Entrepreneurship Contribution to the Economic Stability

Inda Fresti Puspitasari[1], Aniek Hindrayani[2]
{indafresti@yahoo.com}

Universitas Muhammadiyah Surakarta, Surakarta, Indonesia[1], Universitas Sebelas Maret, Surakarta, Indonesia[2]

Abstract. Entrepreneurship is a field of developing intrigued for financial investigate. Business people contribute effectively to financial development since they create employment and wealth. Knowledge and entrepreneurship play an important role in economic progress and they lead the from a management economy towards an entrepreneurial economy. The reason of this study is to explore the capacity of the entrepreneurial action to the 12 Asia's countries economic stability over the period 2010-2017. The results show that entrepreneurship positively contributes to the economic stability. Correlation between entrepreneurship and economic stability turns strongly positive in the presence of high levels of innovation and institutional quality.

Keywords: Entrepreneurship; Contribution; Economic Stability

1 Introduction

The IMF said that Asian economies are expected to grow by 5,6% in 2018 and 2019. But this condition would tightening global financial condition in Asia, and in the medium-term there would be populace maturing in a few nations and restricted efficiency joining. So, to handle these long-term challenges, nations require more ladies and immigrants within the work constrain, more exchange and outside venture, and more inquire about and progressed education. Then, to increasing the trade value, each country needs more entrepreneurs. By the presence of entrepreneurs would create new innovation and technology that lead the higher productivity, jobs opportunity, and trade activity.

Furthermore, it would encourage the trade competition, create the productive workforce, and higher foreign investment. The opens job opportunity will decrease the unemployment rate, then higher social welfare, national income, and purchasing power parity. If there is no right policy about entrepreneurship, people's will use their disposable income to higher their consumption, that could increase people's standard of living and raise the demand-pull inflation.

That is why, entrepreneurship has an important role for the sustainable economic development in a country. The presence of entrepreneurship will encourage people to make an innovation in order to survive in the middle of tight global competition. Then, people's behavior and desire to keep moving forward will encourage the economic development and stability. Dhahri and Omri (2018)2) found that the number of entrepreneurs in creating nations emphatically influences the economic measurements of feasible advancement. In the same context, Prieger et al. (2016) proved that developing countries have more population in running

ICON 2021, December 14, Padang, Indonesia

DOI 10.4108/eai.14-12-2021.2318354

small firms than developed countries. They show that a marginal increase of entrepreneurship rate in developing countries have a positive impact on economic growth, but no evident growth penalty in developed countries.

Urbano and Aparicio (2015) found that enterprise capital, measured by add up to business enterprise action (TEA) and opportunity of TEA may well be key components to expand the financial development. In any case, The Worldwide Business enterprise. Screen (Diamond) alludes to most of the previous categories of individuals as necessity business visionaries. They have no other alternative within the labor showcase for making cash, that's why the TEA is adversely related to financial development and worldwide competitiveness. Entrepreneurship has been cited as a vital variable towards economic stability. The indicators of economic stability are real GDP, consumer price index / inflation rate, and unemployment rate. Unemployment can be linked to the economic stability indicators. The higher of unemployment rate, would decrease purchasing power production, which means that the movement of the economy would run into obstacle.

In this study, we start our investigation with an audit of the concept of economic stability and discussing the relationship between entrepreneurship and the economic stability indicators that are discussed in Section 2. Then we describe the study's research methodology and the used data in Section 3. In Section 4 we presented the empirical analysis results and finding. Finally, in Section 5 is the final section contains concluding discussion of the findings.

2 Literature Framework

The discussion of entrepreneurship contribution in economic stability, to a large extent, focused on the economic, social, and environmental impact of entrepreneurship (Dhahri et al., 2018 (2); Hall et al., 2010)4). Thus, in the following section we reflect upon these perspectives relying on entrepreneurship literature and focused to analyze relationship between the entrepreneurship activity, such as entrepreneurial intentions, total early-stage entrepreneurial activity (TEA), and established business ownership, towards the economic stability indicators (gross domestic bruto, consumer price index, and unemployment rate).

2.1. The definition of entrepreneurship

W. Baumol (1990) said that entrepreneurial activity is crucial for radical innovation and growth. pivotal for radical advancement and growth. (1) Institution chooses the allotment of entrepreneurial movement between beneficial movement (advancement) and useless exercises (like lease looking for, organized wrongdoing, etc). Those statement was strengthened by OECD (1998)5), which is entrepreneurs represent the capacity to marshal assets to seize unused commerce openings, characterized extensively they are central of countries economic growth.

As of late, the inquire about field of business has been characterized as analysis of "how, by whom, and with what consequences opportunities to produce future goods and services are discovered, evaluated, and exploited" (Shane and Venkataraman, 2000)10). The entrepreneurship definition as "whom" has gotten to be progressively acknowledged is proposed by Wennekers and Thurik (1999), they are clarified that business people see and makes unused openings work beneath instability and present item to the advertise.

Besides that, the entrepreneurs could make decision on location, frame, and utilize of assets, and at long last oversee their trade and compete with others for a share of the showcase. Our definition of business is driven not by need but by opportunity. Opportunity business is emphatically related to the financial development and economic stability.

2.2. Entrepreneurship and economic stability

Financial soundness implies the economy of a locale or nation appears no wide changes in key measures of financial execution, such as net household item, unemployment, or swelling. A steady economy illustrates relentless, sensible development in GDP and unemployment whereas holding expansion to a least. Reasonable improvement suggests the economy creates at a backed rate that does not begin inflationary weights and makes higher costs. An economy that appears relentless development for one quarter of the year, taken after by a sharp decay in GDP or a rise in unemployment within another quarter, demonstrates financial flimsiness. The existing of entrepreneurs would encourage innovation (especially in the trade sector), demanding new technologies, and more sophisticated new machine.

3 Research Methodology

3.1 Data

The objective of this think about is to explore the commitment of business enterprise on the 12 Asia's countries economic stability which consist of 5 developed countries (Hongkong, Japan, Singapore, Taiwan, and South Korea) and 7 developing countries (Indonesia, Malaysia, India, China, Philippines, Thailand, and Vietnam) using balanced panel data over the period 2010 – 2017.

Our data includes these following variables:

a. Entrepreneurship: measured by the overall number of recently enrolled trade as a rate of the working-age populace who are either incipient business person or owner-manager of a unused trade (TEA) and the total established business ownership (EBO) as a percentage of the working-age population who are currently an owner-manager of an established business which running more than 42 months.
b. Economic growth: measured by real GDP as a percentage of real GDP growth rate.
c. Unemployment rate: measured by percentage of unemployment rate.
d. Inflation rate measured by annual inflation rate of each country.

The source of data to measure the rate of entrepreneurship in a country (TEA and EBO) was taken from Global Entrepreneurship Monitor (GEM). The yearly GEM collects information from people around the world concerning entrepreneurial movement and incorporates nations over the run of national salary. We utilize the amassed GEM information for 2010-2017 from 12 nations (the foremost permitted by the accessibility of information), even though information are not watched for all a long time for a few nations. Furthermore, the data to measure rate of real GDP, inflation rate, and unemployment rate was taken from World Development Indicator (WDI) of the World Bank, and International Financial Statistics (IFS) of the IMF data.

3.2 Methodology

In arrange to handle these issues, we utilized an experimental strategy in 3 steps. To begin with, we analyze the cross-sectional reliance and check the stationarity of the information. Moment, we assessed the long-run connections among the factors utilizing FMOLS. At last, we evaluated a board VECM to illustrate the interconnection between enterprise and the economic stability in Asia's countries.

Using the natural logarithm to estimate it, we obtain the following equation:

$$ln\, ENT_{it} = ln\, \beta_0 + \sum_{n=0}^{k} \beta_1\, lnGDP_{it} + \sum_{n=0}^{k} \beta_2\, lnUNEMP_{it} + \sum_{n=0}^{k} \beta_3\, lnINF_{it} + \mu_{it}$$

First, we check the cross-sectional dependence by applying one parametric test developed by Pesaran (200). The test statistics of these two tests are as follow:

Pesaran's statistics compute:

$$CD = \sqrt{\frac{2T}{N(N-1)}}\left(\sum_{i=1}^{N-1}\sum_{j=i+1}^{N}\hat{\rho}_{ij}\right)$$

Where p ̃ij is the estimate of

$$\rho_{ij} = \rho_{ij}\frac{\sum_{t=1}^{T}\varepsilon_{it}\varepsilon_{jt}}{\left(\sum_{t=1}^{T}\varepsilon_{it}^2\right)^{1/2}\left(\sum_{t=1}^{T}\varepsilon_{jt}^2\right)^{1/2}}$$

The null hypothesis to be tried is: ρij = ρij = $corr(\varepsilon_{it,}\varepsilon_{jt}) = 0$ for i ≠ j and the alternative hypothesis is ρij = ρij ≠ 0 for some i ≠ j. The cross-sectional reliance test is a key step sometime recently applying board unit root test. For the board with cross-sectional reliance Secondly, after confirming that the series is stationary, the series is ready for panel cointegration analysis. In arrange to look at whether there's a long run relationship between the factors, we used Pedroni (2004)6) co-integration test. Pedroni proposed two types of panels cointegration test: a within-dimension approach based on panel co-integration tests and between-dimension approach called group mean panel co-integration statistics.

Then, to perform tests on the cointegrated vectors, it is vital to utilize strategies of successful estimation. We used FMOLS estimator that was initially suggested by Dhahri and Omri (2018). The primary era unit root test tends to dismiss the invalid speculation. The stationarity of the information arrangement has been analyzed with one of the moment-era unit root tests which is the cross-sectionally expanded IPS unit root test. The CIPS test is the adjusted IPS test based on the normal of a person increased Dickey-Fuller (ADF) test as takes after:

$$CIPS = \frac{1}{N}\sum_{i=1}^{N} CADFi$$

The FMOLS panel estimator for the coefficient β is defined as:

$$\beta^{\wedge\cdot\cdot} = N^{-1}\sum_{i=1}^{N}\left(\sum_{t=1}^{T}(y_{it}-\bar{y})^2\right)^{-1}\left(\sum_{t=1}^{T}(y_{it}-\bar{y})\right)z_{it}^{*} - T\hat{\eta}_i$$

Following Engle and Granger (1987), we specified the VECM panel to examine the Granger causality relationship between entrepreneurship activity (TEA and EBO), real GDP, inflation (INF), and un-employment rate (UNEMP) that can be developed as follows:

$$(1-L)\begin{bmatrix} ENT_t \\ GDP_t \\ UNEMP_t \\ INF_t \end{bmatrix} = \begin{bmatrix} \emptyset_t \\ \emptyset_t \\ \emptyset_t \\ \emptyset_t \end{bmatrix} + \sum_{i=1}^{p}(1-L)\begin{bmatrix} a_{11i}a_{12i}a_{13i}a_{14i} \\ b_{21i}b_{22i}b_{23i}b_{24i} \\ c_{31i}c_{32i}c_{33i}c_{34i} \\ d_{41i}d_{42i}d_{43i}d_{44i} \end{bmatrix}\begin{bmatrix} ENT_{t-i} \\ GDP_{t-i} \\ UNEMP_{t-i} \\ INF_{t-i} \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \end{bmatrix}[ECT_{t-1}] + \begin{bmatrix} \mu_{1t} \\ \mu_{2t} \\ \mu_{3t} \\ \mu_{4t} \end{bmatrix}$$

(1-L) is the difference operator. Besides, ECTt-1 was inferred from the slacked blunder rectification term. The noteworthiness t-statistic of ECTt-1 appears the long run causation. The joint causality test demonstrates whether the gauge factors bear to burden of the short-run alteration to re-establish the long-run harmony.

4 Results and Discussion

In this segment, the establishment for the experimental work is depicted. The comes about of the cross-sectional reliance test are displayed in Table 1, dismiss the invalid cross-sectional reliance for all the subordinate factors, on the opposite for the free factors. Nevertheless, the result detailed that all the arrangement of information are non-stationary at their level shapes but coordinates at to begin with contrast forms. Results of Pedroni's (2004) board co-integration tests are appeared in Table 2.

Pedroni utilized four within-dimension (board) test measurements and three between-dimension measurements to look at whether the chosen board information is co-integrated or not. The within-dimension measurements contain the assessed values of the test measurements based on gauges that pooled the coefficient of autoregressive over distinctive cross-sections for the unit root test of the assessed residuals. In other hand, the between-dimensions appears the evaluated values of the test measurements based on the estimators

Table 1. Cross-Sectional Reliance and Board Unit Tests of Root

		Pesaran (2007) CIPS test	
Test Statistics	Pesaran (2004) CD-test	Level	Δ
Real GDP	10.36978 (0.0000)	-4.58103 (0.0000)	-3.48203 (0.0002)
Inflation	8.019887 (0.0000)	-1.66820 (0.0476)	-2.29427 (0.0109)
Unemployment	9.212371 (0.0000)	-0.09971 (0.4603)	-3.76328 (0.0001)
ENT	-0.696333 (0.4862)	-2.44621 (0.0072)	-5.48293 (0.0000)

Table 2. Pedroni Cointegration Results

Alternative hypothesis: individual AR coefs. (within-dimension)		
	Statistic	Prob.
Panel v-Statistic	-0.611392	0.7295
Panel rho-Statistic	1.636485	0.9491
Panel PP-Statistic	-6.987341	0.0000
Panel ADF-Statistic	-4.023799	0.0000
Alternative hypothesis: individual AR coefs. (between-dimension)		
	Statistic	Prob.
Group rho-Statistic	3.563333	0.9998
Group PP-Statistic	-9.040298	0.0000
Group ADF-Statistic	-2.554164	0.0053

Table 3. FMOLS Results

Panel	ENT	GDP	INF	UNEMP
ENT = f(GDP. Inf, UNEMP)	-	-0,058 (0,653)	0,377 (0,125)	0,640 (0,677)
GDP = f(ENT, INF, UNEMP)	-0.060 (0,644)	-	0,100 (0,720)	1,330(0,443)
INF = f(ENT, GDP, UNEMP)	0,102 (0,131)	0,039 (0,613)	-	1,292 (0,155)

UNEMP = f(ENT, GDP, INF)	0,003 (0,755)	0,011 (0,410)	0,022 (0,381)	-

Table 3 provide the long run coefficients estimated by applying FMOLS methods for TEA, EBO, real GDP, inflation, and unemployment rate. The estimated coefficients from the long-run cointegration relationships can be interpreted as a long-run elasticity. The first equation from panel FMOLS estimator in Table 3, the coefficient is -0.058, 0.377, and 0.640 for real GDP rate, inflation rate, and unemployment rate, respectively. From the result, we found that real GDP has a negative and a statistically insignificant effect on entrepreneurship. This result contradicts the finding of Dhahri and Omri (2018), which found that business enterprise has a positive impact on GDP and contended that higher levels of financial action make modern trade openings and increments business people. But this result affirms the finding of Van Stel, Carree, and Thurik (2004) that contended the full enterprise rate to be emphatically related with development in wealthy nations and conversely related with development in low-income nations.

Table 4 presents the result of short-run and long-run panel VECM test between entrepreneurship and the economic stability indicators. Based on the result, in the first equation we got that entrepreneurship has a positive and significant relation statistically with inflation rate. It means, higher entrepreneurship rate would increase the purchasing power parity and higher the consumer price index, which is the indicator to measure the inflation rate. In contrary, from the first equation we found that entrepreneurship has a negative and significant impact to the unemployment rate statistically. It's confirmed our analysis that entrepreneurship would open the opportunity for job creation.

Table 4. The Panel VECM Results

Dependent Variables	Short-run Source of Causation				Long-run ECT
	ΔENT	ΔGDP	ΔINF	ΔUNEMP	
ΔENT	-	-0.157867 (0.13745)	0.012147 (0.04032)**	-0.000613 (0.00918)**	-0.147187 (0.28279)
ΔGDP	0.003644 (0.16043)	-	-0.033306 (0,03747)**	0.001507 (0.00853)**	1.000000
ΔINF	-0.330439 (0.46073)	-0.150073 (0.28145)	-	0.002156 (0.01879)**	-6.239284 (1.30509)
ΔUNEMP	-3.507868 (2.34014)	-0.138126 (1.86315)	-0.875657 (0.54660)	-	7.013423 (2.88181)

5 Conclusion

The role of entrepreneurship in order to reach the economic stability is as an important variable of some discussions within the later few a long time. In spite of this critical significance, the interface between them is not clear however. In this ponder, we attempted to clarified these joins by analyzing the capacity of enterprise action to synchronous achieves the stability of economic through the economic stability indicators such as real GDP, inflation rate, and unemployment rate over the period 2010-2017.

First, it was concluded that entrepreneurship rate in Asia's countries affect the real GDP growth rate positively but has a negative relationship with the inflation rate and unemployment rate in the short run and inversely correlated in the long run. Second, our results confirm the interactions among entrepreneurship activity and the economic stability indicators in both short and long run. Third, from the empirical analysis results we conclude that for the economic stability, its necessary to increase the amount of entrepreneurship rate, but the most important thing is the quality and innovation of the entrepreneurs itself.

References

[1] Baumol, W. (1990). Entrepreneurship: Productive, Unproductive, and Destructive. Journal of Political Economy 98, 893-921.

[2] Dhahri, S., & Omri, A. (2018). Entrepreneurship Contribution to The Three Pillars of Sustainable Development: What Does The Evidence Really Say? World Development 106, 64-77.

[3] Engle, R. F., & Granger, C. W. J. (1987). Co-integration and error correction: Representation, estimation, and testing. Econometrica, 55, 251-276.

[4] Hall, J., Daneke, G., & Lenox, M. (2010). Sustainable development and entrepreneurship: past contributions and future directions. Journal of Business Venturing 25, 439-448.

[5] OECD. (1998). Fostering Entrepreneurship. Paris: OECD.

[6] Pedroni, P. (2004). Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests with an Application of the PPP hypothesis theori. Econometric Theory, 20, 597-625.

[7] Pesaran, M. (2004). General Diagnostic Tests for Cross Section Dependence in Panel. Working Paper, University of Cambridge.

[8] Pesaran, M. (2007). A Simple Panel Unit Root Test in the Presence of Cross-section Dependence. Journal of Applied Econometrics, 22, 265-312.

[9] Prieger, J., Bampoky, C., Blanco, L., & Liu, A. (2016). Economic Growth and the Optimal Level of Entrepreneurship. World Development 82, 95-109.

[10] Shane, S., & Venkataraman, S. (2000). The Promise of Entrepreneurship as a Field of Research. Academy of Management Review, 25, 217-221.