



RELATION BETWEEN ENTREPRENEURSHIP AND GENDER INDICATORS A COMPARATIVE STUDY IN ASIA PACIFIC REGION

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Abstract

The dynamic economic landscape highlighted the role of emerging economies in global context and significance of women entrepreneurial activity which is pivotal to the development of these economies. Hence, the purpose is to study how gender indicators correlate with women entrepreneurial activity in Asia Pacific region especially the two big emerging economies i.e. India and China.

It is an empirical study based on data from GEM and Gender Gap reports. The hypothesis is to test correlation between women entrepreneurial activity and gender indicators for eleven countries of Asia Pacific region for the year 2014-2015. The analysis reveals that, women entrepreneurial activity (TEA-Total Entrepreneurial Activity) is not significantly correlated with gender gap and gender inequality index. It also shows that women TEA is lower than men's in all eleven countries. However, India exhibits significant growth in women TEA compared to china. The study clarified that gender parity itself will not lead to more women TEA. Thus policy makers can formulate policies considering indicators directly related with women TEA. The focus on emerging economies especially India and China and usage of two different gender indicators namely gender gap and gender inequality index to analyses its correlation with women entrepreneurial activity make this study unique.

Keywords: Women Entrepreneurship, Gender Indicators, Asia-Pacific, Gender Inequality Index, Gender Gap Index.

Introduction

Entrepreneurship is the process of designing, launching and running a new business, i.e. a startup company offering a product, process or service. It has been defined as the "...capacity and willingness to develop, organize and manage a business venture along with any of its risks in order to make a profit." The entrepreneur is "a person who organizes and manages any enterprise, especially a business, usually with considerable initiative and risk."

Emerging economies has a crucial role to play in changing world economic scenario. Asian countries, with a workforce of more than 400 million, a combined GDP of 3,600 billion US\$ and an abundance of natural resources, has vast strengths to draw on and is well positioned for playing an increasingly important role on the global economic stage. Entrepreneurship plays a crucial role in the upcoming Asia Pacific Economic Community, as a key driver of sustainable economic growth and job creation.

The concept of gender describes the socially created roles, norms, behavior, expectation and activities attributed to women and men. Women role is stereotyped and perceived to be limited to household activities with no relation to economy or commerce. Women constitute almost half of the population of world. Like men, they are equally important section of society and mostly an untapped resource potential of a country. Gender equality has been highlighted as one of the eight Millennium Development Goals, and as a key to achieving the other seven goals by the (United Nations Population Fund, 2013). There is consensus among scholars that women can play key role in the entrepreneurial phenomenon and thus lot of interest and work is going around women entrepreneurship.

Literature review

Since 19th century, interest developed in studying entrepreneurs and their activities. Entrepreneurs and entrepreneurship are arguably the pillars on which societies were built. Entrepreneurial activity has been identified as one resource that needs to be tapped by developing countries to enable them to compete in a globalizing market economy (Kanungo, 1998; Khandwalla, 1998).

Gender inequality exists in terms of economic development as well as the rates of entrepreneurial activity. There is a significant gender gap in the entrepreneurial activity rate across the world (Allen et al.2008).

As per Ahl, H. (2006), many research paper tend to recreate the idea of women as being secondary to men, and of women's businesses being of less significance or, at best, as being a complement. Based on a discourse analysis of 81 research articles



(1982-2000), author suggested new research directions which do not reproduce women's subordination, but capture more and richer aspects of women's entrepreneurship.

A comparative study of 43 countries showed that the rates of women's entrepreneurship are lower than men's and the percent of women entrepreneurs is higher in countries where the general income per capita is small and where women have no other option for making a living. (Pines, lerner and Schwartz, 2010).

Jennifer Jennings and candida Brush (2013) analysed the research done on women's entrepreneurship in past 30 years. As per the author, the majority of researches focus on problems women entrepreneurs faced and gender differences. However, being a contemporary topic, more research is needed, and focus should be on success and challenges rather than problem and gender differences.

A study on correlation between gender related indices and entrepreneurship related activity for 41 countries, showed that there is no correlation, and female entrepreneurial activity is not significantly correlated with gender equality (sarfarz et al 2014).

A perception study among the students of USA, India and Poland, towards entrepreneurship, is found to vary a lot. USA and Indian perception were closed while Poland is distinctly different and culture has a big role to play in. (Glinka & thatchenkery: 2013).

In developing economies like India and China promotion of entrepreneurs and entrepreneurship has become a priority for the governments, financial institutions, and academic institutions. It reported that India and China have consistently registered high entrepreneurial activities though the two countries had different patterns of support and investments in entrepreneurship (GEM Hong Kong and Shenzhen Report, 2003; Manimala, 2002). A study (by Goel, Vohra, Zhang & Arora 2007) argues that social support is an important enabler in entrepreneurial activity in a country or a region. This comparative study between India and China reflected that family background's influence on attitudes. Regional development showed stronger influence on attitude in India than in China.

Research Gap

The researcher, based on a literature review identified that limited studies has been done in identifying correlation between gender and entrepreneurship indicators. Studies in the past, considered more than 40 countries data for study, which made the comparison less focused.

In Asian countries the studies are limited. Hence the author decides to choose Asia Pacific region for study. Based on the data availability (from gender entrepreneurship report and gender gap report) 11 countries are selected namely Australia, China, India, Indonesia, Korea, Japan, Malaysia, Philippines, Singapore, Thailand and Vietnam. However, a detailed study is carried out between India and China.

Research Methodology

This research is basically an empirical study based on the secondary data. The data is collected from GEM (Gender Entrepreneurship Monitor) report, HDI report published by United Nations Development Program and Gender Gap report published by World Economic Forum. The study used descriptive statistic for analysis of various data sets and Pearson's correlation coefficient is used to study relation/association between entrepreneurship (TEA) and gender (gender index). A hypothesis is formulated which is tested using SPSS software.

Data and Variables

The secondary data consist of various indicators from the above mentioned reports. The indicators used in the study are:

1. Entrepreneurship Indicator

The Global Entrepreneurship Monitor (GEM) is the world's foremost study of entrepreneurship.

An international consortium Global Entrepreneurship Monitor (GEM) carried out studies to measure entrepreneurial activities in several countries. It is a global study conducted by a consortium of universities.

- i. The primary measure of entrepreneurship used by GEM is the *Early-stage entrepreneurial activity* (TEA) Index, which gauges the level of dynamic entrepreneurial activity in an economy by considering the incidence of start-up businesses (nascent entrepreneurs) and new firms (up to 3.5 years old) in the adult population (i.e. individuals aged 18–64 years).
- ii. *Established business owners* represent those running businesses older than three and a half years. This indicator can therefore reveal the sustainability of entrepreneurship.



- iii. **Business Discontinuance**– Business discontinuance can happen for a variety of reasons. People may stop running businesses that were unprofitable or because they could not—or could no longer—finance them. On the other hand, they may sell, retire or simply choose to go on to something else. For this reason, discontinuance does not necessarily equate to failure in our analysis; consequently, it's important to examine, not just rates, but also the reasons for stopping.
- iv. **Necessity/opportunity/innovation driven entrepreneurship** - GEM recognizes that entrepreneurs may have different motivations for starting a business: in essence, they may be pushed or pulled into entrepreneurship. Some people may be pushed into starting a business because they have no other work options and need a source of income. GEM classifies these entrepreneurs as necessity-driven. Others enter this activity primarily to pursue an opportunity; they are pulled into entrepreneurship by the prospect of opportunity. GEM identifies these as opportunity-driven entrepreneurs.
- v. **Entrepreneurial Intentions**- It measure the percentage of adults in a society that are not currently entrepreneurs, but who intend to start a business in the next three years.

2. Gender Indicators

- i) **Gender Inequality Index (GII)** - It is an index for measurement of gender disparity. According to the UNDP, this index is a composite measure which captures the loss of achievement within a country due to gender inequality. It uses three dimensions to do so: reproductive health, empowerment, and labor market participation. This new index was introduced as an experimental measure to remedy the shortcomings of the previous indicators, the Gender Development Index (GDI) and the Gender Empowerment Measure (GEM).

The value of GII range between 0 to 1, with 0 being 0% inequality, indicating women fare equally in comparison to men and 1 being 100% inequality, indicating women fare poorly in comparison to men.

- ii. **Global Gender Gap index** –It is introduced by the World Economic Forum in 2006, is a framework for capturing the magnitude and scope of gender-based disparities and tracking their progress. The Index benchmarks national gender gaps on economic, political, education and health criteria, and provides country rankings that allow for effective comparisons across regions and income groups, and over time. The highest possible score is 1 (equality) and the lowest possible score is 0 (inequality).

The GII and GGI scoring is just opposite. In Gender Inequality Index score of 1 represents 100% inequality whereas in Gender Gap Index, score of 1 reflects gender equality/parity.

Research objective

The objectives of the research are:

- To compare entrepreneurial indicators of India and China.
- To compare gender wise early stage entrepreneurial activity (TEA) between India and China.
- To explore the relation between early stage entrepreneurial activity (TEA), entrepreneurial intention and gender index (GII and GGI) for selected Asia Pacific countries.

Hypothesis

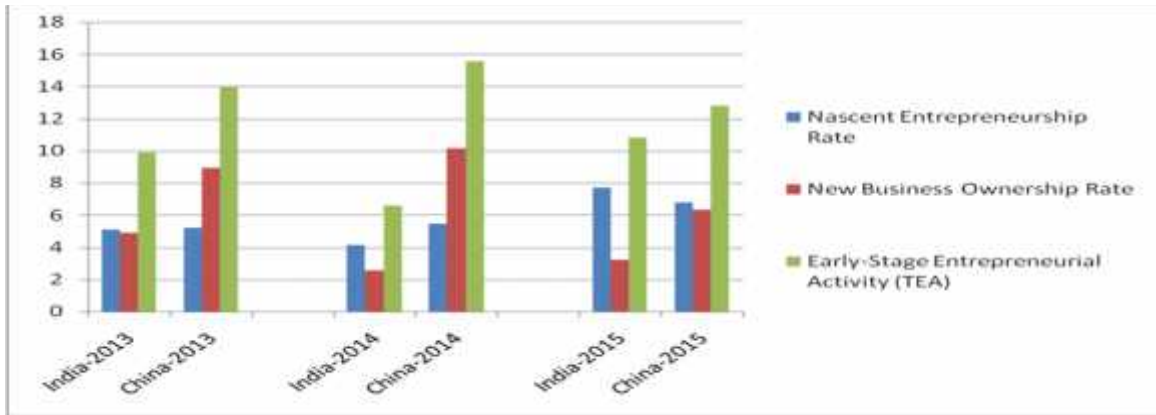
The researcher wants to test the assumption that with the decrease in the gender gap (higher gender gap index score) and gender inequality (lower gender inequality index score), women entrepreneurial activity increases. Since researcher could not find the female-wise details for other data sets, hence for hypothesis testing, only women early stage entrepreneurship indicator, gender gap and gender inequality index is used. The hypotheses formulated are:

H₁. Women early stage entrepreneurial activity is positively correlated with gender gap index.

H₂. Women early stage entrepreneurial activity is negatively correlated with gender inequality index.

Data Analysis

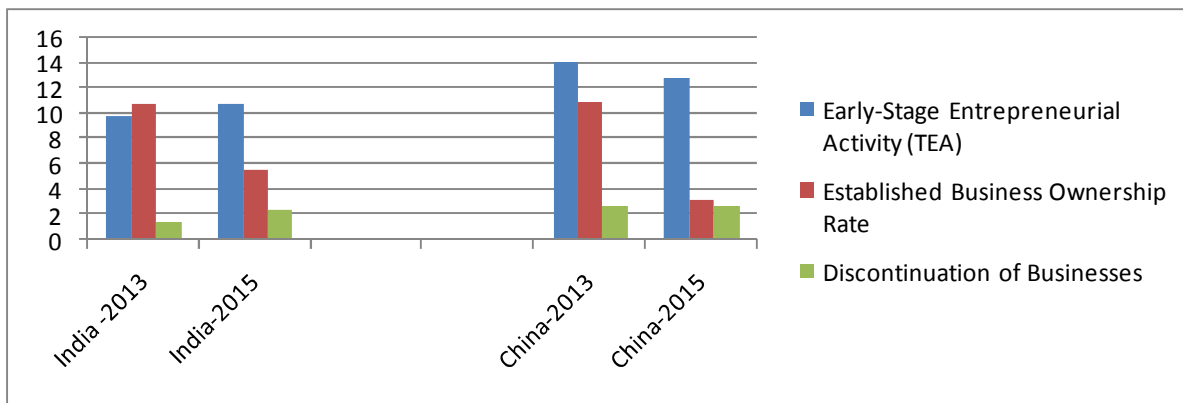
Figure 1: Comparative analysis of India and China TEA from 2013 -2015



Source: GEM Report

The figure 1 compared the entrepreneurship activity between India and china for a period of three years. India is showing an increasing trend in nascent entrepreneurship rate, new business ownership rate and early stage entrepreneurial activity, with a dip in 2014 for all the three values. China is faring well compared to India. Their nascent entrepreneurship rate is almost same to India, while new business ownership and TEA is higher. However, the established business ownership rate is decreasing fast for both countries, down to almost 50% from 2013 level, which can be worrisome.

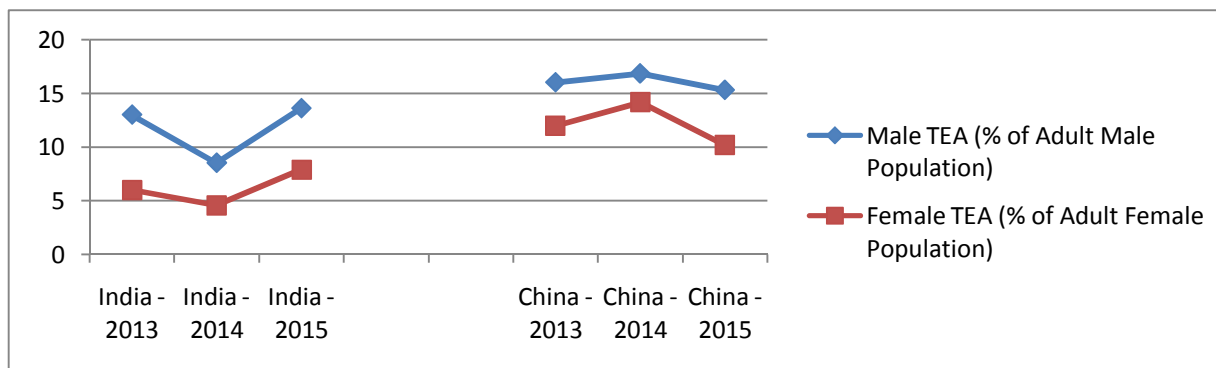
Figure 2: Comparison of India and china on TEA, Established Business and Discontinuance of Business of 2013-2015



Source: GEM report

The figure no.2 depicts the picture of established and discontinued business. Both India and china TEA levels are almost consistent with little ups and downs, but there is sharp dip in established business ownership rate and increase in discontinuance of business. It signifies that people are starting entrepreneurship firms but not able to continue it beyond 3 years, leading to discontinuance. The reasons for discontinuance need further analysis.

Figure 3: Gender wise TEA for India and China from 2013-2015

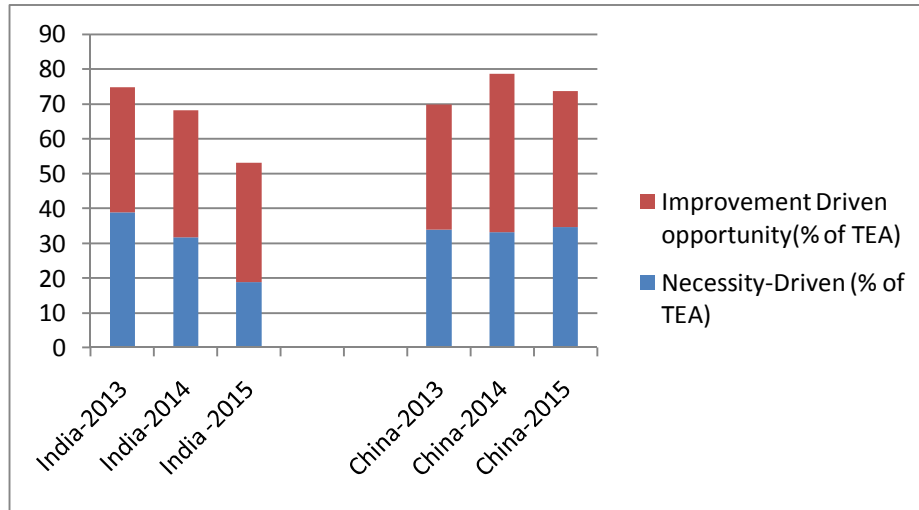


Source: GEM report



This figure no.3 is more relevant as it specified the male and female TEA, thus providing base for this research. For other data, such details were not available. In both the countries, male TEA is more than female TEA, but in India it exhibited increasing trend (with a dip in 2014). China's trend is downwards for both male and female TEA (with a rise in 2014). However, china male and female TEA level are far better than India's level. The catch point here is china and India trend is just opposite for year 2014.while it is decreasing trend for India in almost all GEM indicators, it is an increasing one for china (from 2013 level). It would be interesting to dig more into this aspect.

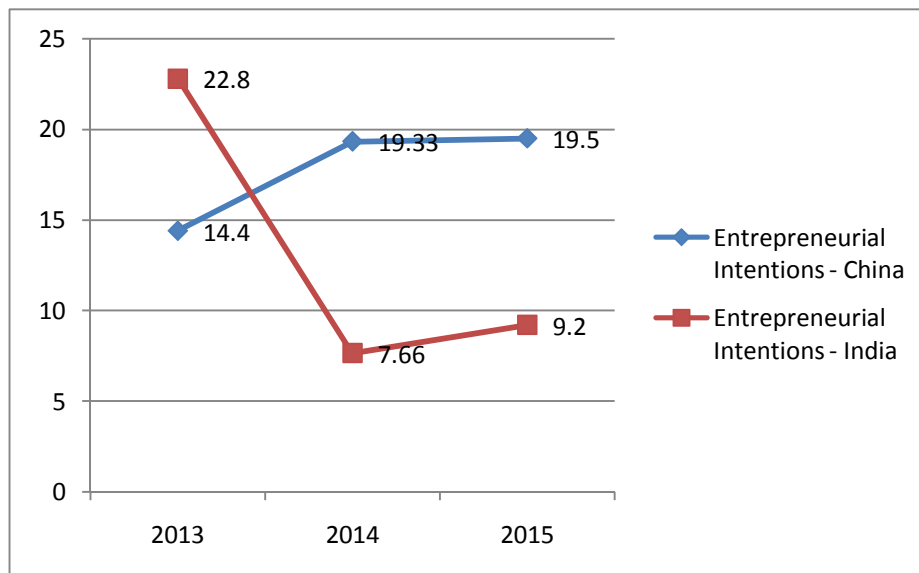
Figure 4: TEA- Improvement and Necessity Driven



Source: GEM report

Figure 4 gives the motive behind the entrepreneurship activity. Interestingly in India, the trend is favoring improvement driven with a steady decline in necessity driven TEA. For china the values showed a little variation.

Figure 5: Comparative Entrepreneurial Intention

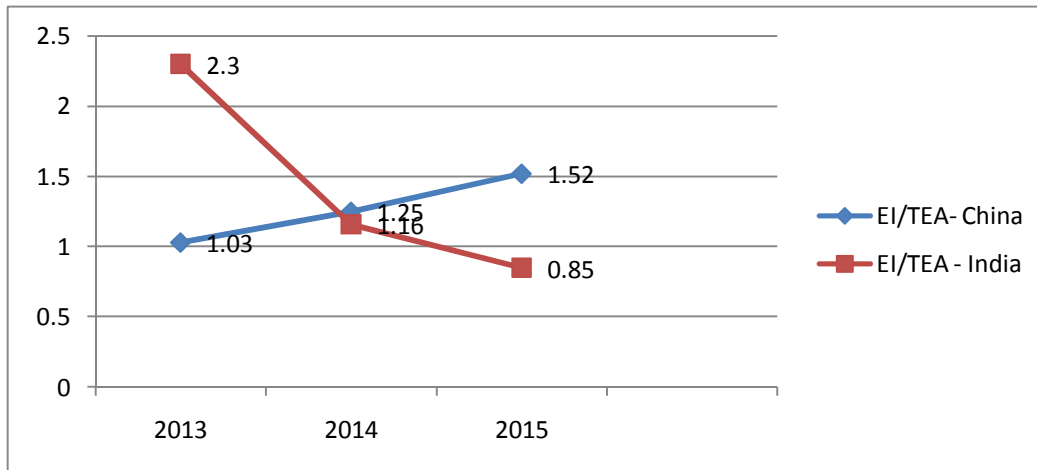


Source: GEM report

As per fig 5, more people in china have Intentions to become entrepreneurs in future and the trend is increasing. In India also higher percentage of population want to become entrepreneurs but percentage dipped sharply in 2014, with a slight bounce back in 2015.



Figure 6: Comparative Ratio of Entrepreneurial Intention to TEA



Source: GEM report

The ratio of Entrepreneurial Intention to TEA is basically the ratio of intentions to actual start. In 2013 in India, for every entrepreneur, two people intend to start, which now came down to level below one. But in china the ratio is increasing consistently and for every one entrepreneur, there are one and a half people with entrepreneurial intentions.

Hypothesis Testing

Pearson's correlation analysis is used for testing the hypothesis.

Correlation coefficient between Gender Gap Index and Women TEA Year 2015

Country	Female TEA (Early-Stage Entrepreneurial Activity)	Gender Gap Index	Pearson's Correlation Coefficient(r)
Australia	10.10	0.733	r = 0.66 alpha =0.05 p value =0.03 p (0.03) < 0.05
China	10.25	0.682	
India	7.88	0.664	
Indonesia	17.79	0.681	
Malaysia	3.00	0.655	
Philippines	19.47	0.79	
Korea	7.71	0.651	
Thailand	14.76	0.706	
Vietnam	15.55	0.687	

Table no.7 (source: GEM and gender gap report)

Correlation coefficient between Gender Gap Index and Women TEA Year 2014

Country	Female TEA (Early-Stage Entrepreneurial Activity)	Gender Gap Index	Pearson's Correlation Coefficient(r)
Australia	10.32	0.741	r = 0.60 alpha =0.05 p value =0.03 p (0.03) < 0.05
China	14.18	0.683	
India	4.58	0.646	
Indonesia	15.16	0.672	
Japan	1.50	0.6580	
Malaysia	6.78	0.652	
Philippines	20.78	0.781	
Singapore	7.17	0.705	
Thailand	22.12	0.703	
Vietnam	15.47	0.692	

Table no 8(source: GEM and gender gap report)



Correlation coefficient between Gender Inequality Index and Women TEA			Year 2014
Country	Female TEA (Early-Stage Entrepreneurial Activity)	Gender Inequality Index	Pearson's Correlation Coefficient(r)
Australia	10.32	0.110	r = 0.37 alpha =0.05 p value =0.32 p (0.32) >0.05
China	14.18	0.191	
India	4.58	0.563	
Indonesia	15.16	0.494	
Japan	1.50	0.133	
Malaysia	6.78	0.209	
Philippines	20.78	0.420	
Singapore	7.17	0.088	
Thailand	22.12	0.380	
Vietnam	15.47	0.308	

Table no 9 (source: GEM and HDI report)

Hypothesis Testing and Interpretation

There are two hypotheses to test. The first hypothesis is tested twice for two different years i.e. 2014 and 2015. The Pearson correlation coefficient i.e. denoted by “r” is calculated and the result is presented in table 7 and 8. For the analysis, the acceptable error level is 0.05, i.e. p - value is 0.05.

H₁: Women early stage entrepreneurial activity is positively correlated with gender gap index.

From table 6 and 7, it is observed that for the first hypothesis, the calculated value of “r” is 0.66 for 2015 and 0.60 for 2014. The p-value is 0.03, which is less than the acceptable error i.e. 0.05, hence the hypothesis is accepted.

The Pearson coefficients between women’s early-stage entrepreneurial activity and gender gap index, is significant, and positively correlated, implying that higher gender gap index score (higher gender parity) leads to higher early-stage entrepreneurial activity in selected countries of Asia Pacific group.

H₂: Women early stage entrepreneurial activity is negatively correlated with gender inequality index. Table no 8 indicated the calculated “r” value as 0.37. The p- value is 0.32 which is greater than the acceptable error of 0.05. Since, the p-value is greater than the acceptable error, it does not signify a relationship between these two parameters i.e. women’s early-stage entrepreneurial activity and gender inequality index and thus the hypothesis is rejected. Rejecting the hypothesis of existing correlation between women’s early-stage entrepreneurial activity and gender inequality index implies that creation of new businesses by women is not necessarily increased when gender inequality is reduced; in the other words, early-stage entrepreneurial activity appears to be independent of gender inequality across selected countries of Asia Pacific region.

Conclusion

The study highlighted that China is doing well on most of the parameters of entrepreneurship (except establishing business) and faring well on gender indices. Unlike India, people in China have higher entrepreneurial intentions to start and higher turnout to actual start. Though culturally different still these two neighbouring countries showed similar trends for entrepreneurship indicators.

The study also supports the assumption that women TEA is positively and significantly correlated with gender gap index but not with gender inequality index.

The dip in almost all indicators and associated increase in Indian and Chinese data exhibits some trend which needs further study. The study is relevant to Asia Pacific region only.

There is a much of scope and untapped potential in entrepreneurship especially women entrepreneurship hence special attention, focused approach and programs from the entire stakeholder is the need of an hour.

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