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Perceived Obstacles and Performance of Food and Agribusiness Enterprises: Implications for Urban and Rural Entrepreneurship Development

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Abstract. This paper aims at examining the enterprises characteristic, business performance, and obstacles in doing business for food and agribusiness firms across rural and urban areas, based on World Bank's Enterprises Survey data of 699 respondents. Chi-square test shows statistically significance difference in firms' characteristics across the rural and urban regions. ANOVA reveals a significant difference in business performance. Similarly, perception about obstacles in doing business varies across the urban and rural firms. This study can be helpful for agribusiness managers and government policy makers in promoting region-based entrepreneurship in a focused manner.

Keywords: Rural; urban, business performance; business obstacles; food and agribusiness.

1. Introduction

The food and agriculture sector has recorded a significant transformation in the developing countries due to increase in production, growing disposable income, changing taste and preferences, nutritional sensitiveness, health consciousness, and marketing (Reardon *et al.*, 1999; Murty, 2000; Pinstrup-Andersen, 2000; Deshingkar *et al.*, 2003; Busch and Bain, 2004; Gehlhar and Regmi, 2005; Henson and Reardon, 2005; Hawkes, 2006; Swinnen and Maertens, 2007; Louw *et al.*, 2008; Kearney,

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2010). It is expected that introduction of blockchain and Internet of things (IoT) will bring a huge change in the food sector (Powell *et al.*, 2021). This rapid transformation in agri-food sector has been attracting the attention of researchers in the recent years (Xu *et al.*, 2008; Reardon *et al.*, 1999). Indian food processing sector has enormous potential for transforming the economy, income and employment generation, export earnings through large scale manufacturing (Ali, 2016), due to the huge availability of raw material, abundance of skilled and semi-skilled labor and technology, and one of the biggest consumption markets that create a win-win situation for both the food processing industry and the consumers.

According to a report of Ministry of Food Processing Industries (MOFPI, 2018–2019), India is among the top producers in many agricultural commodities such as milk, food grains, and horticulture produces. For sustainable production in agricultural sector, decision-making is very complex (Gao *et al.*, 2001). In the year 2017–2018, growth rate of food processing sector was 7.86% with the contribution of 8.83% of GVA of India's total manufacturing sector, and the export volume of food processing sector was 35303.19 Billion USD in 2017–18. Food processing sector provides employment to 1.85 million people, which constitutes 12.43% of the total employment in all registered factories in 2016–2017. Unregistered food processing sector provides employment to 5.1 million workers as per the National Sample Survey Organization [NSSO 73th Round of Survey, (2015–2016)].

Supply chain management is the prerequisite in food sector due to its complex network and a large number of stakeholders (Wang *et al.*, 2014; Haleem and Sufiyan, 2021). International food supply chain is dealing with several new competitive and trade challenges (Neves *et al.*, 2013). The food business attains success through greater market orientation with innovation (Batterink *et al.*, 2006). Functional and spatial integration plays a significant role in firms' performance (Mohanty and Shankar, 2019). Geographical location of the firm determines the efficiency of resources' allocation. If not properly chose, a firm's location may create the problem of high transportation cost, poor technological diffusion, and lack of access to a large economic market, which all may ultimately hamper the productivity of the enterprise (Isaksson, 2007). There has been a significant variation in the investment climate across locations within the city (Dollar *et al.*, 2005), as regional infrastructure positively affects the firm's total factor productivity (Aiello *et al.*, 2014).

High growth of entrepreneurship promotes significant economic growth (Wong *et al.*, 2005), specifically in the rural areas, which plays a significant role in the wellbeing of the national economy (Phillipson *et al.*, 2019). Increasing rate of entrepreneurship has led to reduction in unemployment level in OECD countries (Audretsch and Thurik, 1999). Indian government has worked on mobilizing a large proportion of the population for entrepreneurial activities (Rajesh, 2006). According to World Bank, India has improved its ranking in ease of doing business in the last six years. India's rank was 142nd in 2014, which has improved to 63th in 2019. It indicates that the overall business environment has improved. However, sector-wise understanding of business environment is still being studied.

Location of the firm is one of the significant factors for valuation of the firms and it also affects the firms' policy (Gao *et al.*, 2008). Location of the firm affects the cost of capital, dividend policy, operating plan, stock price risk, financial management lease intensity, and corporate social responsibility (Kedia and Rajgopal, 2011; Boubakri *et al.*, 2016; Husted *et al.*, 2016; Kubick and Lockhart, 2016; John *et al.*, 2011). According to Lu and Tao (2013) institution quality is an important determinant of a firm's productivity. Rajesh and Sen (2017) concluded the same in the case of India. It is a longstanding issue of concern how the requirements of the rural firms are different from those of urban firms with reference to enterprises' characteristics (Smallbone *et al.*, 2003). In rural areas, diversification towards small enterprises from cultivation is a promising option (Lanjouw and Lanjouw, 2001; Khan *et al.*, 2017).

There is a dearth of research regarding the performance of food and agribusiness firms across rural and urban agribusiness firms. A few empirical evidences are available which have discussed the importance of location while among them, studies focusing primarily on food and agribusiness firms are negligible. It is imperative to identify the business environment, entrepreneurial needs and characteristics of rural firms, and how they are different from their urban counterparts, so that proper and effective spatial policy strategies can be designed to harness the full potential of businesses for all the sectors including food and agribusiness in rural economies (Serwicka and Swinney, 2016; OCED, 2018). This study bridges the gap and performs an effective comparative analysis of rural and urban food and agribusiness firms.

An effective policy design requires a comprehensive data-based study. This study contributes to the existing literature on food and agribusiness environment and perceived obstacles in doing business, separately for rural and urban areas. This study will provide a strong empirical understanding of business environment for policy planning and guiding emerging entrepreneurs. Robust policies for rural food and agribusiness enterprises depend upon a comprehensive understanding of the business environment, performance drivers, and institutional arrangement. An understanding of perceived business obstacles, enterprise characteristics, and business performance from a scale perspective will help the agribusiness managers in aligning the needs of the supply chain and the policy makers in designing better policy support. Research on role of spatial location and concentration of economic activity is in primary phase (Ghani *et al.*, 2012). This study measures whether a spatial variation between an urban and a rural located food and agribusiness firm has distinctive characteristics in terms of age, size, legal status, top manager experience and other profile characteristics of the firms. In addition, this study analyzes the major business obstacles such as access to resources, business regulations and market externalities faced by food and agribusiness enterprises.

2. Conceptual Framework

Rural firms tend to be smaller in size as compared to urban firms (Lowe and Talbot, 2000; Smallbone *et al.*, 2003; Atterton and Affleck, 2010; Lyee and Cowling, 2015)

and the legal status of rural firms is largely sole proprietorship and partnership. Using large data set of investment climate survey of World Bank for India, China and Brazil, Sridhar and Wan (2010) concluded that labor intensive firms tend to refrain from locating themselves in medium-sized cities relative to smaller cities. Beck *et al.* (2005) asserted that a firm's size matters a lot for its productivity, survival, and profitability. Size of the firm makes a positive effect on its productivity (Backman, 2012; Rajesh and Sen, 2017). Due to their comparatively smaller size, rural markets are an unpromising destination for large national and global enterprises (Phillipson *et al.*, 2019). Researchers have argued that in the case of women-owned small and medium-sized enterprises, businesses underperform as compared to those owned by male counterparts (Du Rietz and Henrekson, 2000; Watson, 2003). According to Albright (2006), women involvement in farm and rural businesses are increasing but they face difficulty in finding information related to best management practices for their businesses. However, Peake and Marshall (2017) suggested that female-owned farm and rural family businesses perform comparatively better in terms of subjective assessment of performance. The biggest constraint with rural firms is their inability to recruit and retain qualified human resources (Freeman *et al.*, 2012). Some previous research studies reported that rate of entrepreneurship is high in urban areas (Marshall and Samal, 2006; Sternberg, 2009); the potential reason for which may be that urban areas have required resources for startup of an entrepreneurial activity (Yu *et al.*, 2011).

Rural firms have less access to potential workers (Phillipson *et al.*, 2019) and local experts are the main sources of knowledge for grassland management (Da Xu *et al.*, 2001). Hsieh and Klenow (2009) suggested that there are two type of factors that hamper expansion of firms in India and China. First are the financial constraints that particularly impact small firms, and second are the organizational factors that impact large firms. Rural firms are older than urban firms and mostly deal with primary product industries (Phillipson *et al.*, 2019). Food and agribusiness firms are striving for technological advancement. Food supplies needed global identification system (Liu *et al.*, 2021). A World Bank study reveals that labor intensive firms are located in big cities in India (Faggio and Silva, 2014). Feng and Xu (1999) stated that economic development is directly correlated with urbanization. Ali (2014) reported that small and medium-sized food and agribusiness firms were located primarily in the southern region of the country and concentrated in larger cities, while larger firms normally operate in the northern and eastern regions in the case of India. Keeble and Walker (1994) found a noticeable fact that in the rural areas, registration of the firms was correlated with de-registration of the firms. In view of the above literature, the first specific hypothesis of the study is as follows:

- *H1: There are no differences in profile among the food and agribusiness firms across urban and rural areas.*

In a competitive business environment, decision regarding the location of the enterprise has a great importance (Sefiani *et al.*, 2016). Harabi (2003) found that location

significantly determined the performance and growth of the small and medium enterprises. Geographical location is a considerable factor that impacts the export performance, but little attention has been paid to understand the difference between export from regional and metropolitan locations (Katsikea *et al.*, 2005). Studies conducted in different countries, viz. Loughran and Schultz (2005) for United states, Phillipson *et al.* (2019) for United Kingdom and Schwartz and Leifels (2016) for Germany, found that average turnover of rural firms is less than that of the urban firms. On the contrary, Curran and Storey (1993) stated that manufacturing firms located in rural areas earn higher profit than urban manufacturing firms in the United Kingdom.

Urban firms perceive competition as a severe obstacle Phillipson *et al.* (2019), because more firms are attracted towards urban areas, which creates an intense competition among businesses (Phelps *et al.*, 2001). Urban entrepreneurs are more creative and more likely to set up new businesses (Joo, 2011). As compared to urban areas, rural areas have more registered firms having a small business (Phillipson *et al.*, 2019). Rural markets experience less threat of new entrants and external competition as compared to urban markets (Phillipson *et al.*, 2019). In their study, Curran and Storey (1993) concluded that firms in rural areas might underperform due to lack of access to formal and informal advisory, connectivity with customers and input suppliers. Less rural firms engage in export business as compared to the urban firms (North and Smallbone, 2000). Urban firms benefit from the infrastructural availability for exports (Mittelstaedt *et al.*, 2006). Performance of business process guides the decision making for resource allocation and technology-based operations (Kataev *et al.*, 2016). In the light of the above literature, second specific hypothesis of this study is as follows:

- *H2: There are no differences in business performance among food and agribusiness firms across urban and rural areas.*

Foreign direct investment (FDI) provides opportunities to develop businesses by reducing the money constraints (Tougem *et al.*, 2021), but to attract the foreign direct investment, location of the firm is an important requisite, particularly for the newly established enterprises (Tripathi and Kumar, 2017). Dahlqvist *et al.* (2000) argued that location of the firm has significant implications regarding access to market, finance, skilled labor, and infrastructure facilities. Location has a strategic role in starting a new business because it determines the cost of production, scale of production, business regulation and tax (Joo, 2011). Cost is an important aspect for the selection of location of the firms (Ghani *et al.*, 2012). Finance has been viewed as a major obstacle for the entrepreneurs in low and middle-income countries (Woodruff, 2018). Businesses that require higher level of working capital prefer to be established in large cities instead of small cities (Tripathi and Kumar, 2017). On the other hand, Phillipson *et al.* (2019) reported that obtaining finance is not a leading obstacle for both urban and rural firms, because advent of cloud services offers huge collaboration opportunities for business enterprises (Tan *et al.*, 2021). Mukim and Nunnenkamp (2012) studied the choice of location for foreign investors. They revealed that foreign

investors are more likely to invest on the location where better infrastructural facilities are available, and other foreign investors are already investing.

Globally digitalization, telecommunication remote working, and social networking are leading the modern societies (Ianuale *et al.*, 2015). Information and communication technology has risen as a big enabler of firms' performance and it also helps in supply chain integration (Amoako *et al.*, 2021). Rural firms are unable to come out from isolation even through digital channels because the rural areas suffer from weak internet accessibility (Roberts *et al.*, 2017). In the case of India, infrastructure availability is a significant determinant of a firm's location (Sridhar, 2005), because in case of unavailability of banking, telecom, power and other infrastructural facilities, success of the firms is a big "if" (Tripathi and Kumar, 2017). Directors of urban firms have strong business, social and political networking that impacts the information flows, credit ratings, takeover and mergers, and valuation of the firms (Cai and Sevilir, 2012; Houston *et al.*, 2014; Khatami *et al.*, 2016). Rural firms perceive more obstacles regarding business regulations while for urban firms, competition in the market is a greater issue of concern (Phillipson, 2017). Rural enterprises face relatively more taxation regulation issues (Atterton and Affleck, 2010; Lyee and Cowling, 2015). Foreign firms in India perceive more constraints in running the business than domestic firms, while in China, opposite pattern has been recorded (Huang and Tang, 2012). In view of the above literature, the third hypothesis of this study is as follows (Fig. 1):

- *H3: There are no differences in perceived business obstacles among food and agribusiness firms across urban and rural areas.*
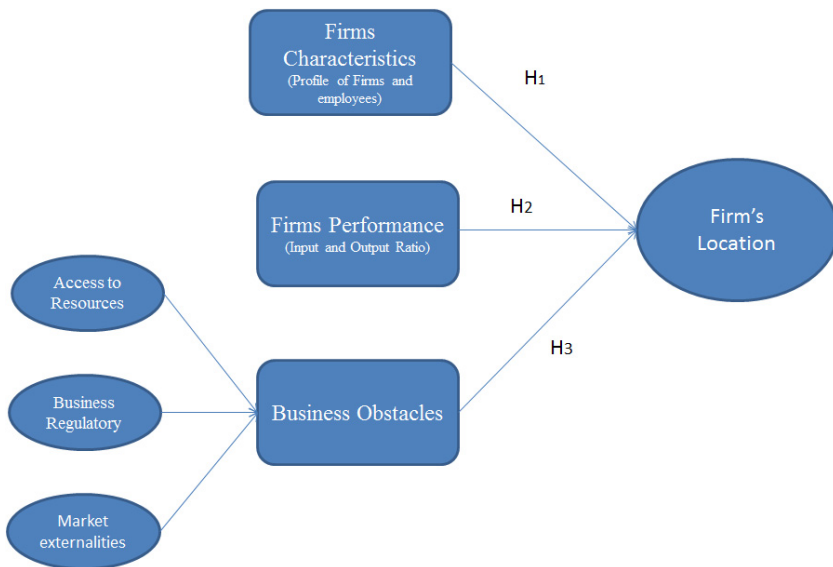

Fig. 1.   Conceptual framework and research hypothesis.

3. Research Methodology

3.1. *Data source and variables description*

This study is based on the World Bank's Enterprises Survey (WBES) data. Stratified random sampling technique has been used to collect the data by the World Bank. Survey was carried out though face-to-face interview and questionnaires from owners and top managers of the manufacturing firms. For India, a total of 9281 manufacturing firms from different industry and sub-sectors have been surveyed, out of which, 699 firms are involve in food and agribusiness. In this study, these food and agribusiness firms have been taken. This enterprise survey comprises of information regarding wide range of firm characteristics such as firm size, legal status, main market of the firms, main product, quality certification, credit status of the firms (loan from financial institution); own website and technology licensed from a foreign-owned company; average year of managers' education and experience; firms' age; performance indicators such as annual sales, labor productivity and capacity utilization; and business obstacles related to access to resources, business regulations and market externalities.

There are a total of 16 obstacles, which have been categorized into three groups, viz. access to resources (electricity, telecommunications, transport services, access to land, and access to finance), business regulations (trade regulations and customs, tax rates, tax administrations, business licensing and permits, and labor regulations), and market externalities (crime, theft and disorder, courts, practices of competitors, political instability, corruption, and inadequately educated workforce). Data of business obstacles have been reported on a five point scale from 1 to 5, where 1 denotes no obstacle while 5 indicates very severe obstacle. Furthermore, to examine the business performance of the firm across locations, viz. urban and rural, some input and output ratios have been examined. Input ratios are measured by labor cost to total cost, cost of raw materials to total cost, costs of fuel to total cost, total annual costs of electricity in the last fiscal year, and rental cost of machinery, vehicles and equipment, while output is measured by annual sales and percentage of total cost of capacity utilization.

4. Analytical Approach

The World Bank's Enterprises Survey (WBES) data have been digitized using SPSS version 20. Simple statistical techniques have been used to test the research hypothesis. Chi-square test has been used to analyze the significance differences in urban and rural enterprises with respect to firms and employees' characteristics (firm size, legal status, quality certification, main market of the enterprises, main product, credit status of the firms (loan from financial institution), own website and technology licensed from a foreign-owned company, average education and year of experience of the managers, and firms' age).

Chi-square test examines the distribution of frequency under categorical variable across the concerned variables. It calculates the existence of a significant difference in

the distribution of frequency. Value of chi-square statistics has been calculated using the following formula:

$$\chi^2 = \sum (O - E)^2 / E,$$

where E = expected value,
O = observed value

with $df = (r - 1)(c - 1)$, where r and c are the number of possible categories under the considered variable.

Furthermore, to examine the difference in business performance and perceived business obstacles (access to resources, business regulations and market externalities) of the enterprises across location of the firms, analysis of variance (ANOVA) has been used. Analysis of variance is a widely used tool to examine the difference between groups.

5. Results and Discussion

A number of studies have examined the firms' characteristics across urban and rural locations (Du Rietz and Henrekson, 2000; Smallbone *et al.*, 2003; Rizov and Walsh, 2011; Lee and Cowling, 2015; Phillipson *et al.*, 2019). Of the total 599 food and agribusiness firms, 96 firms are situated in rural/semi urban areas while 603 firms are situated in urban areas. Firms' characteristics across the location are given in Table 1. Chi-square test ($\chi^2 = 1.384$, $P > 0.1$) indicates that there is no significant difference in the firm size across locations. Most of the firms are small and medium in size. Results on legal status of the firms reveal that most of the rural and semi urban firms are partnership firms while most of the firms in urban areas are sole proprietorship firms. Female participation in the top management between rural/semi urban and urban firms shows a significant difference at 10% level of significance. In the rural/semi urban areas only 2.1% females are in the top management, while on the other hand, 6.8% females are in the top management of the firms in urban areas. As far as international quality certification is concerned, chi-square estimates ($\chi^2 = 13.681$, $P < 0.01$) indicate a statistically significant difference across rural and urban firms. 36.1% of urban firms have internationally recognized quality certification; however, only 16.8% rural/semi urban enterprises have that certificate.

Results of analysis show that 46.9% rural firms sold their product in local market as compared to 37.7% urban firms having the main market of their product in local areas. Regarding the loan adoption from financial institutions, statistically drawn test results show same credit status across different locations. The distribution of enterprises in terms of having own website between rural and urban firms varies significantly ($\chi^2 = 3.920$, $P < 0.05$). A noticeable result reveals that more than 60% food and agribusiness forms do not have their own websites in this era of the internet, irrespective of their location. Chi-square test ($\chi^2 = 10.552$, $P < 0.01$) indicates significant difference in having technology licensed from foreign owned

Table 1. Enterprises' characteristic by rural/semi urban and urban firms.

	Rural/semi urban firms		Urban firms				
	n	%	n	%	χ^2	df	Sig.
Firm size							
Small ≥ 5 and ≤ 19	43	44.8	259	43.0			
Medium ≥ 20 and ≤ 99	34	35.4	247	41.0	1.384	2	0.501
Large ≥ 100	19	19.8	97	16.1			
Legal status							
Sole Proprietorship	45	46.9	317	52.6			
Partnership	46	47.9	219	36.3	6.259**	2	0.044
Limited and others	5	5.2	67	11.1			
Female top manager							
Yes	2	2.1	41	6.8			
No	94	97.9	560	93.2	3.211	1	0.073
Internationally recognized quality certification							
Yes	16	16.8	216	36.1			
No	79	83.2	382	63.9	13.681*	1	0.000
Main market for establishment's main product							
Local market	45	46.9	195	37.7	2.850***	1	0.091
National and international	51	53.1	322	62.3			
Loan from financial institution							
Yes	38	40.0	217	36.5	0.438	1	0.508
No	57	60.0	378	63.5			
Establishment has its own website							
Yes	27	28.1	233	38.6	3.920**	1	0.048
No	69	71.9	370	61.4			
Technology licensed from a foreign-owned company?							
Yes	0	0.0	53	10.3	10.552*	1	0.001
No	94	100.0	464	89.7			
Avg. year of manager experience							
< 5 Years	15	15.6	103	17.1	3.424	3	0.331
6–10 year	31	32.3	195	32.4			
11–20 years	29	30.2	214	35.6			
> 20 years	21	21.9	89	14.8			
Firms age							
< 10 years	22	23.2	158	26.2	0.539	3	0.91
11–20 years	34	35.8	214	35.5			
21–30 years	21	22.1	119	19.8			
> 30 years	18	18.9	111	18.4			

Notes: *Significant at 1%, **Significant at 5%, ***Significant at 10%.

company across the rural/semi urban and urban firms at 1% level of significance. No rural/semi urban firm has technology licensed from a foreign owned company; however, 10.3% urban firms have reported having the license. Regarding managers' experience, result ($\chi^2 = 3.424$, $P > 0.1$) shows no significant difference across rural/ semi urban and urban enterprises. But an interesting outcome of the results is that rural firms have 21.9% top managers who have more than 20 year of experience while on the other hand, in urban firms only 14.8% top managers have more than 20 year of experience. Chi-square test ($\chi^2 = 0.539$, $P > 0.1$) reveals that distribution of firm's age does not vary across the locations.

In Table 2, differences in business performance across rural/semi urban and urban firms are presented. Several studies have examined the organization and business performance across urban and rural firms (Curran and Storey, 1993; Rijkers *et al.*, 2010; Owoo and Naudé, 2017; Chanda and Goyal, 2020). Studies have taken various indicators to analyze the performance of firms such as input efficiency, output generation, employment growth, and capacity utilization. In this study, input and output have been taken to analyze the firms' performance. Under input factors, costs such as labor, raw material, fuel, electricity, rental cost of machinery, and other miscellaneous costs have been taken while in output, difference in annual sales and capacity utilization is analyzed.

For labor cost (wage and salaries), ANOVA ($F = 11.76$, $P < 0.01$) shows a significant difference in rural and urban enterprises. Less labor cost is incurred in rural firms as compared to urban firms. Regarding fuel cost, analysis of variance indicates that rural firms incur significantly higher per unit cost than urban firms ($F = 3.405$, $P < 0.1$). Beside these costs, statistically insignificant differences have been recorded in the cost of electricity, rental cost of machinery, and other costs. As far as output is

Table 2.   Difference in business performance by rural/semi urban and urban firms.

	Rural/semi urban ($n = 96$)	Urban (603)	Total ($n = 699$)	F-value	df	Sig.
Input						
Labor cost to total cost	0.16	0.27	0.254	11.763*	1	0.001
Cost of raw materials to total cost	0.71	0.74	0.734	2.074	1	0.150
Costs of fuel to total cost	0.04	0.03	0.030	3.605***	1	0.058
Total annual costs of electricity in last fiscal year	0.05	0.06	0.062	1.025	1	0.312
Rental cost of machinery, vehicles and equipment	0.04	0.04	0.042	0.015	1	0.903
Rental cost of land and buildings to total cost	0.01	0.02	0.020	1.136	1	0.289
Other cost of production to total cost	0.06	0.05	0.049	1.995	1	0.159
Output						
Annual sales/total cost	1.7	2.8	2.6	4.487**	1	0.035
Capacity Utilization	78.6	80.0	79.8	0.628	1	0.428

Notes: *Significant at 1%, **Significant at 5%, ***Significant at 10%.

concerned, it is revealed from Table 2 that ratio of annual sales to total cost is significantly different ($F = 4.487$, $P < 0.05$) across the rural/semi urban and urban areas. In the rural areas, ratio of sales to total cost is low as compared to urban areas. About the capacity utilization of the plant, F-test ($F = 0.628$, $P > 0.1$) shows no difference between rural/semi urban and urban enterprises. Firms from both the locations utilize their plant capacity equally. Therefore, hypothesis H$_2$, stating that there are no differences in business performance among food and agribusiness firms across urban and rural areas, is not accepted. Urban firms are paying high labor cost, as both the demand and unavailability of labor are generally high in the urban areas. Urban firms follow labor regulations strictly, whereas in rural areas, fuel cost is high, for which, unavailability of electricity may be the reason.

Global business environment in general and Indian business environment in particular are continuously changing (Brauns, 2015; Paul and Mas, 2016). There are several factors that hinder the performance of firms (Roomi *et al.*, 2009; Kwong *et al.*, 2012). This study explores the business obstacles on sixteen parameters under three broad categories, viz. access to resources, business regulations and market externalities as discussed in the conceptual framework. In Table 3, differences in business obstacles across rural and urban firms are given.

Under access to resources, two parameters out of five, viz. electricity and access to land, revealed a significant difference across rural and urban firms. Electricity in

Table 3. Response on business obstacles by rural/semi urban and urban firms.

	Rural/semi urban (n = 96)	Urban (603)	Total (n = 699)	F-value	df	Sig.
Access to resources						
Electricity	3.26	2.71	2.79	18.595*	1	0.000
Telecommunications	1.29	1.42	1.40	2.209	1	0.138
Transport	2.27	2.17	2.18	0.728	1	0.394
Land	1.40	1.59	1.56	3.604***	1	0.058
Finance	2.04	2.20	2.18	1.578	1	0.210
Business regulations						
Customs and trade regulations	2.00	1.76	1.79	3.125***	1	0.078
Tax rates	2.90	2.63	2.66	4.160**	1	0.042
Tax administrations	2.46	2.33	2.34	1.162	1	0.281
Business licensing and permits	2.23	2.11	2.12	0.958	1	0.328
Labor regulations	2.28	2.12	2.14	1.965	1	0.161
Market externalities						
Practices of competitors in informal sector	1.80	2.01	1.98	2.884***	1	0.090
Crime, theft and disorder	1.59	1.95	1.90	8.079*	1	0.005
Political instability	2.05	2.07	2.07	0.017	1	0.895
Corruption	3.32	3.03	3.07	4.142**	1	0.042
Courts	1.67	1.69	1.69	0.047	1	0.829
Inadequately educated workforce	2.18	2.10	2.11	0.404	1	0.525

Notes: *Significant at 1%, **Significant at 5%, ***Significant at 10%.

rural areas is the biggest obstacle for all enterprises. Difference in access to land shows that as compared to rural enterprises, urban enterprises finds access to land more challenging (10% level of significance). No difference has been found with respect to perceiving obstacles in access to telecommunication, transport, and finance. However, mean values reflect that these three parameters are minor obstacles for the enterprises. As far as obstacles in business regulations are concerned, two parameters, custom and trade regulation ($F = 3.125$, $P < 0.1$) and tax rate ($F = 4.16$, $P < 0.05$), indicated a significance difference across rural and urban enterprises. Among all regulatory parameters, tax rate and tax administration have been found to be moderate level obstacles. As far as the parameters of marketing externalities are concerned, results of F-test show that three parameters, namely practices of competitions in informal sectors, corruption, and crime, theft and disorder, revealed a significant difference across the urban and rural firms. Corruption has been reported as the highest ranked obstacle among all parameters. Corruption is the biggest challenge for both rural and urban firms. Mean values reveal that degree of obstacle is moderate in case of corruption. From the above analysis of variance, it clearly shows that hypothesis H3, stating that there is no difference in perceived business obstacle, is partially rejected. Majority of the parameters regarding business obstacles reveal equal level of obstacles across the urban and rural firms.

6. Conclusion, Implications and Future Research

The food and agriculture sector has recorded a significant transformation in the developing countries due to increase in production, growing income, changing tastes and preferences, nutritional sensitiveness, health consciousness, and marketing. This rapid transformation in agri-food sector has attracted a lot of attention from researchers in the recent years. Indian food processing sector has enormous potential to transform the economy, increase income, employment, and export earnings through large-scale manufacturing because of availability of huge raw material, abundance of skilled and semi-skilled labor, technology, and a vast domestic market. Indian government has worked on mobilizing a large section of population for entrepreneurial activities. Geographical location plays a significant role in firms' performance as it is an indispensable factor that can determine the success rate of entrepreneurial activity. Regional infrastructure positively affects the firms' total factor productivity. It has been noticed that there is a significant variation in the investment climate across locations within cities. Therefore, concentration of plants is a critical factor in policy making regarding investment and infrastructure. Perceived business obstacles, enterprise characteristics, and business performance from a scale perspective help agribusiness managers to align with the needs of the supply chain and government policy makers to design better policy support. Our study contributes to the food and agribusiness environment literature and perceived obstacles in doing business in both rural and urban areas.

This study analyzes the difference in characteristics, performance, and obstacles faced by the food and agribusiness firms across rural/semi urban and urban areas in India. Results show that characteristics of the firms vary with the geographical location of the firms. Most of the urban firms are proprietorship firms, whereas, in rural areas, partnership firms are dominant. Urban food and agribusiness enterprises consist of more female top managers compared to the rural food and agribusiness enterprises. Most of the rural/semi urban firms do not have internationally recognized quality certification, and they primarily cater to the local markets. As against, the urban firms have internationally recognized quality certification and serve both national and international markets. Adoption rate of digital platform in the form of websites is high for urban enterprises. Rural firms do not have licenses from foreign-owned companies while some urban firms do have them. The age of food and agribusiness firms does not vary with their geographical location.

The results show the difference in business performance of the firms across locations, viz. rural/semi urban and urban in terms of labor cost, fuel cost and annual sales. Rural food and agribusiness firms have cost advantage with respect to labor, raw material, electricity, and rental cost of land while urban firms incur low fuel and other miscellaneous costs. In addition, differences in obstacles in doing business have also been recorded in food and agribusiness enterprises of urban and rural areas. Understanding of these differences has great implications for researchers, entrepreneurs, policy makers and bankers for developing effective business policies and plant establishment decisions with respect to food and agribusiness firms. Government should focus on providing access to electricity, transport and finance in rural areas. Laws regarding business licensing, tax and labor laws should be flexible to create a friendly business environment, particularly in rural areas. Corruption is the greatest obstacle among all; it should be addressed at the earliest for better and effective functioning of food and agribusiness firms.

This study is based on the comprehensive enterprises survey of World Bank, and the nature of data used in this research is secondary. It limits the researchers to use the given performance indicators and obstacles. Furthermore, secondary data restrict the researchers to design theory-based research framework. In future, there is a scope of extending the research by collecting primary data from food and agribusiness enterprises on various other performance indicators and business obstacles. Field collected primary data may provide a better opportunity to apply advance analytical tools.

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