

Foster Inclusive Entrepreneurship in BOP Areas: The Role of Asset Specificity and Supply Chain Interconnection

Jian Du, Jie Lu *

School of Management, Zhejiang University, Hangzhou, China

*jiel@zju.edu.cn, dujian@zju.edu.cn

Abstract

Inclusive entrepreneurship has been proven to be an elixir for the inclusive growth in the 'Base of the Pyramid' (BOP) regions. Consequently, governors are trying various ways to direct resources into local region to support inclusive entrepreneurship. Some of these policies worked, while others don't. Why? We argue that, although more resources enhance the chances to start business, it also leads to fierce competition among entrepreneurs, and finally impair the benefits of resource supports. So where to direct the resources to and how to arrange these resources should be carefully thought. Analysis based on data collected from inclusive entrepreneurs in Zhejiang province in China shows that, when the resources are directed to sectors with highly specific assets, the competition will be intensified. On the other hand, if the resources are carefully allocated to different links of an intact supply chain, direct competition among entrepreneurs will be mitigated, so the entrepreneurs will benefit more from the resource supporting plans. This study extends literatures on inclusiveness by offering an operational measurement of inclusiveness, and identifying two boundary conditions that will affect the efficacy of resource supporting plans.

Keywords: Inclusive Entrepreneurship; BOP; Asset Specificity; Supply Chain Interconnection

1. Introduction

Inclusive entrepreneurship is highly anticipated to boost inclusive growth in the 'Bottom of the Pyramid' (BOP) regions (Hall et al., 2012) for its potential to break social exclusion while promoting local economy. Given the severe resource constraints in BOP regions, practitioners and policy makers are trying various ways like establishing micro-funding and attracting foreign investment to breed business opportunities. However, despite of the good intentions, some of these policies failed to cultivate successful business (e.g. Ukanwa et al., 2018).

The uncertain relationship between resource support and inclusiveness have been explained in several ways. One stream emphasizes on the typical category of resources that should be offered to inclusive entrepreneurs, and concludes that public education and financial supports are what they really need (Audretsch, 2004). Another stream commits to teaching inclusive entrepreneurs the right way to utilize these resources, and offers guidelines on finding suitable market position for products (e.g. Andersen, 2007), acquiring and retaining customers (e.g. McClure, 2007), and possible ways to start businesses in poor areas concluded from stories about how some talented entrepreneurs create something from nothing despite of the extreme resource constraints (e.g. Sarkar, 2018). However, these studies neglected the importance of a right way to allocate the resources in the regional level.

To bridge this gap, this study focuses on the influence of the direction of resource flow and the way the resources are arranged. The former is indicated by asset specificity of the industry that the resources are invested in, the latter is indicated by whether the resources are allocated harmoniously into different links of an intact supply chain.

By conducting surveys in impoverished counties of Zhejiang province in China, we conceptualized the measurement of inclusiveness which not only gauges the level of economic growth but also the fairness of the allocation system, and found that, directing resources into sectors that demand highly specific asset will intensify the competition among entrepreneurs, thus impair the inclusiveness of resource supporting plans. However, if intact supply chains are built to direct resources flow into different links of the supply chain, the fierce competition will be mitigated, so the effect of resource support will be better.

This work contributes to current literature in two basic ways. Primarily, an operational measurement of inclusiveness may help to deepen the understandings of this concept. Second, focusing on the different competing environment caused by different resource allocation, two contingent factors that will affect the effect of resource supports are identified, i.e. asset specificity and supply chain interconnection.

2. Theoretical development

2.1. Inclusiveness

The idea of inclusiveness originates from welfare economics (Sen, 1995), which concerns over the competence elevating, involvement in social production and social welfare distribution among the disadvantaged. An inclusive society advocates development on the basis of fair play and fair go, and is against deprivation of rights, institutional barriers and social discrimination in the sharing of growth outcome (Ali and Son, 2007). McKinley (2010)

suggested that the building blocks of social welfare system, i.e. economic growth, capability building, employment and infrastructures should be the dimensions to measure inclusive growth. All in all, inclusiveness emphasizes a combination of social and economic benefits, especially the fairness of economic growth. Inheriting this core notion, inclusiveness in this paper is conceptualized as the level of economic growth and the fairness of the allocation of the economic outcomes.

2.2. Resource support and inclusiveness

The relationship between resource support and inclusiveness cannot be predefined. On one hand, the road to inclusive entrepreneurship is obstructed with typical requirements on resources and abilities (Cassar, 2009). Given that the bottom of the pyramid (BOP) regions are characterized with serious resource constraints (Hall, 2014), more resource support will hopefully lower down the threshold of entrepreneurship in BOP regions, attract more people to start their own business and earn some extra income, in this way give more chances to the socially-excluded to enjoy the outcome of economic growth. On the other hand, the entrepreneurs in BOP regions are often less-educated, indicating that the industries that they choose to start their businesses won't be that exclusive, so potential entrants can easily join in and intensify the market competition. With the threshold of launching new businesses be lowered down by resource supports, the market competition will be much fiercer, and quickly offset the super profit of the new business. The entrepreneurs will get very few for the resources they invested.

2.3. The moderating effect of asset specificity and supply chain interconnection

Investing in industries that demand highly specific asset will negatively moderate the relationship between resource support and inclusiveness. Firms with highly specific asset are more likely to be threaten by opportunism, thus suffer from higher transaction cost (Williamson, 1991) and get less economic benefits *ceteris paribus*. They are also at a disadvantage in bargaining, as a result suffer more unfairness in pricing. Big investment in specific asset also forms expensive exit cost, which prohibits incumbents from exiting the industry. In the meanwhile, new entrants will emerge constantly, making the market competition more and more fierce.

Hypothesis 1: the negative (positive) relationship between resource support and inclusiveness will be stronger (weaker) when the resources are invested in industries with highly specific assets.

However, stronger supply chain interconnection will positively moderate the relationship between resource support and inclusiveness. Firstly, supply chain interconnection in the regional level implies that intact production system has been established locally, so entrepreneurs are playing different roles in the supply chain, which means that direct competition among entrepreneurs will be reduced. Second, firms with intimate connections are more likely to form a community of interest and speak up in a common voice (Argyres and Liebeskind, 1999), which empowers the disadvantaged when faced with unfavourable sharing rules, so the entrepreneurs will be more empowered to justify any distorted allocation system.

Hypothesis 2: the negative (positive) relationship between resource support and inclusiveness will be weaker (stronger) when the supply chain interconnection is higher.

3. Data and method

3.1. Sample and data collection

China is the mainstay of the global campaign against poverty (World Bank, 2001), with some regions (e.g. Beijing, Shanghai, Guangdong, Zhejiang) leading the rocketing economic growth (Wei and Zhang 2011). Among these leading regions, Zhejiang province is the most typical one, because its economy is mainly boosted by grassroots entrepreneurs. Consequently, sample collection was restricted to BOP entrepreneurs in Zhejiang province to minimize the heterogeneity of economic development across regions and fully utilize the rich materials.

The main research objects are entrepreneurs, self-employed individuals and owners of small businesses. This group is chosen because they are the main contributor of the endogenous growth of the economy in Zhejiang, and the rise of this group offers high positive externality by engaging a large number of rural surplus labours in social production, indicating that they are exactly what we defined as inclusive entrepreneurs.

During the field research from May 2011 to March 2012, a total of 257 questionnaires were distributed face to face in Zhejiang Quzhou, Jiangshan, Changshan, Kaihua, Hangzhou, Yiwu and other regions, of which 215 copies were collected. Among them, 72 questionnaires were used for scale development and 142 were used to validate hypotheses (one copy is discarded for some missing values on the main variables). The response rate reaches a relatively high level of 83.66 %, so the non-response bias can be ignored.

3.2. Measurements

Because of the unavailability of relevant objective data or previous scale that can be cited, dependent variable and independent variable are measured by self-developed scales. Resource support is defined as the availability of various kinds of required resources and includes 5 items. Inclusiveness contains 5 items. Rather than only gauges

the level of economic gain of focal entrepreneurs, it emphasizes more on the extent to which the focal entrepreneurs think their gains match their inputs (funds, efforts etc.), or in other words, the fairness of the allocation system. Concerning moderators, asset specificity measures the peculiarity of the resources invested in learning or establishing related relationships and the non-transferability of such resources. The scale is compiled on the basis of Rindfleisch and Heide (1997), Klein, Frazier and Roth (1990), Zaheer and Venkatraman (1994), and Christiaanse and Venkatraman (2002). Supply chain interconnection refers to the entrepreneurs' faith in supply chain members. The scale is derived from Huff and Kelley (2003) and McAllister (1995), and measures the trust in the partners' abilities and loyalty.

Items used to measure dependent variables, independent variables and moderators are listed in Table 1.

Individual attributions such as education, entrepreneurial experience, gender and age are controlled. On the firm level, revenue, labours and institutional support are controlled (Audretsch, 2004).

All variables are centralized to their means to eliminate collinearity. After confirming the reliability & validity of the questionnaire by factor analysis, we used multiple linear regression to verify the hypotheses.

4. Results

4.1. Reliability and Validity

Reliability analysis is carried out for dependent variable, independent variable and moderators. The results are shown in Tables 1. All the items load as hypothesized, and Cronbach's alphas for all variables exceed 0.7. All the values of construct reliability are greater than .70 as well. All in all, the reliability test is passed (Fabrigar and Wegener, 2012), which proves the consistency of the scales.

Table 1. Results of reliability test.

Variables	Items	Mean	SD ^a	Factor loadings	CR ^b	Cronbach's α
Asset specificity	I purchased specific equipment for the production and sale of this product when I started the business.	4.55	1.88	.74	.75	.75
	If the relationship with the client ended, then some knowledge that was exclusively acquired for the relationship were wasted.	4.75	1.94	.81		
	Both me and my partners have made specific investments to establish this relationship when the business was started.	4.87	1.84	.65		
Trust Interconnections	I trusted my suppliers and customers.	5.12	1.56	.65	.80	.80
	When a cooperative relationship was established, my partner tended to do their best to ensure the interests of both parties.	5.49	1.44	.78		
	Even if the company had a new partner, I continued to be loyal to our original partners.	5.66	1.40	.74		
	My relationship with my customers or suppliers is mutually beneficial.	5.26	1.46	.69		
	The ability of my customers and suppliers was distinguished among their peers.	4.75	1.46	.60		
	My relationship with my partner is necessary for both of us.	5.32	1.38	.59		
Resource support	The production environment I am in was open and free.	4.95	1.61	.70	.85	.84
	The resources I needed for production were rich in amount.	4.72	1.42	.66		
	I could get the resources I needed easily.	4.61	1.63	.76		
	The growth rate of the industry I worked in was very high.	4.74	1.54	.79		
	I could get production-related information easily.	5.08	1.54	.74		
Inclusiveness	Compared with my performance, my income was reasonable.	4.76	1.60	.64	.87	.87
	My return matched the resources I invested in production.	4.74	1.60	.82		
	My return matches the energy I spent in the work.	4.70	1.60	.90		
	I got no less than what I deserve.	4.88	1.62	.90		
	The allocation system balanced the interests of all parties.	4.59	1.52	.54		

Notes: ^a Standard deviation; ^b Construct reliability

In terms of content validity, for scales derived from foreign studies, back-translation is used to make sure that measurement match their original ideas. For the scales developed by ourselves, interviews with representative enterprises were conducted at first to generate the initial items. Then items were discussed with and modified according to experts. Finally, the questionnaire was pre-tested in small groups, and the participants' suggestions on the questionnaire were adopted to ensure that the questionnaire had good content validity.

4.2. Descriptive Statistics

Descriptive statistics and correlation analysis were performed before regression analysis. The results are shown in Tables 2 and 3 respectively.

Descriptive statistics are used to summarize the basics of the sample¹. Most (57.4 %) of the entrepreneurs haven't experience entrepreneurship more than 6 years, so the memory of entrepreneurial experience should remain relatively clear. More than 60 % of entrepreneurs receive an education of 12 years (equivalent to China's senior high school) or less, which is in line with our assumptions that inclusive entrepreneurs are relatively less-educated. In terms of gender ratio, female exceeds the number of the male slightly (female = 56.6 %, male = 43.4 %), which is opposite to the gender ratio of entrepreneurs in general settings (Wei and Zhang 2011). This may be because adult men in BOP areas are the main labour force of the family, and are expected to find a job in "big cities", while women are supposed to stay at home and engage in small businesses such as handicrafts (George et al., 2016). In general, our sample is a good representation of entrepreneurs in the BOP regions.

Correlation analysis is mainly used to evaluate the strength and significance of linear relationship between the variables. Table 2 shows the means, standard deviations, and correlation coefficients for variables.

Table 2. Correlation coefficients

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EDU		-0.155*	0.160*	-0.091	0.090	0.064	0.073	0.162*	0.016
AGE	-0.250***		0.223***	0.202**	0.089	0.065	-0.028	0.035	0.110
REVENUE	0.135	-0.044		0.258***	0.553***	0.078	-0.194**	0.030	-0.015
EXP	-0.034	0.209**	0.315***		0.197**	-0.010	-0.007	-0.081	0.039
LABOR	0.088	0.080	0.115	0.097		0.168**	0.103	-0.056	0.036
RESOURCE	0.069	-0.037	0.011	-0.007	-0.061		0.297***	0.325***	0.525***
ASSET	0.121	-0.106	-0.146*	-0.108	0.030	0.329***		0.280***	0.187**
SUPPLY CHAIN	0.210**	0.020	0.064	-0.068	-0.199**	0.329***	0.275***		0.286***
SHARE	0.023	0.080	-0.213**	0.033	-0.092	0.557***	0.212**	0.294***	

Lower-triangular cells report Pearson's correlation coefficients, upper-triangular cells are Spearman's rank correlation

*** p<0.01, ** p<0.05, * p<0.1

The largest correlation coefficient between variables is smaller than the rule-of-thumb .7, and all variance inflation factors (VIF) in reported models are below 2.81. Therefore, multicollinearity does not threat our analyses (Cohen et al., 2002).

4.3. Regression

Table 3 shows the regression results. Model 1 only contains control variables. Model 2 includes moderators and control variables. Model 3 adds independent variable on the basis of model 2. Model 4 and 5 test the moderation effect. Model 6 is the full model.

In models 1, the coefficient of institutional support is significantly positive, confirming the positive role of institutional support in reducing entrepreneurial difficulties and promoting inclusive entrepreneurship (Busenitz et al., 2000). However, the effects of education and entrepreneurial experience are insignificant. Revenue is negatively related to sharing inclusiveness, which is in line with the assertion that economic gains doesn't guarantee inclusiveness.

Table 3. Results of regression

	(1)	(2)	(3)	(4)	(5)	(6)
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
GENDER	-0.193 (0.222)	-0.278 (0.218)	-0.246 (0.186)	-0.237 (0.184)	-0.256 (0.188)	-0.259 (0.184)
EDU	0.0367 (0.0354)	0.00990 (0.0356)	0.00965 (0.0304)	0.00599 (0.0300)	0.0107 (0.0306)	0.00799 (0.0300)
AGE	0.0145 (0.0136)	0.00921 (0.0135)	0.0117 (0.0116)	0.0165 (0.0116)	0.0115 (0.0116)	0.0170 (0.0116)
REVENUE	-0.00101*** (0.000350)	-0.00104*** (0.000348)	-0.00115*** (0.000298)	-0.00125*** (0.000297)	-0.00115*** (0.000299)	-0.00126*** (0.000296)

¹ Results are now shown due to the page limitation. Full results are available from authors upon request.

	(1)	(2)	(3)	(4)	(5)	(6)
	SHARE	SHARE	SHARE	SHARE	SHARE	SHARE
EXP	0.0408 (0.0251)	0.0506** (0.0246)	0.0437** (0.0211)	0.0414** (0.0208)	0.0444** (0.0212)	0.0426** (0.0208)
LABOR	-0.0000120 (0.0000172)	-0.00000781 (0.0000171)	-0.00000862 (0.0000147)	-0.00000803 (0.0000145)	-0.00000794 (0.0000148)	-0.00000620 (0.0000145)
PR	0.0290 (0.127)	0.124 (0.127)	0.0694 (0.109)	0.0401 (0.108)	0.0738 (0.110)	0.0455 (0.108)
INST	0.268*** (0.0728)	0.155* (0.0801)	0.0674 (0.0697)	0.0496 (0.0692)	0.0678 (0.0699)	0.0474 (0.0690)
ASSET		0.109 (0.0730)	-0.00515 (0.0647)	-0.0227 (0.0643)	-0.00221 (0.0652)	-0.0186 (0.0642)
SUPPLY CHAIN		0.293** (0.123)	0.153 (0.107)	0.144 (0.106)	0.160 (0.109)	0.161 (0.107)
RESOURCE			0.550*** (0.0808)	0.522*** (0.0807)	0.551*** (0.0811)	0.519*** (0.0805)
RESOURCE*ASSET				-0.0979** (0.0451)		-0.116** (0.0473)
RESOURCE*SUPPLY CHAIN					0.0317 (0.0615)	0.0797 (0.0634)
_cons	-0.0161 (0.543)	-0.0289 (0.527)	-0.0847 (0.451)	0.0153 (0.447)	-0.0945 (0.453)	0.00952 (0.446)
N	142	142	142	142	142	142
adj. R2	0.108	0.158	0.383	0.401	0.380	0.404

Notes: standard errors in parentheses.

Industrial effect is controlled in all models.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

The relationship between resource support and inclusiveness is significantly positive in Model 3 ($b = 0.55$, $p < 0.01$), and the coefficient of the interaction term of resource support and asset specificity is significantly negative in Model 4 ($b = -0.0979$, $p < 0.05$) and full model ($b = -0.116$, $p < 0.05$), which validates the negative moderation effect of asset specificity (H1). The coefficient of the interaction term of supply chain interconnection and resource support is insignificant in both Model 5 ($b = 0.0317$, $p > 0.1$) and full model ($b = 0.0787$, $p > 0.1$), which threatens the validation of the second hypothesis. However, the insignificance can be resulted from the inconsistency among different levels of the moderator. To better investigate the influence of the moderator, the sample is split into two parts based on the mean value of supply chain interconnection (SCIL and SCIH), and Suest test is used to verify whether the coefficient of resource support is significantly different in these two subsamples². The coefficients of resource support are significant in both subsamples. When supply chain interconnection is low (SCIL), the coefficient of resource support is 0.429 ($p = 0$), and it goes up to 0.779 ($p = 0$) when supply chain interconnection is high (SCIH). Suest test showed that the coefficient is significantly larger when the value of supply chain interconnection is higher ($p < 0.01$). So the second hypothesis is verified at last.

5. Conclusions

5.1. Key findings

The uncertain relationship between resource support and inclusiveness can be explained by 1) where the resources are directed and 2) how the resources are organized. The negative moderating effect of asset specificity is verified by the conflicting sign of the coefficients of its interaction with resource support ($b = -0.0979$, $p < 0.05$) and the main effect ($b = 0.55$, $p < 0.01$). which implies that, when the resources are directed into sectors with high investment, the benefit of resource support will be mitigated. The results of Suest test that the effect of resource support is stronger ($b = 0.779$, $p = 0$, compared with $b = 0.429$, $p = 0$) when the value of supply chain interconnection is higher showed the positive moderation effect of supply chain interconnection. Accordingly, it can be concluded that, when allocated properly along the supply chain, the outcome of resource support will be better.

5.2. Theoretical contributions

This study contributes to literatures on inclusiveness in three ways. First, an operational measurement of inclusiveness is established. Second, focusing on the competition environment in BOP settings, two boundary conditions under which resource supporting plans actually works are identified. Third, research on inclusive growth is accused of the shortage of quantitative empirical studies based on large samples. Using survey data of Zhejiang province in China, we devoted our effort to filling up this gap.

² Results are now shown due to the page limitation. Full results are available from authors upon request.

5.3. Practical implications

This study basically reveals two implications of fostering the global process of alleviating poverty and build a more “nutritional” environment for inclusive entrepreneurship. First, investing in sectors with certain thresholds of specific assets undermines the transferability of the resources, thus inclusive entrepreneurs are locked in a competition which will get more and more intensive, and finally offset the benefits of the resource supports. So potential entrepreneurs should be very careful when arranging investment. If industry upgrading is needed to foster regional economy, it is suggested that needed specific assets should be covered in the government purchase, and be leased to intended entrepreneurs, in this way facilitates the transfer of these specific assets. Second, after the resources are channelled into the region, local government are responsible for instructing and organizing the entrepreneurs to take different roles in the supply chain (which is supported by key resources) to reduce direct competition. Establishing a local credit system to cultivate a trust atmosphere among entrepreneurs may also help to lubricate the supply chain.

5.4. Limitations and future research

The results of regression and Suest test basically confirmed the hypotheses. But this study still has some limitations. First, concerning the inconsistency between the results of the two methods used to test the moderation effect of supply chain interconnection, it will be worthwhile to further explore the impact of supply chain interconnection in detail. In this study, the supply chain interconnection is measured by the trust between supply chain members. Since the BOP regions are usually characterized by kinship, will the sources of trust between supply chain members affect the way they compete and cooperate. Specifically, will the BOP entrepreneurs benefit more from the supply chain which is composed of their family members? Second, according to Williamson (1991), asset specificity can be relational, physical, site specific and so on. Will all those specific assets have the same effect on the relationship between resource support and inclusive entrepreneurship? Finally, all of the key variables are measured subjectively in this study. An objective measurement of the variables will greatly enhance the reliability and accuracy of the results.

Acknowledgments

This study is supported by National Natural Science Foundation of China (Grant No.71832013, No.71672176).

References

- Bruton, G.D., 2010. Business and the world's poorest billion—The need for an expanded examination by management scholars. *Academy of Management Perspectives*, Vol. 24, No. 3, pp. 6–10.
- Busenitz, L.W., Gómez, C., Spencer, J.W., 2000. Country institutional profiles: Unlocking entrepreneurial phenomena. *Academy of Management Journal*, Vol. 43, No. 5, pp. 994–1003.
- Chiles, T.H., McMackin, J.F., 1996. Integrating variable risk preferences, trust, and transaction cost economics. *Academy of Management Review*, Vol. 21, No. 1, pp. 73–99.
- George, G., McGahan, A.M., Prabhu, J., 2012. Innovation for inclusive growth: Towards a theoretical framework and a research agenda: Innovation for inclusive growth. *Journal of Management Studies*, Vol. 49, No. 4, pp. 661–683.
- Greenberg, J., 1986. Determinants of perceived fairness of performance evaluations. *Journal of Applied Psychology*, Vol. 71, No. 2, pp. 340–342.
- Hall, J., Matos, S., Sheehan, L., Silvestre, B., 2012. Entrepreneurship and innovation at the base of the pyramid: A recipe for inclusive growth or social exclusion? *Journal of Management Studies*, Vol. 49, No. 4, pp. 785–812.
- Kolk, A., Rivera-Santos, M., Rufin, C., 2014. Reviewing a decade of research on the “Base/Bottom of the Pyramid” (BOP) concept. *Business and Society*, Vol. 53, No. 3, pp. 338–377.
- Levine, S., White, P.E., 1961. Exchange as a conceptual framework for the study of interorganizational relationships. *Administrative Science Quarterly*, Vol. 5, No. 4, pp. 583.
- Matten, D., Crane, A., 2005. Corporate citizenship: Toward an extended theoretical conceptualization. *Academy of Management Review*, Vol. 30, No. 1, pp. 166–179.
- Peredo, A.M., Chrisman, J.J., 2006. Toward a theory of community-based enterprise. *Academy of Management Review*, Vol. 31, No. 2, pp. 309–328.
- Ruttan, V.W., 2002. Productivity growth in world agriculture: Sources and constraints. *Journal of Economic Perspectives*, Vol. 16, No. 4, pp. 161–184.
- Williamson, O.E., 1991. Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, Vol. 36, No. 2, pp. 269.