

Exploring Entrepreneurship Intension Aptitude along Gender Lines among Business Decision Students in Nigeria

Paul O. Udofot, Emem B. Inyang

Abstract—The study investigated the variability in aptitude amidst interactive effects of several social and environmental factors that could influence individual tendencies to engage in entrepreneurship in Nigeria. Consequently, the study targeted a population having similar backgrounds in type and level of higher education that are tailored toward enterprise management and development in the Niger Delta region of Nigeria. A two-stage sampling procedure was used to select 67 respondents. Primarily, the study assessed the salient pattern of entrepreneurship aptitude of respondents, and estimated and analyzed the index against their personal characteristics. Male respondents belonged to two extremes of aptitude index ranges (poor and high). Though female respondents did not exhibit a poor entrepreneurship aptitude index, the incidence percentage of the high index range of entrepreneurship aptitude among male trainees was more than the combined incidence percentage of their female counterparts. Respondents' backgrounds outside gender presented a serious influence on entrepreneurship uptake likelihood if all situations were normal.

Keywords—Aptitude, entrepreneurship, entrepreneurial orientation, gender divide, intention, trainee.

I. INTRODUCTION

IN most low income and transitional economies of sub-Saharan Africa, there exists perceived distinctive gender oriented role performance within and outside households and as well as in business related endeavours [1]. Males are believed to have higher dimensional scale of competence regardless of age [2]; they are more likely to pursue business creation [3]; and they have more access to finance credit than their female counterparts [4]. This has led to a lot of mainstreaming efforts by national and international development bodies [5], [6].

This study on entrepreneurship aptitude focused on the perceptual gender-based disparity and presumed there is a paradigm shift based on increasing women's social and capacity empowerment. The study therefore purposefully used a population of youths with immense human capital formation on enterprise development-based academic background for in-depth analytics. Primarily, the concern of this study was to explore the status of entrepreneurship aptitude among a cluster

of graduating class with the highest theoretical capacity in business decision sciences. The training which the students had in enterprise management skills was assumed to encourage self-employment.

The motivation for the study was the high level of university graduate unemployment in Nigeria. Many authors including [7], [8] have observed a docile aptitude of graduates to self-employment, especially among those without vocational skills. If graduates were generally entrepreneurship risk averse, would those in the core business decision science, like accounting, display such tendency? Would there be variation in aptitude between male and female graduates? The result of the study will provide an opportunity for not just having a clear insight of the gender dimensions but also allow an opportunity to trace the respondents' group entrepreneurship activity. The literature will be also enriched. To achieve this, we set the following objectives to: analyse gender orientation on the index of entrepreneurship aptitude among the business decision science trainees; estimate the index of entrepreneurship aptitude by gender and analyse the entrepreneurship aptitude index profile of the respondents.

II. THEORETICAL AND EMPIRICAL REVIEW OF LITERATURE

Entrepreneurial action is behavioural [9]. And the literature is rich in intention theories [10]–[12]. It takes a process to think and initiate a business enterprise through the creation of mental maps within a given environment. This process captures the service/produce to be provided, resources needed, and the benefits derivable as well as the challenges. The Theory of Planned Behaviour (TPB) [13], for example, identified three predictors of intention. It postulates that the intention to start a business enterprise depends on the personal attitude (desirability), the social acceptability to a normative reference group (subjective norms) and the perceived feasibility of actually becoming an entrepreneur. The more favourable these predictors are, the greater the intention to engage in entrepreneurial endeavours, the theory explains. The attitude (self-efficiency) refers to the extent the individual feels capable of initiating and managing an entrepreneurial venture. The subjective norms represent the societal, family and peer group acceptance of the person's entrepreneurship environment. Reference [10] in Social Learning theory establishes the influence of environment on behaviour focusing on the concepts of reinforcement and observation. In entrepreneurship, it could be inferred that previous encounter with entrepreneurs or entrepreneurial training could influence

P. O. Udofot, PhD, is with the Department of Business Management, University of Uyo, P.M.B 1017, Uyo, Nigeria (phone: +234-802-3310-628; e-mail: podofot@yahoo.com).

E. B. Inyang, is with the Department of Agricultural Economics, University of Uyo, P.M.B 1017, Uyo, Nigeria (phone: +234-802-8769-672; e-mail: embainy@yahoo.com).

such behaviour. Reference [11] in the Entrepreneurship Event Model is supportive of the entrepreneurial intention. The model believes an individual usually has an inertia which guides behaviour until displaced by an event. Such displacement, it is believed, comes with a capacity to initiate a 'start-up' in the entrepreneurship environment. Fusing the Entrepreneurial Event Model with the planned behaviour theory, [12] introduced variables including perceived future family commitment, employment, emigration, and tested over the short, medium and long term intentions to start a business venture.

The TPB factors alignment to the purpose of the study may suffice. In terms of attitude ([14], [15] are of the opinions that women are entrepreneurially driven by career dissatisfaction and work-family balance as against the money-making interests of their male counterparts. Subjective norms are weak in predicting the TPB model [16], [17]. Regarding perceived feasibility, [18] suggested that women's propensity to start a business is positively linked to alertness to exploit existing opportunities and proper self-evaluation of the entrepreneurship internship. Empirically, the entrepreneurship intention models have been tested by researchers including [19]–[21] in Brazil, Pakistan and Malaysia, respectively, and other researchers including [22], [23] have successfully linked entrepreneurial intention with formal education.

III. METHODOLOGY

This study was carried out within the Eastern Niger Delta Region of Nigeria in Uyo Local Government Area of Akwa Ibom State of the Eastern (or Atlantic) section of the coastal South-South Nigeria, which lies in latitude 40 301 to 70351 North and longitude 40301 to 70351 East, southern Nigeria (FRN, 2004). Parts of it are also on the Atlantic coastline. It lies principally between the tropical rainforest zone, the estuaries of Imo and Qua Iboe Rivers, and the Atlantic Ocean. It therefore comprises mangrove forests, a few upland communities, islands, and several coastal permanent and semi-permanent fishing communities. The region is noted among others for high incidences of youth restiveness and unemployment [24]. The dwindling socioeconomic wellbeing is always cited as central reasons for agitation and tension. Even though self employment appears the panacea, little is known of the entrepreneurship instinct [25]. The region has two States (political units below the centre), each having a federal university. A two stage sampling technique was adopted. At the first stage, simple random sampling technique was used to select a state out the two, and then to select a department out of five in the faculty of the selected university. From the class of final year students offering similar business-related courses, only 67 students willingly participated in the survey of which copies of a questionnaire were administered. All the distributed copies were returned and used for the analysis. The target population of the study comprised all the final year undergraduate students of Accounting adopted from an earlier study of [26]. The study population had an average age of 24 years, and most were graduating students of business decision sciences. The male surveyed population (56.7%) was

slightly above the female surveyed population (43.3%) with a 13.4% difference, and 80.6% were not engaged in one form of employment while in training. Generally, 83.6% of their parents were in self-employment. The scale to measure entrepreneurial interest was revalidated through a pilot study of undergraduate students.

The pilot study helped in fine tuning the items in the questionnaire and enhanced the validity using Cronbach's alpha reliability statistics and the instrument had a reliability coefficient of 0.78. Descriptive statistics (simple percentages and frequencies) and composite index analysis were used to analyse the data and draw inference. The composite index derivation estimates the proportion of entrepreneurial aptitude based on a probabilistic value that ranged from 0.0 to 1.0, which implies virtually negligible to excellent. The composite index approach has an index range that lies within 0.00 and 1.00. As the respondents estimated, the index of overall response tends towards 1.00, it implies that the extent of entrepreneurial aptitude was extremely high and vice versa as it tends towards 0.00. However, for ease of analysis, the index of each respondent was distributed along a categorized level of entrepreneurial aptitude based on common intervals, such that 0.00 – 0.33 indicates a low or poor level of contribution, 0.331 – 0.67 indicates an average contribution level, while 0.671 – 1.00 indicates a high contribution level.

IV. RESULTS AND DISCUSSION

A. Estimation of Index of Entrepreneurial Aptitude by Gender

Primarily, assessing the perceptual divide in entrepreneurship aptitude demanded ascertaining the index of entrepreneurship aptitude of each respondent considered for this study. This gave credence to the relative comparison across the study population based on the composite index derivation. The distribution pattern of entrepreneurship aptitude index was analyzed using the broadly categorized three ranges of low, average and high. The pooled results of both sexes were considered. The respondents were distributed across the three categories alongside their respective entrepreneurial aptitude mean index. The overall mean index of entrepreneurial aptitude stood at 0.7696, implying 76.96%. Quite a negligible percentage of the study population (3.0%) were in the poor category and had about 32.50% entrepreneurial aptitude mean index, while 10.4% were in the average category with a mean index of 57.00%. About 86.6% of the population expressed a sufficient entrepreneurship aptitude mean that stood at about 80.9%. Further decomposition of the results revealed that female respondents expressed averagely more aptitude to venture into entrepreneurship than their male counterparts, as shown in Table I. At the segment of the lowest entrepreneurship aptitude index were male respondents, despite not having any distribution in the average entrepreneurship aptitude index. The entrepreneurship aptitude of males in the upper segment showed a higher index than their female counterparts. Thus, it could be observed that males were most decisive in terms of

attractiveness to self-employment. The female distribution did not show low entrepreneurial aptitude but the mean highest entrepreneurship aptitude index stood at 78.86% compared to males at 82.15% [1], [2]. The relatively less aptitude could be the influence of socio-cultural orientation and work-family life balance [14], [15]. Males were found to exhibit an extreme index of entrepreneurship aptitude than females. This was prevalent within the 0-4% and above 70% proportion on a 0 to 100% scale, unlike females who exhibit entrepreneurship behaviour of not less than 59% on a 0 to 100% scale. The high aptitude among females might be driven by a socialization process and a motivation to supplement family earnings [3].

TABLE I
DISTRIBUTION OF RESPONDENTS BASED ON INDEX OF ENTREPRENEURSHIP APTITUDE BY SEX

Entrepreneurship Aptitude Index (EAI)	EAI range Interpretation	Distribution by Gender		
		Male	Female	Both
		Mean (%)	Mean (%)	Mean (%)
0.0-0.399	Poor	0.3250 (3.0)	0.000 (0.00)	0.3250 (3.0)
0.4-0.699	Average	0.000 (0.0)	0.5750 (10.4)	0.5750 (10.4)
0.7-1.0.0	High	0.8215 (53.7)	0.7886 (32.8)	0.8091 (86.6)
	Total	0.7954 (56.7)	0.7371 (43.3)	0.7701 (100.0)

Source: Field Survey, 2013 N/B: values in bracket represent % of Total N

B. Gender Orientation on Entrepreneurial Aptitude among Business Decision Science Trainees

This subsection explored the magnitude of importance of elements that aggregately described and pushed-up the entrepreneurship aptitude of the respondents. The exploration took cognizance of the relative importance of the elements of entrepreneurship aptitude through the ranked affirmative index by males, females and both. Entrepreneurial aptitude could be induced by several none or salient issues, of which, sex might influence entrepreneurial aptitude orientation. Could the sex orientation create differences in the magnitude of the push-pull array of elements of entrepreneurship aptitude among highly informed business decision scientists? The results, as shown on column P, Q and R revealed some pattern of underlying push-pull elements of entrepreneurship aptitude presented in column P, Q and R. In Table II, the distribution of male, female and both followed a similar pattern, though slightly different at some points when compared to the aggregate affirmative index ranked position. The variations in perceived magnitude of importance of the push-pull elements of entrepreneurship led to the relative positioning in column P and Q, as indicated by the right sided numerical superscript. The result of these columns (P and Q) made significant revelation when compared to the aggregate affirmative index ranked order position 3rd and 4th in column R. The male orientation differed in position 3rd and 4th compared to aggregate positioning. The male preferred self-employment but did not hesitate in experimenting with securing paid employment if the opportunity arose. The female orientation tended toward being involved in a self-directed enterprise. The

orientation variation underpins the self-assertive traits that tend to promote sole proprietorship other than partnership or corporate entrepreneurship as being advocated by international development interventions in the study area. The remaining push-pull elements of entrepreneurial aptitude were virtually of the same magnitude of importance including the 1st and 2nd ranked push-pull elements of entrepreneurial aptitude. The array of eight elements in Table II showed three major underlying patterns which had been categorized based on left-sided alphabetical superscripts interpreted as follows:

- Superscript A: 1st – 4th shows an incidence of enterprise formation and ownership
- Superscript B: 5th – 6th shows a tendency to support and strengthen an existing enterprise.
- Superscript C: 7th – 8th shows virtually little technical support from an institution resource unit to initiate an enterprise.

TABLE II
DISTRIBUTION OF RESPONDENTS BASED ON GENDER ORIENTATION ENTREPRENEURIAL APTITUDE

Item	Elements Entrepreneurial Aptitude	Disagree		Agree		Affirmative Index
		Male	Female	Male	Female	
1	Starting my own business sounds attractive to me. I personally consider entrepreneurship to be a highly desirable career alternative for people with my education.	6.0	9.0	50.7 ^{2nd}	34.3 ^{2nd}	^a 0.850 ^{2nd}
2	I would rather found a new company than be the manager of an existing one.	6.0	16.4	50.7 ^{2nd}	26.9 ^{5th}	^a 0.776 ^{4th}
3	It is more beneficial to society to have large enterprises than small firms.	17.9	13.4	38.8 ^{5th}	29.9 ^{4th}	^b 0.687 ^{5th}
4	In business, it is preferable to be an entrepreneur, rather than a large firm employee. In my university, there is a well functioning support infrastructure to support the start-up of new firms.	23.9	20.9	32.8 ^{6th}	22.4 ^{6th}	^b 0.552 ^{6th}
5	I know many people in my university who have successfully started a business.	9.0	11.9	47.8 ^{4th}	31.3 ^{3rd}	^a 0.791 ^{3rd}
6	Overall I consider an entrepreneurship career as paramount.	38.8	37.3	17.9 ^{8th}	6.0 ^{8th}	^c 0.139 ^{8th}
7		31.3	23.9	25.4 ^{7th}	19.4 ^{7th}	^c 0.448 ^{7th}
8		1.5	1.5	55.2 ^{1st}	41.8 ^{1st}	^a 0.970 ^{1st}

Source: Field Survey, 2013 Note: a=1-4th indicates proportional interest in enterprise formation and ownership b=5th-6th indicates proportional tendency to support and strengthened existing enterprises. c=7th-8th indicates proportional interest with drawn motivation from institutions resource based technical support.

C. Profile Analysis and Orientation Divide in Entrepreneurial Aptitude

Having analyzed the underlying psychological trend of entrepreneurship aptitude and subsequently estimating the entrepreneurship aptitude status along the sex orientation, it became obvious to evaluate the variation arising from the

array of socio-economic characteristics of the survey participants. For the age of the respondents, aggregately (male, female and both), according to Table III, Item one indicated a positive relationship with increased entrepreneurship aptitude. Comparing the entrepreneurship index for male and female separately; those across the ages of 22-23 years, 24-25 years and more than 25 years showed a difference in entrepreneurship aptitude orientations. However, males had a higher entrepreneurship aptitude index mean than the female respondent, while the males who were more than 25 years old had the highest entrepreneurship aptitude index of 0.8345; implying an aptitude of 83.45%. Comparatively, female respondents within the ages of 24-25 years had the highest entrepreneurship aptitude index of 0.8000, implying an aptitude of 80%.

The disparity in the mean entrepreneurship aptitude index, particularly age group displaying the highest tendency to be entrepreneurs, could clearly be tied to the societal orientation of the respondents. At the age above 25 years, most males would have been motivated by family responsibilities. These responsibilities thus pushed for diversification of income generating sources towards improvement of the socioeconomic wellbeing status. The female highest entrepreneurship aptitude index was pronounced among those below the age of 25 years, perhaps due to some socio-economic demands like starting a new family, the challenges of taking care of her responsibility if not married and solving the immediate parental family needs, if sources of funding are not adequate. According to Item 2 on Table III, though the entrepreneurial aptitude index of the employed and non-employed showed slight variations, both categories were sufficiently high in entrepreneurship aptitude having mean index values that were more than 0.7200, implying more than 72% aptitude. Trainees who had worked showed relatively more entrepreneurship aptitude than those who were not economically engaged. It could be that experience due to exposure to the work environment provided more confidence and decisive insights on the next direction to venture into. This succinctly underscores the importance of mentoring and apprenticeship in specific technical lines, despite adequately being empowered in business decision science capacity [27].

With respect to Item 3 on Table III, the trend earlier observed in Item 2 was replicated. Though there were slight variations in the respective entrepreneurship aptitude mean indexes, the difference in the male category was quite insignificant, except for the female categories that witnessed a significant difference. The male entrepreneurship aptitude mean index stood at 0.7954, implying an aptitude of 79.54% and was higher than the female aptitude mean index of 0.7371 indicating an aptitude of 73.71%. It indicates technical lines of enterprises as crucial in driving individual entrepreneurship aptitude.

V. CONCLUSION

Understanding the sources of variations in entrepreneurship aptitude among young people in a population characterized by a high level of unemployment is very important. A

consideration worthy of note is that the respondents were exposed to higher educational attainment that was entrepreneurially friendly and the respondents were either directly involved or indirectly involved in entrepreneurship through their parents. Based on the results of the study, irrespective of gender, an individual who has explored capacity building either through a formal or non-formal process, has the high aptitude likelihood to engage in entrepreneurship activities. Those respondents in the higher age above 25 years were likely to possess a higher aptitude for entrepreneurship. Obviously, there were slight variations in the gender orientations of the respondents as males were more driven towards direct ownership of an enterprise than their female counterparts. Generally, both male and female respondents were sufficiently high in the entrepreneurship aptitude index and we recommend equal attention to them in entrepreneurship matters.

TABLE III
 DISTRIBUTION OF RESPONDENTS BASED ON ENTREPRENEURIAL APTITUDE

Item	Demographic variables	Male	Female	Both
		Mean (%)	Mean (%)	Mean (%)
1	Age range			
	20-21	0.5500 (3.0)	0.7208 (9.0)	0.6781 (11.9)
	22-23	0.7813 (6.0)	0.7089 (20.9)	0.7250 (26.9)
	24-25	0.7705 (16.4)	0.8000 (10.4)	0.7819 (26.9)
	26-27	0.8345 (31.3)	0.7625 (3.0)	0.8283 (34.3)
2	Are you currently self-employed?			
	Yes	0.8094 (11.9)	0.7550 (7.5)	0.7885 (19.4)
	No	0.7917 (44.8)	0.7333 (35.8)	0.7657 (80.6)
3	Are your parents currently self-employed?			
	Yes	0.7978 (34.3)	0.7687 (23.9)	0.7859 (58.2)
	No	0.7917 (22.4)	0.6981 (19.4)	0.7482 (41.8)

Source: Field survey, 2013

REFERENCES

- [1] Jayachandran, S, The Roots of Gender Inequality in Developing Countries. Annual Review of Economics, vol. 7, 2015: Submitted. DOI: 10.1146/annurev-economics-080614-115404.
- [2] Fiske, S. T., Cuddy, A.J.C., Glick, P and Xu, J. "A Model of (Often Mixed) Stereotype Content: Competence and Warmth Respectively Follow From Perceived Status and Competition". Journal of Personality and Social Psychology. vol. 82, no. 6, pp. 878-902, 2002. DOI: 10.1037//0022-3514.82.6.878. (Accessed online on February 29, 2016).
- [3] Kim, P. H., Aldrich, H.E. and Keister, L.A. Access (Not) Denied: The Impact of Financial, Human, and Cultural Capital on Entrepreneurial Entry in the United States. Small Business Economics. vol 27, no. 1, pp. 5-22, 2006.
- [4] Isaac, S. K., The EU's Democracy-Stability Dilemma Persists in Egypt, E-IR, August 1, 2013 (online), available from: <http://www.e-ir.info/2013/08/01/the-eus-democracy-stability-dilemma-persists-in-egypt/> (accessed August 18, 2015).
- [5] Berger, B. (Ed.), The culture of entrepreneurship. San Francisco: Institute for Contemporary Studies (ICS) Press, 1991.
- [6] Arbache, J. S., Kolev, A., Filipiak, E, Gender Disparities in Africa's Labor Market. Africa Development Forum. World Bank. 2010.

- <https://openknowledge.worldbank.org/handle/10986/2520> License: CC BY 3.0 IGO.” (Accessed online on February 29, 2016).
- [7] Dabalen, A. Oni, B. and Adekola, O. A. Labour Market Prospects for University Graduates in Nigeria. The Nigeria University system Innovation Project Study, 2000.
- [8] Shadare, B. & Tunde, O. “Ethno-religious conflicts in Nigeria: Causal analysis and proposals for new management strategies”. *European Journal of Social Sciences*, vol. 13, no. 3, pp. 345-353, 2011.
- [9] Krueger, N. F., Reilly, M.D. and Carsrud, A.L. “Competing Models of Entrepreneurial Intentions”. *Journal of Business Venturing*, vol. 15(5-6) pp. 411-432, 2000.
- [10] Bandura, A. *Social Foundations of Thoughts and Action: A Social Cognitive Theory*. Prentice Hall, New Jersey, 1986.
- [11] Shapero, A. and Sokol, L. *The Social Dimensions of Entrepreneurship* In Kent, Sexton and Vesper, *Encyclopedia of Entrepreneurship* 72-90, Englewood Cliffs, New Jersey: Prentice-Hall Inc. 1982.
- [12] Reitan, B. *Entrepreneurial Intentions: A Combined Models Approach*. 9th Nordic Small Business Research Conference, Lillehammer, Norway, May 29-31, 1996..
- [13] Ajzen, I. *Theory of Planned Behaviour*. *Organizational Behaviour and Human Decision Process*, vol. 50, pp. 179-211, 1991.
- [14] Carter, N., Gartner W., Shaver K. & Gatewood E. The career reasons of nascent entrepreneurs. *Journal of Business Venturing*, vol. 18, pp. 13-39, 2003..
- [15] Kirks, J. and Belovics, R. *Counseling Would-Be Entrepreneurs*. *Journal of Employment Counseling*, vol. 43, no. 2, pp. 50-62, 2006.
- [16] Armitage, C.J. and Conner, M. “Efficacy of the Theory of Planned Behavior: A metaanalytic review”. *The British Psychological Society*, vol. 40, no. 4, pp. 471-499, 2001.
- [17] Kolvereid, L. and Isaksen, E. “New business start-up and subsequent entry into self employment”. *Journal of Business Venturing*, vol. 21, pp. 866-885, 2006.
- [18] Langowitz, N. and Minniti, M. *The Entrepreneurial Propensity of Women*. *Entrepreneurship Theory & Practice*, vol. 31, no.3, pp. 341-364, 2007.
- [19] Gibson, S.G. Harris, M.L., and Barber 111, D “An Examination of Entrepreneurial Intention Personality Factors in Brazilian Student Population.” *Proceedings of Southeast INFORMS Annual Meeting*, October, 2008
- [20] Ali, A., Topping, K.J., Tariq, H.R. “Entrepreneurial Attributes among Post-graduate Students of Pakistan University.” *US-China Educational Review*, vol. 7, no. 5, pp. 66-77, 2010.
- [21] Zain, Z.M., Akram, A.M and Ghani, E.K “Entrepreneurial Intention among Malaysian Business Students”. *Canadian Social Science*, vol. 6, no. 3, pp. 34-44, 2010.
- [22] Ferreira, J., Raposo, M., Rodrigues, R., Dinis, A., Paço, A. “A Model of Entrepreneurial Intention: An Application of the Psychological and Behavioral Approaches.” *Journal of Small Business and Enterprise Development*, vol. 19, no. 3, pp. 424-440, 2012.
- [23] Gerba, D.T, “Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia.” *African Journal of Economic and Management Studies*, vol. 3, no. 2, pp. 258 – 277, 2012.
- [24] Afinotan, L.A and Ojakorotu, V “Niger Delta Crises: Issues, Challenges and Prospects.” *African Journal of Political Science and International Relations*, vol. 3, no. 5, pp. 191-198, 2009.
- [25] Inyang, E. B. and E. E. Udong “Gender, Livelihood Security and Diversification in an Environmentally-Challenged Niger Delta Region.” *The International journal of Humanities and Social Science*. (India): vol. 1, no.1, pp. 44-52, 2013.
- [26] Udofot, P.O., Udoidem, J.O. and Inyang, E.B. “Exit Dimensions of low entrepreneurial start-up of Business Ventures among Graduates in Nigeria. *Journal for Development and Leadership*, vol. 5, no. 1, pp. 17-24, 2016.
- [27] St-Jean, E. and Audet, J. “The Role of Mentoring in the Learning Development of the novice entrepreneur.” *International Entrepreneurship Journal*. 2009. (Accessed from link.springer.com/article/10.01007/s11365-009-0130-7 on Feb. 29,2016).