

# Empirical Result on Firms' Cluster Integration: Should Firms Evolve beyond Their Region?

S. Rick Fernandez

**Abstract**—The present study focuses on illustrating relevant regional firm's integration.

Part one examines the situation of bilateral countries relationship, and firms' opportunities at the present behavior of CELAC implementation.

Part two portrays relevant literature review, conforming to bring statement of complementing firm's clusters study, where the author states ways of cooperation as well as truth.

Part three examines the methodology used on the study, seeking to provide information of firm's participation on the survey, where 55.1% of the total firms sample distribution was tested to prove the null hypotheses.

Part four is pointing out that, the study has an observation of 174 firms tested by several statistical measures. The data will be analyzed using Rank Correlation, Correlation Coefficient and Multiple Regression, as excel is complemented by the comparison of several variables to tab the data.

Finally, part five depicts the conclusion and the finding summary by answering the study-aimed questions.

**Index Terms**—CELAC, FCI—firms' cluster integration, capital investment, production capabilities, expand of dynamism.

## I. INTRODUCTION THE AIM OF THE STUDY

This point of view will refer to these firms' networks as competitors or customers. Finally, the study will evaluate the level of performance outcome, and the perception of the country's (especially firms) member's behavior, whereas most prior studies have examined only several results in this type of firms cluster relationship. As a whole, this study tries to answer several important questions such as:

- 1) When the firms enter to a Commercial Network, Truthfully Commercial Environment and Expected Low Levels of Reciprocity, do they become more dynamic in international strictly regulated and potential market?
- 2) As the firms make important Capital Investment in assets to be implemented on commercial platform, and relevant Production Capabilities to raise regional forces, do they become more dynamic in an international strictly regulated and potential market?
- 3) If firms provide Dynamism for each other in firms cluster integration, will they become more dynamic in an international strictly regulated and potential market?

Having presented the theoretical framework under consideration in this study, the next step will be to present the relevant data that will be used to contrast the established

hypotheses as address on Fig. 1.

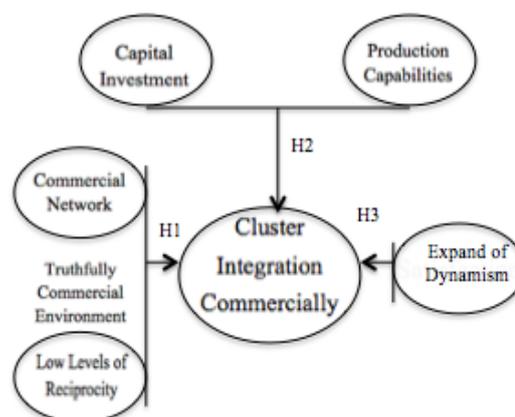


Fig. 1. The proposed model of the Study, the author-contextualizing data (2013).

H01. Firms' will enter a commercial network with government support, and become more dynamic in an international strictly regulated and potential market, if firms enter into a commercial network, truthfully commercial environment and expected low levels of reciprocity; it will help to participate in the platform.

H02. Firms' will enter a commercial network with government support, and become more dynamic in an international strictly regulated and potential market, if firms make important Capital Investment in assets to be implemented on commercial platform and make relevant Production Capabilities to rising regional forces; it will help to participate in the platform.

H03. Firms' will enter a commercial network with government support, and become more dynamic in an international strictly regulated and potential market, if firms provide Dynamism for each other in Firms Cluster Integration; it will help to participate in the platform.

## II. LITERATURE REVIEW

### Overview—Cluster Platform Implementation:

According to strategic cluster platform, commitment has been a typical point of several pieces of literature [1]. A strategic cluster platform should become one of the most significant issues in strategic initiative literature. On this study one can notice that, a strategic cluster network among countries worldwide has been dramatically implemented over the last decades, and this interesting study has followed suit [2], [3]. Recently, an unprecedented number of countries have been entering into a variety of Firms Cluster Platform, with an aim to conduct political and commercial regional issues such as, the Community of Latin American States and

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the Caribbean. These networks were often undertaken to develop internal countries' economies (CELAC), not including United States and Canada [4]. These integration networks will come to be firms' regional cooperation as the author demonstrates in the following Fig. 2, also on other typical commercial platforms such as JV's, franchises, companies' strategic cooperation, (see for example [5], [6]).

**Integration Network & Dynamism Structure:** It has just been seen how in the transactional value framework, the selected structure for managing the commercial integration between firms, should be the one maximizing the net value of the integration network for all of the members. These criteria could lead to a position far away from the structure, that should be selected under the criteria of the transaction cost and property rights theories i.e., selecting the most efficient structure [3]. As [2]–[7] conceptualized, the pursuit of greater joint value could require the use of government network structures, which are less efficient from a transaction cost perspective.

Looking at the overall process, once the integration firms establish the preferred structure considering the characteristic of the commercial network per se, the major investments will require previous minor investments made by the firms. The characteristics of its members include:

- 1) Its reputation
- 2) The possibility of trust
- 3) And forbearance

In fact, the processing stage decreases conflict issues, defined here in this study as the perceived divergence in international market interest [8], [9]. As a consequence, there is no obstacle to value maximization, which increases the likelihood of cooperative in the firm's network over multiple forum communication. In other words, it produces development resources, and a subsequent reduction in incentives of several firms that are not inside the integration network. Integration members in this case study, will feel a growing confidence in the expectations of the future.

### III. COMMERCIAL INTEGRATION FRAMEWORK

Successful SMEs processes will be necessary to participate in the international market with their commercial resources [1]–[10]. Potential markets require high quantity of resources from different industries. In this way, SMEs must become indirect suppliers of the destination market that has multiple retailers, and the biggest firms could support those SMEs. In addition, every single supplier has far better knowledge of their own production management capacities than retailers. Therefore, to each party the margins and customer dynamism is the most important issues. It is a reasonable way to develop FCI – Firms Cluster Integration network between countries, in order to satisfy the final customer. On one end, FCI – Firms Cluster Integration networking (CELAC) will mean; to share information in international markets [11], commercial platform and international commercial risk. On the other end, the strategic network is completely managed with retailers in the international market.

As shared previously, FCI – Firms Cluster Integration provides an effective means to improve the regional economies and the commercial methods [12]. That seems to be the real reason, why it is considered an attractive point for

each single country.

In conclusion, for the reasons mentioned, it is very important to develop this study for analyzing the strategic of FCI – Firms Cluster Integration phenomenon between parties (CELAC). With no doubt, this study would add valuable information to other studies, by analyzing the strategic network phenomenon in international markets, as can be seen in Fig. 2 below.

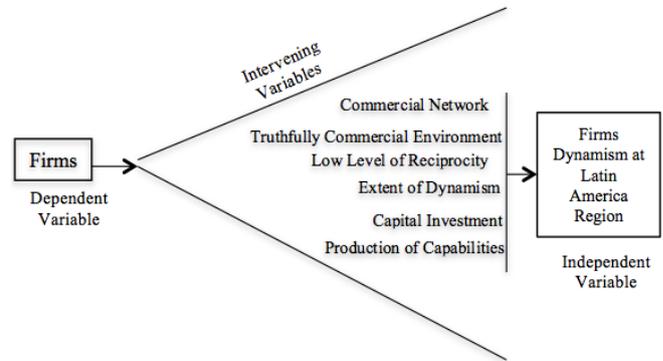


Fig. 2. Conceptual model of the testing firms dynamism, the author-contextualizing data (2013).

### IV. RESEARCH METHODOLOGY

Measures were developed and refined on the basis of the guidelines provided by [13], [14]. The questionnaires were used to ask the respondents about their experiences with integration network. The data used in the analyses were collected with an e-mail survey.

This study found that some firms did not pay any attention but some did. The total returned questionnaires showed that, 185 resulted in a response rate of 58.5%. However, out of all these, 11 questionnaires were discarded, 4 declined to response because the firms had never experienced any FCI – Firms Cluster Integration platform and 7 other questionnaires were not usable due to non-completion of questions.

Finally, there were a total of 174 completed questionnaires, which resulted in a usable response rate of 55.1%. Table I shows the distribution result of these enterprises according to their sector.

TABLE I: SURVEYED MAIIS RESULT

Description	Quantity	%
Questionnaires sent (1)	226	
Undeliverable Questionnaires	18	8.0%
Received Questionnaires (1)	111	49.1%
Questionnaires sent for follow-up	108	47.8%
Questionnaires received (2)	74	32.7%
Total Questionnaires sent (1) - (2)	316	
No response	131	41.5%
Response	185	58.5%
Decline to participate	4	1.3%
Unusable	7	2.2%
Completed Questionnaires	174	55.1%

Sources: S. Rick Fernandez, (2013, p. 117)

Finally, a total of completed questionnaires were 174, resulted in a usable response rate of 55.1%. Table I shows the

distribution result of these enterprises according to their sector.

## V. DATA ANALYSIS AND INTERPRETATION

This section is addressing the results of the several hypotheses tests that were studied previously. It is organized into four parts. The first part describes the characteristics of the respondents (individual person) and firm's behavior. The second part presents the descriptive statistics of all study variables. The next part presents the statistical assumption testing and the results of the hypotheses testing. The last part summarizes the results.

As mentioned in the previous sections, little studies have been focused on implementing firms cluster integration. A vital example is about, explored firms cluster integration between Latin American Firms, cooperating with each other and strongly entering into other markets or economic groups, but no studies have considered firms clusters integration across CELAC firms. In fact, there are very few studies in literature focused on FCI – Firms Cluster Integration among CELAC firms. Therefore, this study is designed with two different purposes: on one hand, to be an exploratory study into the implementation of firms cluster by CELAC firms; and on the other hand, to be an explanatory study in the field of firm's behavior and, dynamism of clusters implementation in the regional economic group.

To understand the dynamics in FCI – Firms Cluster Integration, an empirical test was used, as well as dynamism and cluster firms' behavior; to address the study with literature references in the areas of FCI – Firms Cluster Integration.

This study also provides richness of contextual detail and allows being more forceful. Then, the data collected allowed the hypotheses to be tested, as can be seen in section three (the three hypotheses).

### Experiences of CELAC' Firms on Commercial Integration Platform Agreement

The instrument used to collect the information related to the experience of CELAC firms, and cooperation agreements was a questionnaire divided in six different parts:

- 1) General information about cooperation, for example; the number of cooperation implemented by the firms, the number of partners, the type of allied partners, the facility of info-source, the type of agreement and motivation,
- 2) Assessment of the experience with cooperation,
- 3) Assessment of the partners' behavior,
- 4) Degree of agreement with different topics related to the establishment of FCI – Firms Cluster Integration,
- 5) Identification of problems for implementing FCI – Firms Cluster Integration,
- 6) Characteristics of the firms and characteristics of the respondent.

## VI. DESCRIPTIVE INFORMATION ON THE INTERVIEWED FIRMS

### A. Characteristics of the Firms and Respondents

The last part of the questionnaire focused on characteristics of the firms as well as characteristics of top

management respondents. The firms' characteristics considered are: Firms experiences in the market, Employability, and commercial sector. These characteristics have been used as control variables in the analyses, because of their potential effect on partner behavior and dynamism.

### B. Firms Experiences in the Market

The age of the firm may have an influence on the firm's ability, to learn about FCI – Firms Cluster Integration between firms at the regional economics group, emphasized that it could be argued that, the duration of the integration and learning, would be affected in the firm's integration. At the same time, the long-terms agreement would also increase the probability to interact on the international commercial risk. In a situation where firms have experience in international markets issue, those firms would have more advantage, but in the other way, younger firms would have higher capabilities to get richer in internationalization clusters knowledge, as the following Table II will analyse.

TABLE II: EXPERIENCES IN THE MARKET

Age of the Firms	Quantity	%	CCI	%	Non-CCI	%
Less than 10	66	38%	28	16%	38	22%
Between 11 – 20	70	40%	24	14%	46	26%
Between 21 – 30	18	10%	5	3%	13	7%
More than 31	20	11%	1	1%	19	11%
Total	174	100%	58	33%	116	67%

Sources: The Author-contextualizing data, 2013

### C. Employability

The size of a firm can affect its market power and, thus its ability to dominate the commercial integration, because of this; bigger firms are more likely to performance significant ways into their consideration than smaller firms, at the time of entering in the internationalization of regional FCI – Firms Cluster Integration. Furthermore, one can use proxies to have general information, as well as the total number of employees, to be closer of the revenues. Moreover, the total number of employees is often highly correlated with total annual revenue. Therefore, the number of employees as a control variable has been used, as can be seeing in the Table III.

TABLE III: EMPLOYABILITY

Rank	Quantity	%	CCI	%	Non-CCI	%
0–15	25	14%	18	10%	7	4%
16–30	44	25%	16	9%	28	16%
31–50	30	17%	8	5%	22	13%
51–100	33	19%	8	5%	25	14%
101–250	18	10%	4	2%	14	8%
251-500	14	8%	2	1%	12	7%
More than 501	10	6%	2	1%	8	5%
Total	174	100%	58	33%	116	67%

Sources: The Author-Contextualizing Data, 2013

D. Industrial Sector

TABLE IV: COMMERCIAL SECTOR DATA

Commercial Sector	Quantity	% Response		% Non-Response		%	
Production Firms	125	40	79	45	25	46	15
Commercial Firms	99	31	45	26	14	54	17
Services Firms	45	14	27	16	9	18	6
Exporting Firms	32	10	14	8	4	18	6
Importing Firms	15	5	9	5	3	6	2
Total	316	100	174	100	55.1	142	45

Sources: The Author-Contextualizing Data, 2013

It is believed, as other authors have highlighted that, the type of industry has relevant influences to establish FCI –

Firms Cluster Integration and provide significant firms decisions. A vivid example is that of the study from [15], they argued that, the type of industry affected the criteria used to make acquisition decisions. A number of other authors have also argued that, the importance of industry type to address strategy on firm’s employee. For this fact therefore, the groups depend on firms’ activities, according to Standard Industrial Classification, CELAC countries have been implemented this standard sources production, as can be seen in the following Table IV.

The results show that 45% of the firms participating in this study belong to the production sector, and 26% to the commercial sector. This means that, CELAC countries have potential resources to integrate a common commercial objective, to bring a solution to the questions of this study, and use 71% of the resources, as well as the 16% of services firms, to promote and get stronger support.

In order to test the expansion of dynamism statistically as mentioned by the null hypotheses summary above Table V, one needs to use testing variables and models as shown in the following steps of study.

TABLE V: TAB OF DATA COLLECTION: STUDY VARIABLES

	Industrial Network		Industrial Environment		Level of Reciprocity		Capital Investment		Production Capabilities		Expand of Dynamism		
	Level	No. Firms	SD	No. Firms	SD	No. Firms	SD	No. Firms	SD	No. Firms	SD	No. Firms	SD
Not Very High	1	14	115.60	53	64.53	9	83.5	23	165.68	13	134.17	28	155.4
Low Level	2	22	77.23	88	0.94	14	58.60	13	36.86	7	34.27	21	38.63
Medium Level	3	18	13.74	9	7.23	27	29.54	5	2.34	16	23.53	19	2.41
High Level	4	38	0.61	10	35.97	34	0.07	88	8.79	32	1.45	73	30.25
Very High Level	5	82	104.05	14	117.46	90	81.91	45	77.94	106	65.71	33	89.16
Total Firms		174		174		174		174		174		174	
$\mu$ =Mean		3.874		2.103		4.046		3.684		4.213		3.356	
$\sigma$ =Standard Deviation			1.337		1.140		1.207		1.295		1.220		1.347

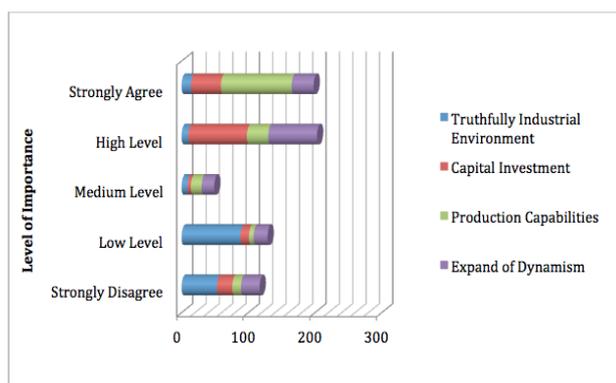


Fig. 3. Comparison variable (A), the author calculation.

Markets are indispensable to address commercial environments over mutual benefits, and firms’ reputation to engross commercial goals; therefore the latter should manage internal commercial problems as expressed in the present study. Previous issues are not relevant because countries of CELAC have mutual market vision as was tested by measure of firms on previous Fig. 3 and Table V; and which provided a result of ( $M=2.103$ ;  $S.D.=1.140$ ), according to Likert Scale.

Measures of Capital Investment show necessary variables to be integrated on commercial environment. As tested

previously, firms with high cooperation and association would maximize financial statement and technology to enjoy venture capital, expanding and controlling the transaction cost as mentioned under theory of transaction cost, and reducing production cost, finding it to be competitive. Where financial return would be more dynamic to contribute on the regional cooperation at the moment that SMEs make essential manner contribution of being productive and competitive, and grow on destination markets; this measure is answering question 2. Production capabilities and capital investment are related measures to be implemented according to the result tested (Capital Investment with  $M=3.684$ ;  $S.D.=1.295$  and Production Capabilities with  $M=4.213$ ;  $S.D.=1.220$ ), this shows that, the measured surveyed provided the test of hypotheses 1 and hypotheses 2.

To expand the dynamism of firms on firms cluster integration therefore, it would be relevant to have regional government’s participation, sharing mutual trust and markets information, as well as coordinating a commercial network among firms and, to have a global understanding about cooperation. The test found out that, hypothesis 3 is totally positive under the result as shown on Fig. 4; which determinate that this measure is tested under high behavior of productivity and competitiveness as shown on Table V

above.

Dynamism is measured by low level of reciprocity and markets expectation, which provide a result of ( $M=4.046$ ;  $S.D. =1.207$ ); basically this measure comes from mutual interest and benefits. As previous analysis stipulated, question 3 is answered by managing the commercial industry cost over integration agreements and investment, following the commercial network with a result of ( $M=3.874$ ;  $S.D. =1.337$ ), which is provided by dynamism to regional firms as mentioned above.

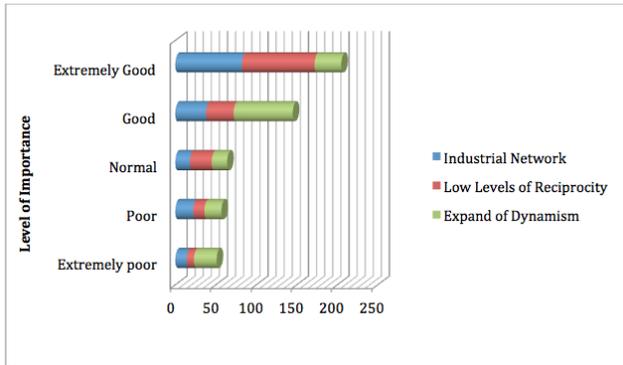


Fig. 4. Comparison variable (B), the author calculation.

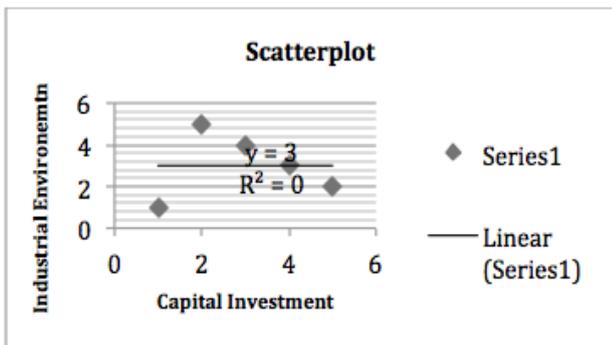


Fig. 5. Rank correlation H02, the author calculation.

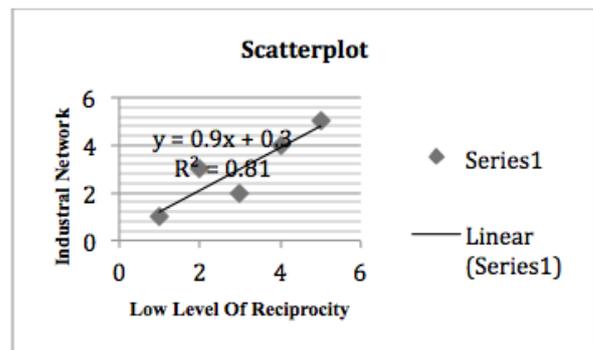


Fig. 7. Testing rank correlation H01, the author calculation.

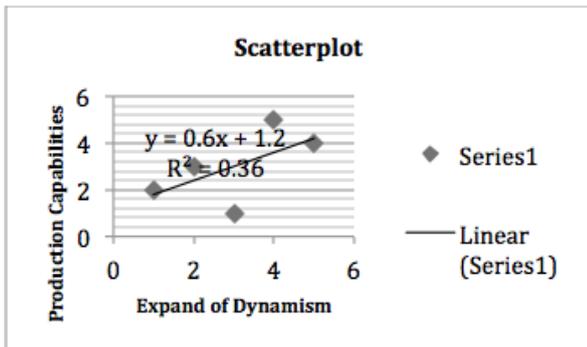


Fig. 6. Testing rank correlation H03, the author calculation.

There was a measure statistically significant and a strong positive relationship ( $p < 0.05$ ) between truthfully commercial environmental and capital investment. The effect size ( $r = -0.46$ ) presented in Rank coefficient  $p = 0.0$ , was big as mention by Fig. 5, and this implies the availability of capital investment, which played a major negative role according to the survey tested, enhancing regional commercial integration among firms, and, implementing an innovation commercial platform. This would activate a mutual cooperation and accept null hypotheses H02, which state that, if firms enter into a commercial network, a truthfully commercial

environment and an expected low level of reciprocity; and, if these firms make important Capital Investment in assets to be implemented on commercial platform and make relevant Production Capabilities to rising regional forces, it will help to participate in the platform, as it is demonstrated by rank Fig. 6.

The survey reaction shows an equivalent distribution on the firms cluster integration, and a result tested provides an interpretation that was statistically non-significant statistic was weak, but had a positive relationship ( $p > 0.05$ ) between production capabilities and expansion of dynamism. The effect size ( $r = 0.16$ ), presented in Rank coefficient  $p = 0.6$ , was very small and this gives an understanding that, production capabilities at CELAC's firms should display a stronger influence to ensure the ability required at potential markets, as well as economic groups applying this strategy. CELAC's firms would not operate negligible process and on the tested result, it accepted a null hypotheses H03, which stated that, if firms make important Capital Investment in assets to be implemented on commercial platform and make relevant Production Capabilities to rising regional forces, as mentioned above, and, if firms provide Dynamism for each other in Firms Cluster Integration, it will help to participate in the platform, as it is demonstrated in Fig. 7, using variables.

There was a statistically non-significant and very weak positive relationship ( $p > 0.05$ ) between commercial networking and low level of reciprocity. The effect size ( $r = 0.98$ ), presented in Rank coefficient  $p = 0.9$ , was very big. While, the regional networking shows high process of better performance of commercial environment among firms, this, according to the measure tested above. CELAC's firms should monitor a low level of reciprocity to integrate processes, associated with an expand of dynamism on bilateral regional agreements, as indicated above to have accepted the null hypothesis H01, which stated that, if firms enter into a commercial network, a truthfully commercial environment and an expected low level of reciprocity, it will help to participate in the platform, as mentioned above, and demonstrated in Fig. 7.

According to Table VI, the correlation coefficient index obtained on commercial network is  $r = 0.25(**)$ , which mentions a positive significance and moderate effect on the expansion of dynamism, according to the coefficient result that is higher than  $\beta = 0.1$ , and implies that there is significance on Commercial network. The coefficient correlation  $r = 0.98(***)$  computed for low levels of reciprocity and commercial network was positive with a

significant relationship and a strong effect between the involved variables, and with a result higher than  $\beta=0.1$ , which confirms the significance. Moreover, the correlation coefficient result  $r=0.98(****)$  evaluated previously shows a

positive significant relationship between the variables of production capabilities and commercial network, which enacted a significant and a strong effect with a result higher than  $\beta=0.1$ .

TABLE VI: CORRELATION COEFFICIENT ANALYSIS INDEX (EXPAND OF DYNAMISM) AND VARIABLES (COMMERCIAL NETWORK, TRUTHFULLY COMMERCIAL ENVIRONMENT, LOW LEVEL OF RECIPROCITY, CAPITAL INVESTMENT AND PRODUCTION CAPABILITIES)

	Mean	SD	1	2	3	4	5	6
1. Expand of Dynamism	3.356	1.347	1					
2. Commercial Network	3.874	1.337	0.25(**)	1				
3. Truthfully Commercial Environment	2.103	1.140	-0.44	-0.43	1			
4. Low Levels of Reciprocity	4.046	1.207	0.16	0.98(****)	-0.55	1		
5. Capital Investment	3.684	1.295	0.97(****)	0.45(**)	-0.46	0.35	1	
6. Production Capabilities	4.213	1.220	0.16	0.98(****)	-0.49	0.98(****)	0.37	1

Note: Significance at: \* $p$ , 0.05, \*\* $p$ , 0.01, \*\*\* $p$ , 0.001 and \*\*\*\* $p$ , 0.10

The Correlation of  $r=0.98(****)$  obtained from the variables' data of production capabilities and low level of reciprocity, were all positive; which therefore provided an explanation of a strong effect according to the related variables, and their significance on the result, throwing a greater number than  $\beta=0.1$ . Therefore, the correlation result of  $r=0.45(**)$  previously expressed illustrates positive significance but with a weak effect on the relationship

between the variables of capital investment and commercial network, which enacted a significant result higher than  $\beta=0.1$ . Finally, the correlation coefficient calculated with a strong effect of  $r=0.97(****)$  indicates that, a capital investment was positive with a significant result higher than  $\beta=0.1$ . The latter also indicates that, there is a significant relationship between the previous variable and expand of dynamism.

TABLE VII: MULTI REGRESSION ANALYSES THE CONSTANT ((EXPAND OF DYNAMISM) AND VARIABLES (COMMERCIAL NETWORK, TRUTHFULLY COMMERCIAL ENVIRONMENT, LOW LEVEL OF RECIPROCITY, CAPITAL INVESTMENT AND PRODUCTION CAPABILITIES)

Model		SS	df	MS	F	Sign
1	Regression	0.671	1	0.671	0.372	0.559(***)
	Residual	14.408	8	1.801		
	Total	15.079	9			
2	Regression	8.291	2	4.146	2.537(**)	0.12(***)
	Residual	19.606	12	1.634		
	Total	27.898	14			
3	Regression	11.57	3	3.857	2.426(**)	0.103(**)
	Residual	25.434	16	1.590		
	Total	37.003	19			
4	Regression	12.03	4	3.007	1.871(*)	0.155
	Residual	32.142	20	1.607		
	Total	44.172	24			
5	Regression	14.699	5	2.94	1.852(*)	0.141(*)
	Residual	38.095	24	1.587		
	Total	52.795	29			

Note: Significance at: \* $p$ , 0.05, \*\* $p$ , 0.01, \*\*\* $p$ , 0.001 and \*\*\*\* $p$ , 0.10

On Table VII, the components in the five models are shown. Model 1, 2, 3, 4 and 5 are giving proof or evidence that, Commercial Networking, Truthfully Commercial Environment, Low Level of Reciprocity, Capital Investment and Production Capabilities have positive relationship with

the expansion of dynamism. This finding is valid as the significance are higher than  $\beta=0.1$ . The result however, is according to the hypotheses of the study, dressed as a regional agreement among firms.

Implications of these findings for regional firms as a whole

include those individuals firms, which may develop commercial cooperation with organizational systems such as government and financial institutions, using the same give-and-take framework that relies on the trustworthiness. Such relationships seem necessary for a successful regional economy growth that relies on the exchange of services and goods.

## VII. SUMMARY OF FINDINGS

Studying to integrate regional firms as on this study case (CELAC's firms), Section IV demonstrate statistically important result, these result provide a correlation depending on study hypotheses. The study also got positive result with the Correlation coefficient calculation (p) illustration; as well as Multiple Regression, which predominate that variables analyzed are higher than Beta 0.1. The findings conclusion continued to enhance a qualification to raise expansion of dynamism on regional firms.

Addressing the findings, the study gave an illustration of developing mutual control regional commercial platform, in terms of lower transaction cost and common trust over explicit agreement on implementation of firms cluster integration, interpreting Rank correlation result, which involved relationship among variables analyzed; bringing a suggestion to rely on voice mechanism to induce the firms to interact in the international transactions.

## VIII. CONCLUSION

The purpose of the study was to demonstrate that, regional firm integration would enhance high commercial behavior, as well as maximizing mutual benefits among firms, and prove according to the test that countries would need to seek commercial measures together with firms. The objective of the study was to propose regional (CELAC) firms integration, to look ahead and address international markets or economic groups, with mutual firms cooperation. This study was guided by three hypotheses. Moreover, to better understand the aimed questions answered below, it is wise to note that, Multiple Regression demonstrated on Table VII that, the variables tested on Model 1, 2, 3, 4 and 5 are giving proof or evidence that, the findings were valid as the significance were higher than  $\beta=0.1$ . The results however, were according to the hypotheses of the study, dressed as a regional agreement among firms.

### A. Question I

When the firms enter to a Commercial Network, Truthfully Commercial Environment and Expected Low Levels of Reciprocity, do they become more dynamic in international strictly regulated and potential market?

### B. Answering Question I

The firms will become more dynamic if they improve the result that was found by Table VI, where Correlation coefficient is needed to improve internal regional truthfully commercial environment among firms, and also required to expect low level of reciprocity; where the result tested provide a negative ( $r=-0.55$ ) and significance of ( $p$ -value=0.000), and, positive correlation coefficient index

on commercial network ( $r=0.25$ ) with  $p$ -value=0.001 which is less than  $\beta=0.1$ .

It means that, regional firms make sustainable relationship but need to be truthful to one another, and do not expect very high incomes in return. This means therefore that, being more truthful and having confidence doesn't mean expecting high ambitious, thus the aim could be difficult to achieve.

One found on Table VI and Fig. 7 that, null hypothesis 1 is radically accepted, statistically non-significant, weak positive relation ( $p>0.05$ ) between the variables mentioned by question 1, where the table illustrate the effect size, which was very big ( $r=0.98$ ). The above analysis thus states a positive answer to this question.

### C. Question II

As the firms make important Capital Investment in assets to be implemented on commercial platform, and relevant Production Capabilities to raise regional forces, do they become more dynamic in an international strictly regulated and potential market?

### D. Answering Question II

A positive answer found on Table VI where Correlation coefficient index test confirms that, firms would become more dynamic at overseas markets. The result provided by testing the question variables which demonstrate a positive regional commercial interaction according to the Correlation coefficient index  $r=0.37$ , a significance  $p$ -value=0.000 provides an understanding that, regional firms are strong enough to integrate regional commercial protocol process, to open an international dynamism, at international strictly regulated and potential markets.

One found after test carried out on Table VI and Fig. 5 by Rank correlation that, null hypothesis 2 measured statistically is significant and has a strong positive relation ( $p<0.5$ ) related to the variables asked by question 2, where the effect size was quite big ( $r=0.46$ ), in which, these variables play a major negative role on commercial activities.

### E. Question III

If firms provide Dynamism for each other in firms cluster integration, will they become more dynamic in an international strictly regulated and potential market?

### F. Answering Question III

On Table VI one also found out that, Correlation coefficient index provides an understanding of the question variables, which are positive ( $r=0.25$ ); including a significant  $p$ -value=0.001, as the obtained result show that, firms need to continue expanding the dynamism on regional firms cooperation to be firmly integrated and have easy access on strictly regulated and potential markets.

The result obtained from Rank correlation Table VI and Fig. 6 found out that, non-significant statistic was weak, but had a positive relation ( $p>0.05$ ) between the question variables, with an effect size of  $r=0.16$ , which is considered small with accepted null hypothesis 3. Thus, this states a positive answer to this question.

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