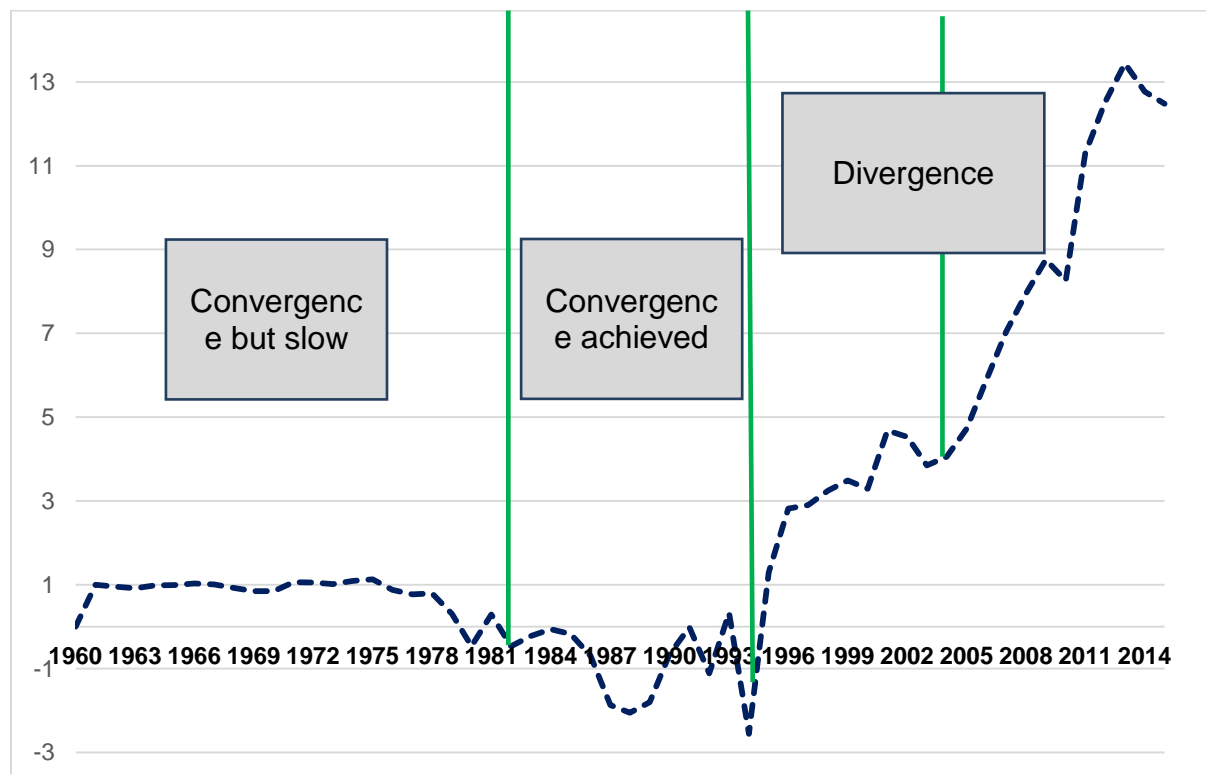
We even notice that these reforms will lead in 1993 to the reduction of the coefficient β to reach its lowest value over the entire period. These efforts will be short-lived because from 1994 to 2017, the coefficient β will start to rise again despite the reforms undertaken during the third SAP to the sixth SAP such as the devaluation and reduction of the state's standard of living, the

country is beginning to s 'move away from emerging countries. Indeed, between 1994 and 2003, the coefficient β is not only increasing but is above zero, that is to say an increasingly significant distance from emerging countries.

But from 2004 to 2017, the coefficient β still undergoes an increase, the trend of which is different from that observed between 1994 and 2003, proof that since the establishment of strategic policies specific to the State, including the PRSP and the GESP, country no. 'made it further away from emerging countries as during the implementation of the SAPs.

Beginning of the vision of emergence in 2010: efficiency and prospects of the GESP
   a) Efficiency

The first part of our analysis allowed us to observe that the country's convergence with emerging countries has not been uniform characterized by episodes of rapprochement and estrangement, however since 1993, the country has moved further and further away from this emergence trajectory despite the establishment of public policy batteries. Thus, it is a question of looking into the effectiveness of these public policies, in particular those of the GESP which marks the first decade of emergence policies implemented by the country. For this, we will analyze the emergence indicator that was created.

The emergence being a complementary association of several reforms on the political, economic and social plan, we will analyze the evolution in each of these dimensions.

Graph 3 shows the evolution of the efforts undertaken by the government to move closer to emergence since the implementation of the GESP. He tells us that it is in the economic and financial dimension that the country has made the greatest effort to get closer to emerging countries, this is explained by the decrease in its curve compared to others.

The graph also shows us that it is in the political and institutional dimension that the country seems furthest from emerging countries, followed by the social and cultural dimension. So the country should insist a lot on the reforms relating to these 02 dimensions in order to get closer to emerging countries; especially on issues of political stability, corruption, democracy, employment, gender, income inequality, poverty and social protection.

Overall, we note that the reforms made it possible to bring Cameroon very slowly closer to emerging countries, except in 2014 when the country moved further and further

away from emerging countries because of the exogenous shocks that Cameroon suffered, in particular the fall in oil prices as well as the security crisis linked to the Islamic sect BOKO HARAM.

Graphic 3: Evolution of the distance between Cameroon and emerging countries from 2009 to 2017 on all dimensions
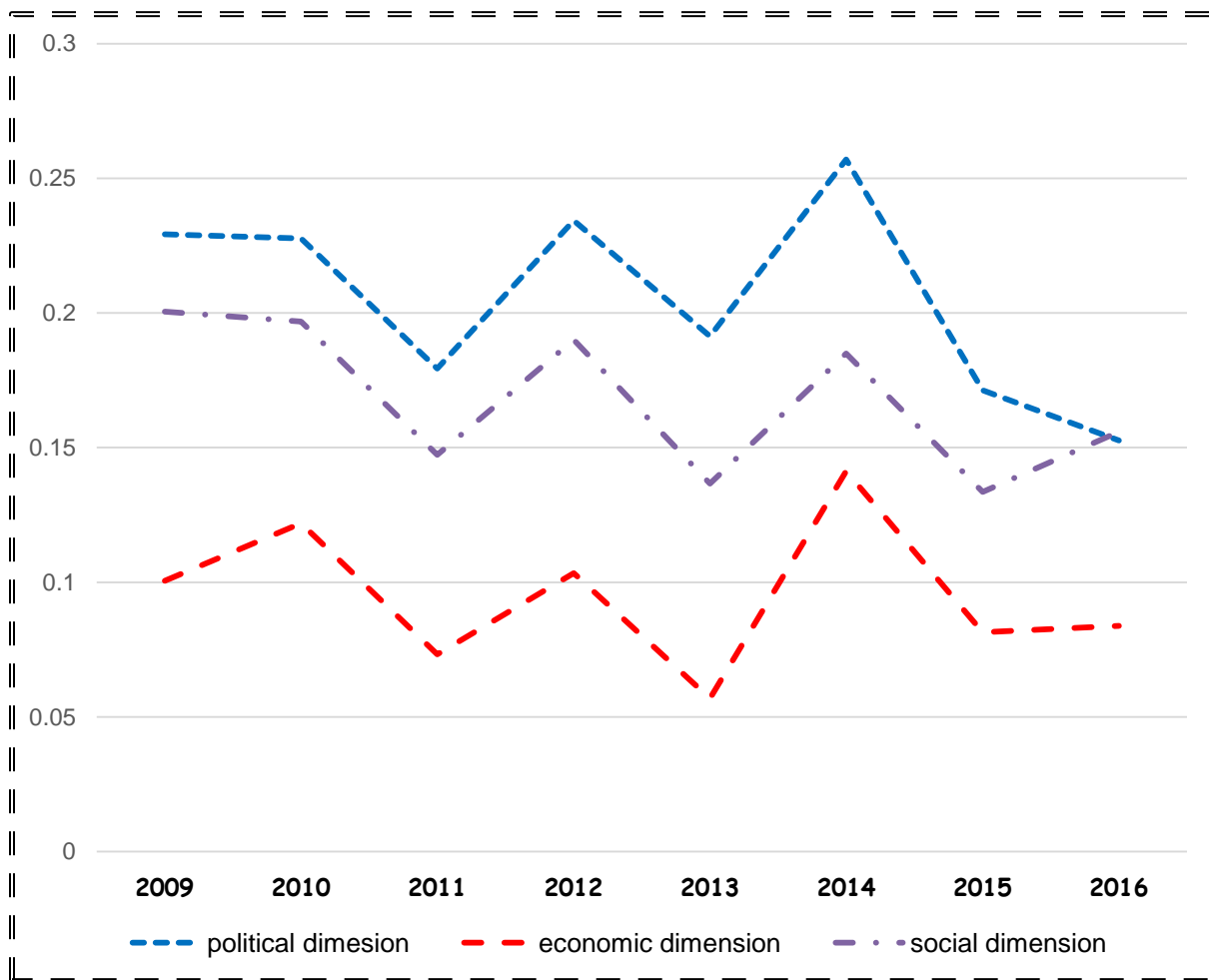
Graph 4 shows the position of Cameroon in relation to emerging countries, we see that Cameroon on all dimensions is very low compared to emerging countries which are very much above. In the lower part of graph 4, this concerns the positioning of Cameroon on the factorial plan made up of the first 2 axes, we also observe the same observation, namely a considerable gap which separates Cameroon from the emerging countries in 2009.

Graphic 4: Path illustrating the distance between Cameroon
and emerging countries in 2009
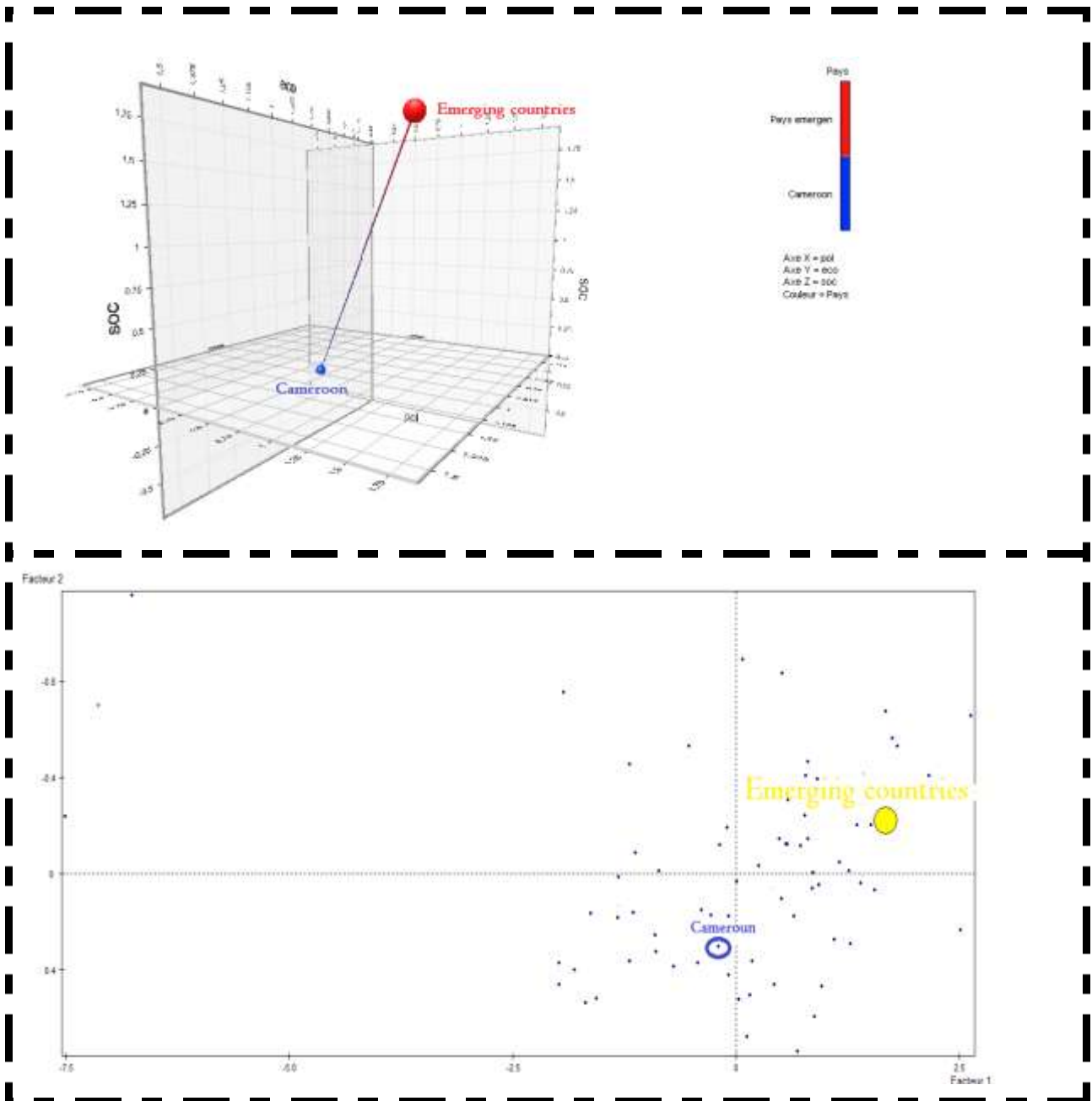
At the end of 2017, graph 5 shows that nothing has significantly changed compared to 2009, the country has moved away very slightly from these countries, proof once again of a general status in all dimensions .

Graphic 5: Path illustrating the distance between Cameroon
and emerging countries in 2017
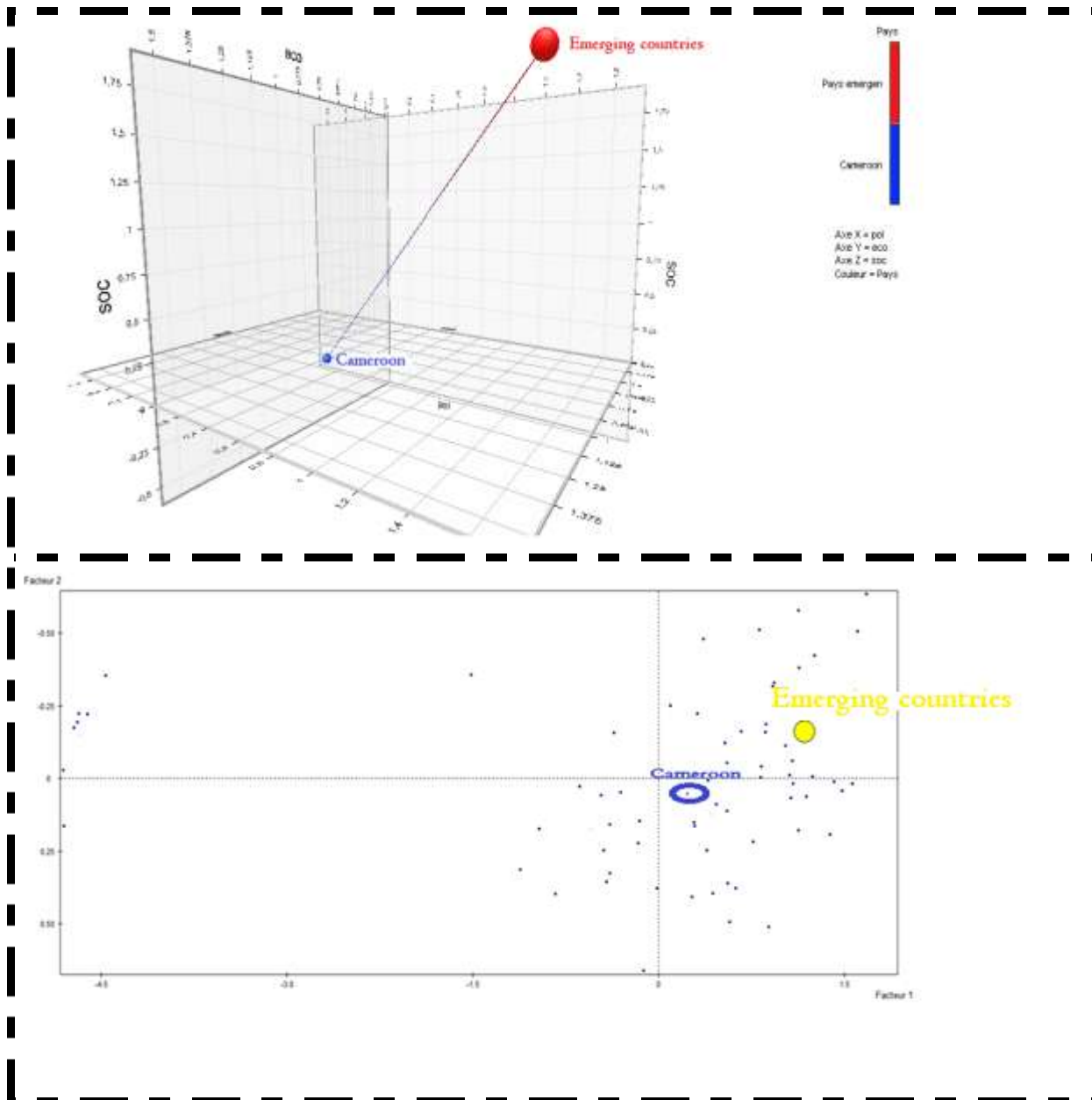
Under these analyses, we note that the reforms undertaken in the GESP could not place the country on a viable trajectory of emergence, yet it is the first decade of the country's emergence policy. As a priority cause for this observation, we drown out the weak impact of political and social reforms.

b) Outlook

Graphic 6: Evolution of probabilities in each state from 2010 to 2035 for Cameroon
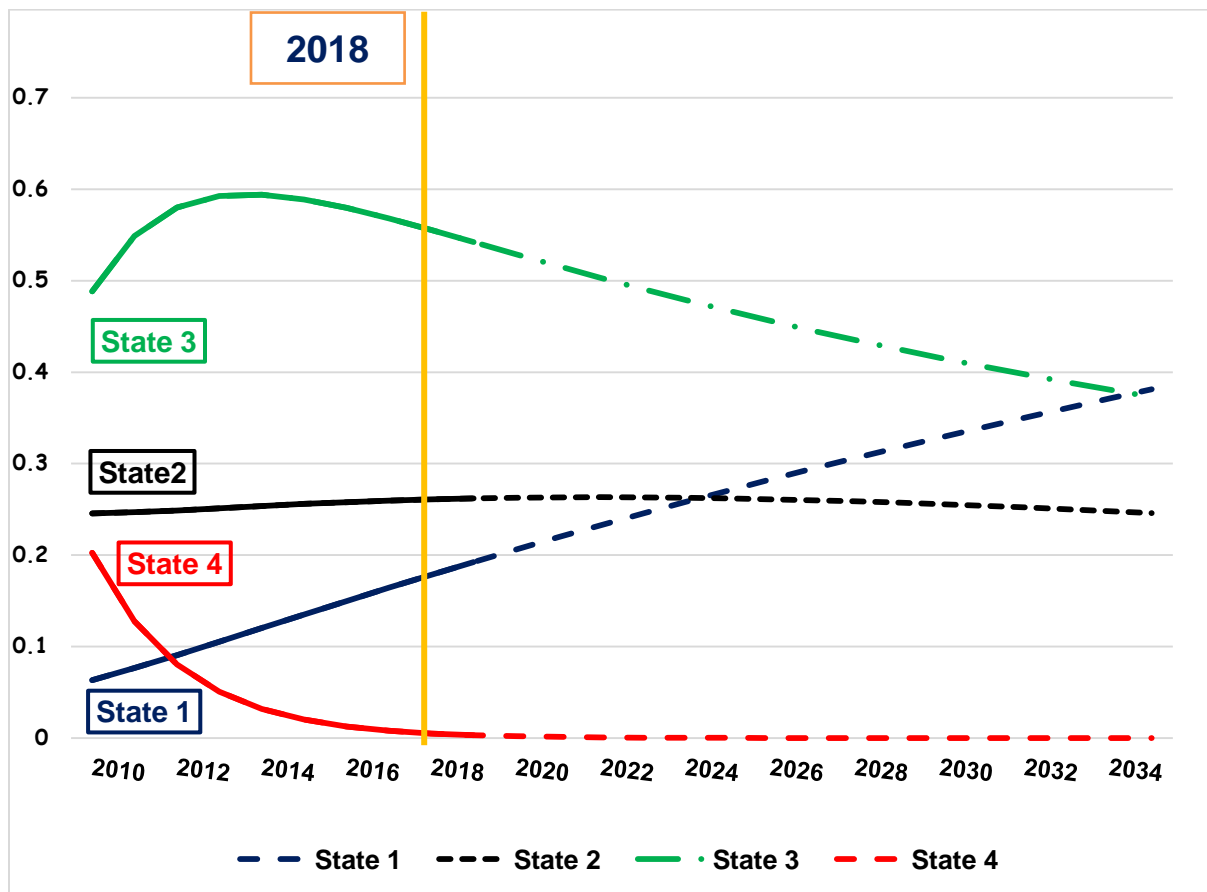
After determining the transition matrix, we determined the probabilities of being in each state for Cameroon. With regard to graph 6, the probability for Cameroon to remain in state 3 (pre-emergent) is higher than all the others. On the other hand, the probability for Cameroon to be emerging decreases over time to stand at 0.004.

Another remark lies in the probability for Cameroon to be in state 2 (potentially emerging) does not vary around time, fluctuates around 25%, on the other hand the probability for Cameroon to return to the stage of non-emerging country. grows over time to the point that by 2035, it is very likely that the country will be non-emerging, indeed by 2035, the probability of being emerging is almost zero while that of not being emergent is 0.37. This shows us that all things being equal, the country has a strong chance of not being emerging by 2035 if we continue at this rate.

CONCLUSION AND RECOMMENDATIONS

After ascending to its independence, Cameroon initiated a succession of development strategies starting from five-year plans to the GESP through the SAPs and the HIPC initiative materialized by the implementation of the PRSP.

However, these strategies have recorded a rather mixed record in terms of socio-economic results, especially since the implementation of the SAPs, or after the relaxation of the external constraint following the HIPC Initiative, the public authorities initiated in 2009 a deep desire to be emerging by 2035 through its forward-looking vision, of which the GESP was the first phase and constituted the global framework of reference for the actions of the government and development partners for the period 2010-2019.

It is within this framework that this work falls, the objective of which was to analyze the trajectory of Cameroon resulting from the different development strategies adopted starting from the five-year plans up to the GESP, and to offer a perspective view. on the policy of emergence.

To take stock of sixty decades of public development policy management, we have used various analytical methods, namely: econometric analysis, data analysis and probabilistic analysis on socio-economic data and governance between 1960 and 2017 from databases of international and national institutions such as the IMF, UNDP, UNIDO, INS and the World Bank.

In the end, the results show that the various strategies implemented have recorded a rather mixed results in terms of socio-economic results, especially since the implementation of the SAPs which leads Cameroon to move away from emerging countries in terms of real GDP per capita. Indeed, between 1960 and 1993, development strategies made it possible to place the country on the trajectory of emergence, however after 1993, there was an increasingly significant distance from Cameroon, from emerging countries notwithstanding all public policies undertaken, especially those of the GESP which appeared according to government rhetoric as the tool to put Cameroon on the path to emergence. Subsequently, these results show us that if the authorities continue in this dynamic, there is very little chance that the country will become emerging in 2035.

This situation is clearly illustrated by the disappointing performance of the Cameroonian economy in recent years. In fact, at the macroeconomic level, there has been a decline in the GDP growth rate since 2014, dropping from 5.6% in 2015 to -2.8% in 2020, the current account balance still in deficit with a passing deficit. from 729 billion in 2017, to 991.9 billion in 2019[5], the constantly growing stock of public debt with a debt ratio ranging from 18.9% in 2010 to 44% in 2020[6]. Regarding the social dimension, we note a remarkable rise in inequalities (the Gini

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[5]Https: // www.imf.org/external/ Data Mapper / profil / CMR. Accessed August 25, 2021 at 10:20 a.m.
[6]CAA, "Monthly public debt situation in Cameroon n ° 06/21 June 2021", July 29, 2021, p. 5.

income index dropped from 37.0% in 2007 to 42.0% in 2017), a stagnation of the monetary poverty rate, in particular more pronounced in rural areas (the poverty index fell from 40.2% in 2001 to 39.9% in 2007, reaching 37.5% in 2014)[7].

Therefore, in terms of economic policy recommendations, we urge the public authorities to really look into the design of an endogenous development model taking into account the specificities of the country, focusing particularly on political and social aspects. It should be noted that previous development models, imported or imposed from the West have shown their limits; they cannot therefore pull the country towards emergence in 2035 as the rulers wish.

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APPENDICES

Appendix 1: Canonical correlation of the first 03 factorial axes with each of the subsystems and the inter / total inertia ratio

	2009			2010			2011		
	F1	F2	F3	F1	F2	F3	F1	F2	F3
Political and institutional	0.94	0.87	0.28	0.94	0.87	0.25	0.94	0.89	0.24
Economic and financial	0.95	0.31	0.21	0.96	0.30	0.17	0.96	0.27	0.13
Social and cultural	0.97	0.54	0.84	0.97	0.53	0.84	0.97	0.52	0.87
Inter / total inertia ratio	0.91	0.35	0.27	0.91	0.35	0.26	0.92	0.35	0.28
	2012			2013			2014		
Political and institutional	0.93	0.88	0.27	0.94	0.89	0.23	0.97	0.95	0.23
Economic and financial	0.96	0.29	0.17	0.95	0.28	0.16	0.98	0.15	0.12
Social and cultural	0.96	0.52	0.85	0.97	0.53	0.85	0.98	0.56	0.90
Inter / total inertia ratio	0.91	0.35	0.27	0.91	0.36	0.26	0.96	0.38	0.29
	2015			2016			2017		
Political and institutional	0.97	0.95	0.32	0.97	0.87	0.29	0.97	0.85	0.31
Economic and financial	0.98	0.13	0.12	0.98	0.28	0.18	0.97	0.38	0.22
Social and cultural	0.98	0.54	0.86	0.98	0.58	0.81	0.94	0.48	0.88
Inter / total inertia ratio	0.96	0.38	0.28	0.96	0.33	0.27	0.95	0.33	0.29

Appendix 2: Cronbach's alpha coefficients from 2009 to 2017.

Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
Cronbach's alpha	0.9520	0.9533	0.9539	0.9478	0.9495	0.9778	0.9764	0.9792	0.9698

Appendix 3: White noise portmanteau test

	Portmanteau (Q) statistic	P-value
Measurement equation	26.8448	0.4175
Equation of state 1	21.8608	0.6438
Equation of state 2	26.8448	0.4338

Appendix 4: Residues from the space-state model